

Introduction to Communicable Disease Surveillance and Investigation in North Carolina



Healthcare-Associated Infections

Jennifer K. MacFarquhar, RN, MPH, CIC
Epidemiology Field Officer

Centers for Disease Control & Prevention
North Carolina Division of Public Health



Learning Objectives

- Define and identify healthcare-associated infections
- Discuss state and federal initiatives
- Describe infection prevention responsibilities of LHD



Definition

Healthcare-associated infections (HAI) are infections caused by a wide variety of common and unusual bacteria, fungi, and viruses during the course of receiving medical care.

~adapted from the Centers for Disease Control and Prevention, National Health Safety Network



Types of HAIs

- Central line-associated bloodstream infection (CLABSI)
- Catheter-associated urinary tract infection (CAUTI)
- Surgical site infection (SSI)
- Laboratory identified events (LabID events)
 - Methicillin resistant *Staphylococcus aureus* (MRSA)
 - *Clostridium difficile* infection (CDI)



Pathogens associated with HAIs

- Yeast, fungi
- *Enterococcus spp.*
- *Staphylococcus spp.*
- *Escherichia coli spp.*
- *Pseudomonas spp.*
- *Enterobacter spp.*
- *Klebsiella spp.*



Impact of HAIs

National

Morbidity:

- 1 out of every 20 hospitalized patients
- 1.7 million infections

Mortality:

- 99,000 attributable deaths

Cost:

- 28 – 45 billion dollars

North Carolina

Morbidity:

- Approximately 100 HAIs per year per hospital

Cost:

- 124 – 348 million dollars

Am J Infect Control. 2013 Sep;41(9):764-8.



Prevention Measures

#1 Most Effective Method: Handwashing



Prevention Measures: CLABSI

Catheter Associated Bloodstream Infections

Healthcare Providers:

- Clean hands before inserting catheter
- Wear mask, cap, gown, sterile gloves and sheet during insertion
- Minimize number of days device is in place

Patients:

- Clean hands often
- Assure anyone touching you or visiting you cleans their hands
- Tell healthcare provider if area around catheter is sore or red

FAQs
(frequently asked questions)

about
“Catheter-Associated Bloodstream Infections”
(also known as “Central Line-Associated Bloodstream Infections”)

What is a catheter-associated bloodstream infection?
A “central line” or “central catheter” is a tube that is placed into a patient’s large vein, usually in the neck, chest, arm, or groin. The catheter is often used to draw blood, or give fluids or medications. It may be left in place for several weeks. A bloodstream infection can occur when bacteria or other germs travel down a “central line” and enter the blood. If you develop a catheter-associated bloodstream infection you may become ill with fevers and chills or the skin around the catheter may become sore and red.

Can a catheter-related bloodstream infection be treated?
A catheter-associated bloodstream infection is serious, but often can be successfully treated with antibiotics. The catheter might need to be removed if you develop an infection.

What are some of the things that hospitals are doing to prevent catheter-associated bloodstream infections?
To prevent catheter-associated bloodstream infections doctors and nurses will:

- Choose a vein where the catheter can be safely inserted and where the risk for infection is small.
- Clean their hands with soap and water or an alcohol-based hand rub before putting in the catheter.
- Wear a mask, cap, sterile gown, and sterile gloves when putting in the catheter to keep it sterile. The patient will be covered with a sterile sheet.
- Clean the patient’s skin with an antiseptic cleanser before putting in the catheter.
- Clean their hands, wear gloves, and clean the catheter opening with an antiseptic solution before using the catheter to draw blood or give medications. Healthcare providers also clean their hands and wear gloves when changing the bandage that covers the area where the catheter enters the skin.
- Decide every day if the patient still needs to have the catheter. The catheter will be removed as soon as it is no longer needed.
- Carefully handle medications and fluids that are given through the catheter.

What can I do to help prevent a catheter-associated bloodstream infection?

- Ask your doctors and nurses to explain why you need the catheter and how long you will have it.

What do I need to do when I go home from the hospital?
Some patients are sent home from the hospital with a catheter in order to continue their treatment. If you go home with a catheter, your doctors and nurses will explain everything you need to know about taking care of your catheter.

- Make sure you understand how to care for the catheter before leaving the hospital. For example, ask for instructions on showering or bathing with the catheter and how to change the catheter dressing.
- Make sure you know who to contact if you have questions or problems after you get home.
- Make sure you wash your hands with soap and water or an alcohol-based hand rub before handling your catheter.
- Watch for the signs and symptoms of catheter-associated bloodstream infection, such as soreness or redness at the catheter site or fever, and call your healthcare provider immediately if any occur.

If you do not see your providers clean their hands, please ask them to do so.

- Ask your doctors and nurses if they will be using all of the prevention methods discussed above.
- Make sure that all doctors and nurses caring for you clean their hands with soap and water or an alcohol-based hand rub before and after caring for you.
- If the bandage comes off or becomes wet or dirty, tell your nurse or doctor immediately.
- Inform your nurse or doctor if the area around your catheter is sore or red.
- Do not let family and friends who visit touch the catheter or the tubing.
- Make sure family and friends clean their hands with soap and water or an alcohol-based hand rub before and after visiting you.

Co-sponsored by:

Prevention Measures: CAUTI

Catheter Associated Urinary Tract Infections

Healthcare Providers:

- Clean hands before inserting catheter or touching patient
- Do not disconnect catheter
- Do not twist or kink tubing
- Minimize number of days device is in place

Patients:

- Clean hands often
- Assure anyone touching you or visiting you cleans their hands
- Do not pull, twist, or kink tubing
- Keep catheter below level of bladder

FAQs
(frequently asked questions)

about
"Catheter-Associated Urinary Tract Infection"

What is "catheter-associated urinary tract infection"?
A urinary tract infection (also called "UTI") is an infection in the urinary system, which includes the bladder (which stores the urine) and the kidneys (which filter the blood to make urine). Germs (for example, bacteria or yeasts) do not normally live in these areas; but if germs are introduced, an infection can occur.
If you have a urinary catheter, germs can travel along the catheter and cause an infection in your bladder or your kidney; in that case it is called a catheter-associated urinary tract infection (or "CA-UTI").

What is a urinary catheter?
A urinary catheter is a thin tube placed in the bladder to drain urine. Urine drains through the tube into a bag that collects the urine. A urinary catheter may be used:
• If you are not able to urinate on your own
• To measure the amount of urine that you make, for example, during intensive care
• During and after some types of surgery
• During some tests of the kidneys and bladder
People with urinary catheters have a much higher chance of getting a urinary tract infection than people who don't have a catheter.

How do I get a catheter-associated urinary tract infection (CA-UTI)?
If germs enter the urinary tract, they may cause an infection. Many of the germs that cause a catheter-associated urinary tract infection are common germs found in your intestines that do not usually cause an infection there. Germs can enter the urinary tract when the catheter is being put in or while the catheter remains in the bladder.

What are the symptoms of a urinary tract infection?
Some of the common symptoms of a urinary tract infection are:
• Burning or pain in the lower abdomen (that is, below the stomach)
• Fever
• Bloody urine may be a sign of infection, but is also caused by other problems
• Burning during urination or an increase in the frequency of urination after the catheter is removed.
Sometimes people with catheter-associated urinary tract infections do not have these symptoms of infection.

Can catheter-associated urinary tract infections be treated?
Yes, most catheter-associated urinary tract infections can be treated with antibiotics and removal or change of the catheter. Your doctor will determine which antibiotic is best for you.

What are some of the things that hospitals are doing to prevent catheter-associated urinary tract infections?
To prevent urinary tract infections, doctors and nurses take the following actions:

Catheter insertion

- o Catheters are put in only when necessary and they are removed as soon as possible.
- o Only properly trained persons insert catheters using sterile ("clean") technique.
- o The skin in the area where the catheter will be inserted is cleaned before inserting the catheter.
- o Other methods to drain the urine are sometimes used, such as
- External catheters in men (these look like condoms and are placed over the penis rather than into the penis)
- Putting a temporary catheter in to drain the urine and removing it right away. This is called intermittent urethral catheterization.

Catheter care

- o Healthcare providers clean their hands by washing them with soap and water or using an alcohol-based hand rub before and after touching your catheter.

If you do not see your providers clean their hands, please ask them to do so.

- o Avoid disconnecting the catheter and drain tube. This helps to prevent germs from getting into the catheter tube.
- o The catheter is secured to the leg to prevent pulling on the catheter.
- o Avoid twisting or kinking the catheter.
- o Keep the bag lower than the bladder to prevent urine from backflowing to the bladder.
- o Empty the bag regularly. The drainage spout should not touch anything while emptying the bag.

What can I do to help prevent catheter-associated urinary tract infections if I have a catheter?

- Always clean your hands before and after doing catheter care.
- Always keep your urine bag below the level of your bladder.
- Do not tug or pull on the tubing.
- Do not twist or kink the catheter tubing.
- Ask your healthcare provider each day if you still need the catheter.

What do I need to do when I go home from the hospital?

- If you will be going home with a catheter, your doctor or nurse should explain everything you need to know about taking care of the catheter. Make sure you understand how to care for it before you leave the hospital.
- If you develop any of the symptoms of a urinary tract infection, such as burning or pain in the lower abdomen, fever, or an increase in the frequency of urination, contact your doctor or nurse immediately.
- Before you go home, make sure you know who to contact if you have questions or problems after you get home.

If you have questions, please ask your doctor or nurse.

Co-sponsored by:

Prevention Measures: SSI

Surgical Site Infections

Healthcare Providers:

- Clean hands and arms up to elbows just before surgery
- Wear mask, cap, gown, and sterile gloves during surgery
- Clean skin at site of surgery

Patients:

- Quit smoking
- Do not shave near site where you will have surgery
- Visitors should not touch surgical wound or dressings
- Clean hands often
- Assure anyone touching you or visiting you cleans their hands

FAQs
(frequently asked questions)

about
"Surgical Site Infections"

What is a Surgical Site Infection (SSI)?
A surgical site infection is an infection that occurs after surgery in the part of the body where the surgery took place. Most patients who have surgery do not develop an infection. However, infections develop in about 1 to 3 out of every 100 patients who have surgery. Some of the common symptoms of a surgical site infection are:

- Redness and pain around the area where you had surgery
- Drainage of cloudy fluid from your surgical wound
- Fever

Can SSI be treated?
Yes. Most surgical site infections can be treated with antibiotics. The antibiotic given to you depends on the bacteria (germs) causing the infection. Sometimes patients with SSIs also need another surgery to treat the infection.

What are some of the things that hospitals are doing to prevent SSIs?
To prevent SSIs, doctors, nurses, and other healthcare providers:

- Clean their hands and arms up to their elbows with an antiseptic agent just before the surgery.
- Clean their hands with soap and water or an alcohol-based hand rub before and after caring for each patient.
- May remove some of your hair immediately before your surgery using electric clippers if the hair is in the same area where the procedure will occur. They should not shave you with a razor.
- Wear special hair covers, masks, gowns, and gloves during surgery to keep the surgery area clean.
- Give you antibiotics before your surgery starts. In most cases, you should get antibiotics within 60 minutes before the surgery starts and the antibiotics should be stopped within 24 hours after surgery.
- Clean the skin at the site of your surgery with a special soap that kills germs.

What can I do to help prevent SSIs?
Before your surgery:

- Tell your doctor about other medical problems you may have. Health problems such as allergies, diabetes, and obesity could affect your surgery and your treatment.

After your surgery:

- Quit smoking. Patients who smoke get more infections. Talk to your doctor about how you can quit before your surgery.
- Do not shave near where you will have surgery. Shaving with a razor can irritate your skin and make it easier to develop an infection.

At the time of your surgery:

- Speak up if someone tries to shave you with a razor before surgery. Ask why you need to be shaved and talk with your surgeon if you have any concerns.
- Ask if you will get antibiotics before surgery.

After your surgery:

- Make sure that your healthcare providers clean their hands before examining you, either with soap and water or an alcohol-based hand rub.

If you do not see your providers clean their hands, please ask them to do so.

- Family and friends who visit you should not touch the surgical wound or dressings.
- Family and friends should clean their hands with soap and water or an alcohol-based hand rub before and after visiting you. If you do not see them clean their hands, ask them to clean their hands.

What do I need to do when I go home from the hospital?

- Before you go home, your doctor or nurse should explain everything you need to know about taking care of your wound. Make sure you understand how to care for your wound before you leave the hospital.
- Always clean your hands before and after caring for your wound.
- Before you go home, make sure you know who to contact if you have questions or problems after you get home.
- If you have any symptoms of an infection, such as redness and pain at the surgery site, drainage, or fever, call your doctor immediately.

If you have additional questions, please ask your doctor or nurse.

Co-sponsored by:

SHEA
The Society of Hospital and Health System Executives

AIDSA
American Infection Disease Society

American Hospital Association

APIC
Association for Professionals in Infection Control and Epidemiology

The Joint Commission

Prevention Measures: MRSA

Methicillin-Resistant Staphylococcus Aureus

Healthcare Providers:

- Clean hands before and after caring for each patient
- Use Contact Precautions when caring for patients with MRSA

Patients:

- Clean hands often
- Assure anyone touching you or visiting you cleans their hands

FAQs

(frequently asked questions)

about

“MRSA”

(Methicillin-Resistant *Staphylococcus aureus*)

What is MRSA?

Staphylococcus aureus (pronounced staff-ill-oh-KOK-us AW-ree-us), or “Staph” is a very common germ that about 1 out of every 3 people have on their skin or in their nose. This germ does not cause any problems for most people who have it on their skin. But sometimes it can cause serious infections such as skin or wound infections, pneumonia, or infections of the blood.

Antibiotics are given to kill Staph germs when they cause infections. Some Staph are resistant, meaning they cannot be killed by some antibiotics. “Methicillin-resistant *Staphylococcus aureus*” or “MRSA” is a type of Staph that is resistant to some of the antibiotics that are often used to treat Staph infections.

Who is most likely to get an MRSA infection?

In the hospital, people who are more likely to get an MRSA infection are people who:

- have other health conditions making them sick
- have been in the hospital or a nursing home
- have been treated with antibiotics.

People who are healthy and who have not been in the hospital or a nursing home can also get MRSA infections. These infections usually involve the skin. More information about this type of MRSA infection, known as “community-associated MRSA” infection, is available from the Centers for Disease Control and Prevention (CDC). <http://www.cdc.gov/mrsa>

How do I get an MRSA infection?

People who have MRSA germs on their skin or who are infected with MRSA may be able to spread the germ to other people. MRSA can be passed on to bed linens, bed rails, bathroom fixtures, and medical equipment. It can spread to other people on contaminated equipment and on the hands of doctors, nurses, other healthcare providers and visitors.

Can MRSA infections be treated?

Yes, there are antibiotics that can kill MRSA germs. Some patients with MRSA abscesses may need surgery to drain the infection. Your healthcare provider will determine which treatments are best for you.

What are some of the things that hospitals are doing to prevent MRSA infections?

To prevent MRSA infections, doctors, nurses, and other healthcare providers:

- Clean their hands with soap and water or an alcohol-based hand rub before and after caring for every patient.
- Carefully clean hospital rooms and medical equipment.
- Use Contact Precautions when caring for patients with MRSA. Contact Precautions mean:
 - Whenever possible, patients with MRSA will have a single room or will share a room only with someone else who also has MRSA.
 - Healthcare providers will put on gloves and wear a gown over their clothing while taking care of patients with MRSA.

- Visitors may also be asked to wear a gown and gloves.
- When leaving the room, hospital providers and visitors remove their gown and gloves and clean their hands.
- Patients on Contact Precautions are asked to stay in their hospital rooms as much as possible. They should not go to common areas, such as the gift shop or cafeteria. They may go to other areas of the hospital for treatments and tests.

- **May test some patients to see if they have MRSA on their skin.** This test involves rubbing a cotton-tipped swab in the patient’s nostrils or on the skin.

What can I do to help prevent MRSA infections?

In the hospital

- Make sure that all doctors, nurses, and other healthcare providers clean their hands with soap and water or an alcohol-based hand rub before and after caring for you.

If you do not see your providers clean their hands, please ask them to do so.

When you go home

- If you have wounds or an intravascular device (such as a catheter or dialysis port) make sure that you know how to take care of them.

Can my friends and family get MRSA when they visit me?

The chance of getting MRSA while visiting a person who has MRSA is very low. To decrease the chance of getting MRSA your family and friends should:

- Clean their hands before they enter your room and when they leave.
- Ask a healthcare provider if they need to wear protective gowns and gloves when they visit you.

What do I need to do when I go home from the hospital?

To prevent another MRSA infection and to prevent spreading MRSA to others:

- Keep taking any antibiotics prescribed by your doctor. Don’t take half-doses or stop before you complete your prescribed course.
- Clean your hands often, especially before and after changing your wound dressing or bandage.
- People who live with you should clean their hands often as well.
- Keep any wounds clean and change bandages as instructed until healed.
- Avoid sharing personal items such as towels or razors.
- Wash and dry your clothes and bed linens in the warmest temperatures recommended on the labels.
- Tell your healthcare providers that you have MRSA. This includes home health nurses and aides, therapists, and personnel in doctors’ offices.
- Your doctor may have more instructions for you.

If you have questions, please ask your doctor or nurse.

Co-sponsored by:

Prevention Measures: CDI

Clostridium Difficile

Healthcare Providers:

Clean hands before and after caring for each patient

- Use Contact Precautions when caring for patients with *C. diff*
- Only give patients antibiotics when necessary

Patients:

- Assure anyone touching you or visiting you cleans their hands
- Clean hands often, especially after using the bathroom and before eating
- Only take antibiotics as prescribed by your doctor

FAQs
(frequently asked questions)

about
"Clostridium Difficile"

What is Clostridium difficile infection?
Clostridium difficile [pronounced Kio-STRID-ee-um dif-uh-SEEL], also known as "*C. diff*" [See-dif], is a germ that can cause diarrhea. Most cases of *C. diff* infection occur in patients taking antibiotics. The most common symptoms of a *C. diff* infection include:
Watery diarrhea
Fever
Loss of appetite
Nausea
Belly pain and tenderness

Who is most likely to get *C. diff* infection?
The elderly and people with certain medical problems have the greatest chance of getting *C. diff*. *C. diff* spores can live outside the human body for a very long time and may be found on things in the environment such as bed linens, bed rails, bathroom fixtures, and medical equipment. *C. diff* infection can spread from person-to-person on contaminated equipment and on the hands of doctors, nurses, other healthcare providers and visitors.

Can *C. diff* infection be treated?
Yes, there are antibiotics that can be used to treat *C. diff*. In some severe cases, a person might have to have surgery to remove the infected part of the intestines. This surgery is needed in only 1 or 2 out of every 100 persons with *C. diff*.

What are some of the things that hospitals are doing to prevent *C. diff* infections?
To prevent *C. diff* infections, doctors, nurses, and other healthcare providers:
• Clean their hands with soap and water or an alcohol-based hand rub before and after caring for every patient. This can prevent *C. diff* and other germs from being passed from one patient to another on their hands.
• Carefully clean hospital rooms and medical equipment that have been used for patients with *C. diff*.
• Use Contact Precautions to prevent *C. diff* from spreading to other patients. Contact Precautions mean:
o Whenever possible, patients with *C. diff* will have a single room or share a room only with someone else who also has *C. diff*.
o Healthcare providers will put on gloves and wear a gown over their clothing while taking care of patients with *C. diff*.
o Visitors may also be asked to wear a gown and gloves.
o When leaving the room, hospital providers and visitors remove their gown and gloves and clean their hands.

o Patients on Contact Precautions are asked to stay in their hospital rooms as much as possible. They should not go to common areas, such as the gift shop or cafeteria. They can go to other areas of the hospital for treatments and tests.
• Only give patients antibiotics when it is necessary.

What can I do to help prevent *C. diff* infections?
• Make sure that all doctors, nurses, and other healthcare providers clean their hands with soap and water or an alcohol-based hand rub before and after caring for you.
If you do not see your providers clean their hands, please ask them to do so.
• Only take antibiotics as prescribed by your doctor.
• Be sure to clean your own hands often, especially after using the bathroom and before eating.

Can my friends and family get *C. diff* when they visit me?
C. diff infection usually does not occur in persons who are not taking antibiotics. Visitors are not likely to get *C. diff*. Still, to make it safer for visitors, they should:
• Clean their hands before they enter your room and as they leave your room
• Ask the nurse if they need to wear protective gowns and gloves when they visit you.

What do I need to do when I go home from the hospital?
Once you are back at home, you can return to your normal routine. Often, the diarrhea will be better or completely gone before you go home. This makes giving *C. diff* to other people much less likely. There are a few things you should do, however, to lower the chances of developing *C. diff* infection again or of spreading it to others.
• If you are given a prescription to treat *C. diff*, take the medicine exactly as prescribed by your doctor and pharmacist. Do not take half-doses or stop before you run out.
• Wash your hands often, especially after going to the bathroom and before preparing food.
• People who live with you should wash their hands often as well.
• If you develop more diarrhea after you get home, tell your doctor immediately.
• Your doctor may give you additional instructions.

If you have questions, please ask your doctor or nurse.

Co-sponsored by:
SHCNA
IDSA
American Hospital Association
APIC
The Joint Commission

Federal Response

US Department of Health and Human Services

- HHS Action Plan

Centers for Disease Control and Prevention

- NHSN
- Support to states

Centers for Medicare and Medicaid Services

- Inpatient Prospective Payment System (IPPS) Rule



North Carolina Response

- Infrastructure within Division of Public Health
- Legislation for public reporting of HAIs
- Public reporting of hospital-specific HAI data
- Collaboration with Advisory Group

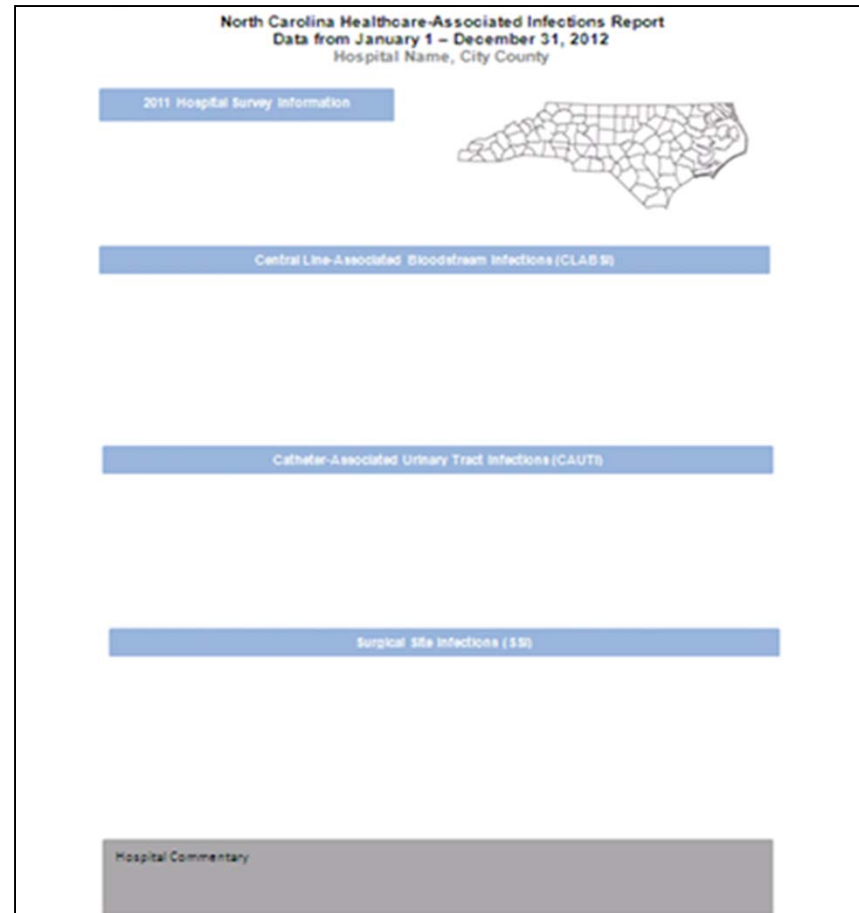




Public Report



- Available on website
 - <http://epi.publichealth.nc.gov/cd/hai/figures.html>
 - No current plans for printing hard copies
- Two versions
 - Healthcare provider
 - Healthcare consumer
- Evolving documents



INFECTION PREVENTION IN ADULT CARE HOMES



Hepatitis B Outbreaks in Long-Term Care Facilities

- Increasing problem
- 30 HBV outbreaks in long-term care settings reported to CDC during 1996-2011
- >90% linked to assisted monitoring of blood glucose (AMBG)



Use of fingerstick devices for multiple residents



Sharing of blood glucose meters



Sharing of insulin pens



Legislative Attention

GENERAL ASSEMBLY OF NORTH CAROLINA
SESSION 2011

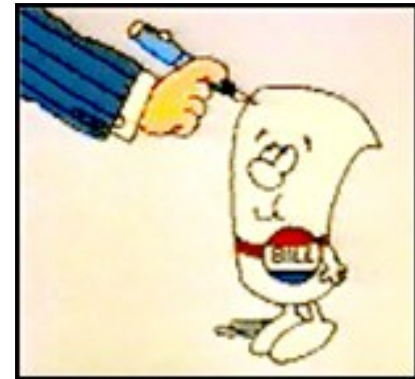
SESSION LAW 2011-99
HOUSE BILL 474

AN ACT TO PROTECT ADULT CARE HOME RESIDENTS BY INCREASING MINIMUM CONTINUING EDUCATION, TRAINING, AND COMPETENCY EVALUATION REQUIREMENTS FOR ADULT CARE HOME MEDICATION AIDES, STRENGTHENING ADULT CARE HOME INFECTION CONTROL REQUIREMENTS, AND REQUIRING THE DEPARTMENT OF HEALTH AND HUMAN SERVICES, DIVISION OF HEALTH SERVICE REGULATION, TO ANNUALLY INSPECT ADULT CARE HOMES FOR COMPLIANCE WITH SAFE INFECTION CONTROL STANDARDS.

“Act to Protect Adult Care Home Residents”

Signed into law May 31st, 2011

- Increased infection prevention training and competency evaluation
- Stronger infection prevention policies
- Reporting of suspected outbreaks
- Annual inspection for compliance with safe infection control practices



Identification and Reporting of Infection Prevention Breaches


Division of Health Services Regulation (DHSR)
Surveyors conduct inspections




Breaches reported to DHSR central office



DHSR central office notifies NC DPH (HAI Program)



NC DPH (HAI Program) notifies local health department



Local health department reports findings

Frequency of Specific Infection Prevention Breaches

Breaches identified	2011-2012	2012-2013
Sharing glucose meters w/o cleaning/disinfection	49	35
Sharing of lancing devices	7	7
Sharing of insulin pens	1	0

Public Health Response to Infection Control Breach

- Primary objective: Determine whether transmission has occurred
- Secondary objective: Provide/reinforce education regarding safe practices



Local Health Department Form

Follow Up Report of Infection Control Breach Notification

County: _____

Date of report to LHD: _____

Notified by: _____

Facility name: _____

Facility contact: _____

Breach identified: (check all that apply)

- Sharing of blood glucose meters without cleaning and disinfection between residents
- Sharing of fingerstick devices
- Sharing of injection equipment (e.g., insulin pens, needles, or syringes)
- Other: _____

Specific information (e.g., timeframe, number of residents exposed)

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Local Health Department Form

Actions taken: (check all that apply)

**Note: Appropriate actions will vary depending on the nature of the breach and setting;
not all actions listed are required in all cases*

- Visit to facility
- Surveillance for evidence of clinical or lab findings suggestive of acute hepatitis among exposed residents
- Search NC EDSS for reported HBV events among exposed residents
- Lab testing of exposed residents for bloodborne pathogens
- Education re: best practices for assisted blood glucose monitoring & insulin administration
- Education re: infection prevention requirements for adult care homes (Session Law 2011-99, available at www.ncleg.net/Sessions/2011/Bills/House/PDF/H474v6.pdf)
- Other: _____

Specific information

Findings:

Is there clinical and/or laboratory evidence that transmission has occurred? Yes No
Outbreak identified? Yes No

Additional notes:

Public Health Actions Documented in LHD Reports for 2011-2012 (n=27)

Action Taken	N	(%)
Education regarding best practices	27	(100)
Visits to adult care home	22	(81)
Assessing for evidence of acute hepatitis among exposed residents	19	(70)
Searching surveillance database for reported HBV among exposed residents	17	(63)
Laboratory testing of exposed residents	3	(11)