

Infection Control in Adult Care Homes

Section 5 Bloodborne Pathogens

Objectives

- Define bloodborne pathogens and describe three examples of bloodborne pathogens – Hepatitis B virus, Hepatitis C virus, and Human immunodeficiency virus.
- Describe the role of the Occupational Safety and Health Administration (OSHA) and the Centers for Disease Control and Prevention (CDC) in infection prevention.

Objectives

- Relate the concept of the chain of infection with bloodborne pathogens.
- Describe the prevention of bloodborne pathogen transmission during blood glucose (sugar) monitoring and administration of insulin to residents in adult care homes.
- List guidelines for point of care testing regarding blood glucose (sugar) testing.



Bloodborne Pathogens

HVB

HIV

HVC

A resident in an adult care home can get an infection from bloodborne pathogens by

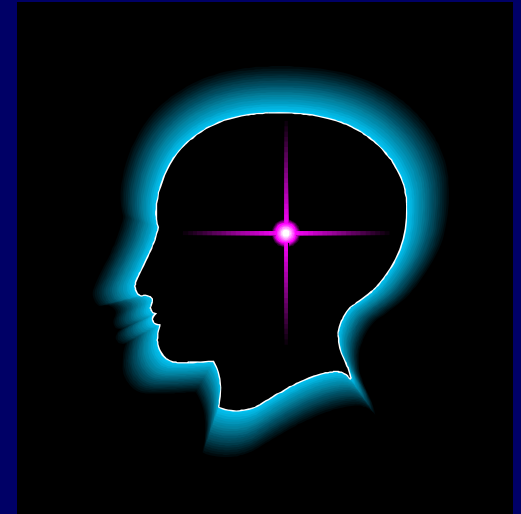
- Sharing contaminated needles
- Sharing contaminated fingerstick devices
- Direct contact with blood from an infected person

You can get an infection from bloodborne pathogens by

- Accidental puncture wounds (jabs) from contaminated sharps; and
- Direct contact with blood from an infected person

Recall

- Sharps are devices that have corners, edges, or projections that can cut or pierce skin
- Sharps often used in adult care homes include syringe needles, fingerstick devices, and razors



Occupational Safety and Health Administration (OSHA)

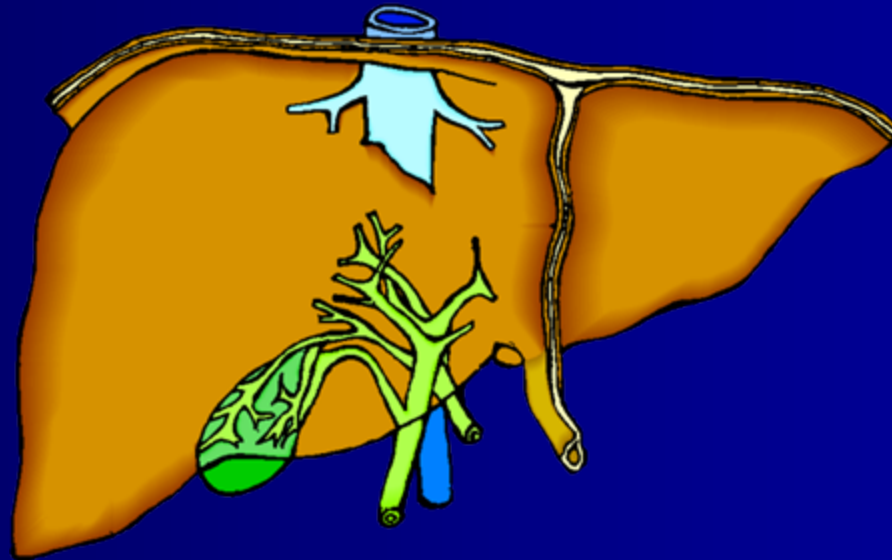
- Agency of the federal government
- In charge of protecting workers while at work
- Sets safety standards in the workplace



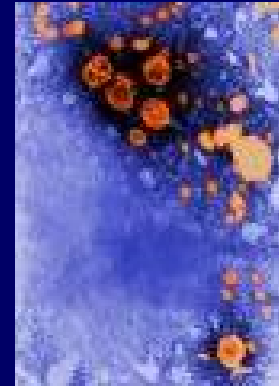
Bloodborne Pathogen Standard

Hepatitis

Is a disease of the liver and often caused by viruses



Hepatitis B



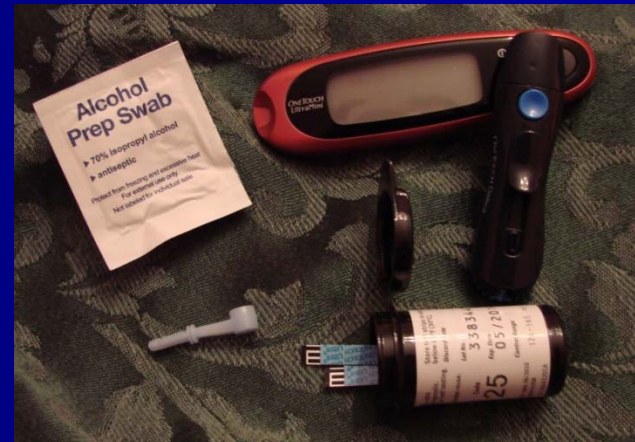
A contagious disease of the liver caused by hepatitis B virus (HBV)

- Usually spread when blood, semen, or another body fluid from a person with HBV enters the body of someone who is not infected.
- Through sexual contact and sharing of needles, syringes, or other drug-injection equipment

Hepatitis B

In adult care homes, HBV can spread by sharing

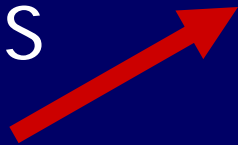
- Infected needles
- Syringes
- Fingertick devices or
- Blood glucose monitors



among residents during diabetic care

7 DAYS!!!

HEPATITIS B
VIRUS CAN LIVE
OUTSIDE THE
BODY ON
EQUIPMENT AND
ON SURFACES
FOR **SEVEN**
DAYS. IT CAN
INFECT OTHERS
DURING THIS
TIME



July						
Sun	Mon	Tues	Wed	Thur	Fri	Sat
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

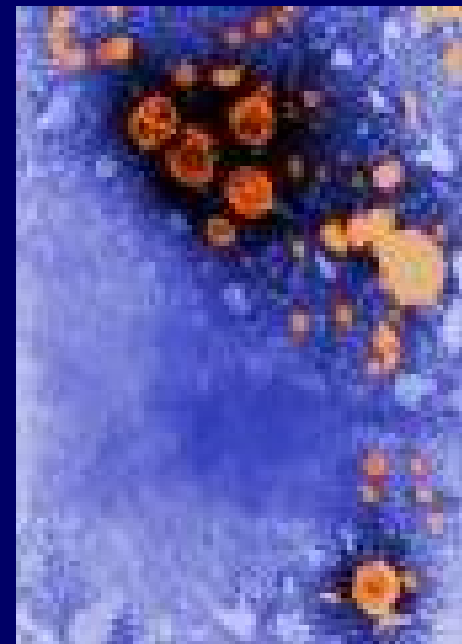
July

Sun	Mon	Tues	Wed	Thur	Fri	Sat
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28	29	30	31			

7 DAYS!!!

Hepatitis B Virus (HBV)

- Causes Hepatitis B, a disease of the liver
- About 1/3 of persons infected with HBV do not show symptoms
- Even though they do not show symptoms, they can still infect you



GREAT NEWS...

The **GREAT** news is that there is a vaccine that is available to prevent you from getting Hepatitis B.



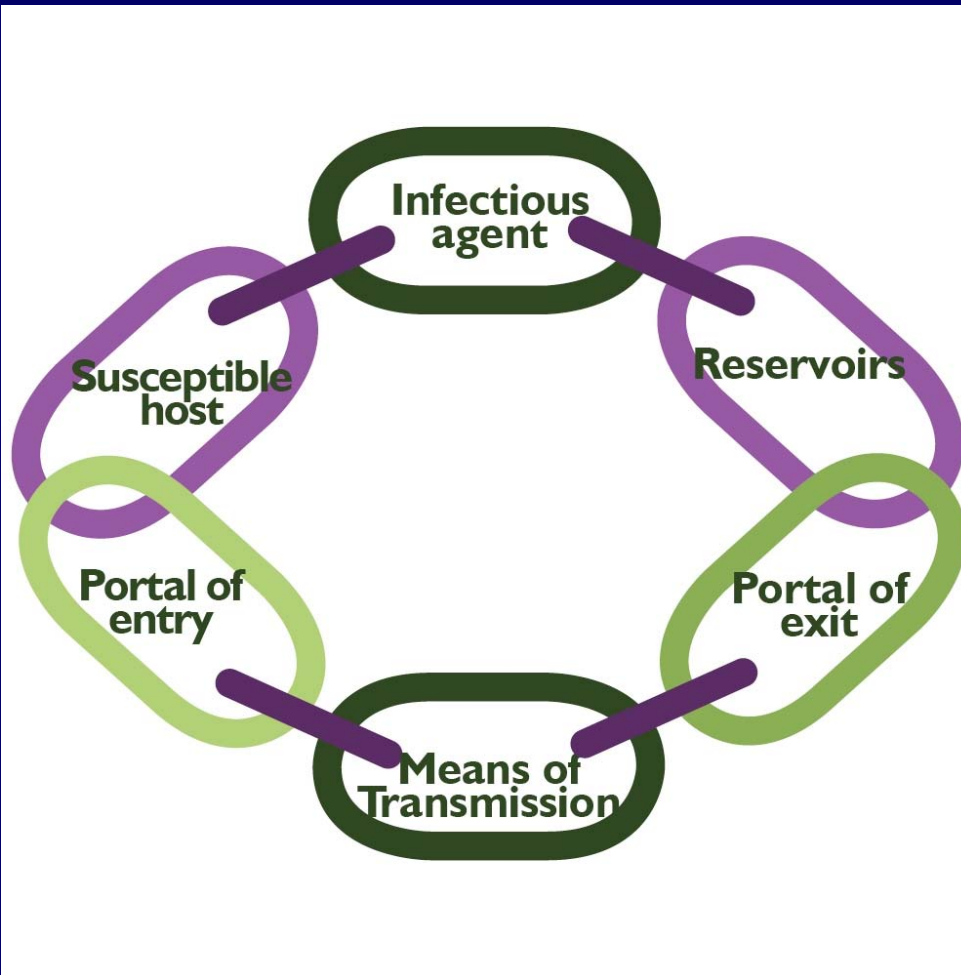
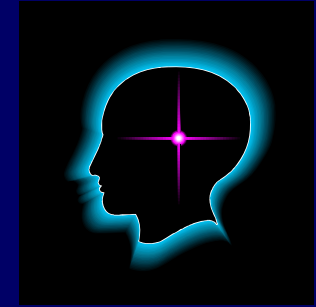
The **BEST** way to prevent Hepatitis B infection is by getting the Hepatitis B vaccine

Other Bloodborne Pathogens

- Hepatitis C virus causes a contagious liver disease called Hepatitis C
- HIV attacks the immune system and is the virus that can cause AIDS

There are currently no Hepatitis C or HIV vaccines

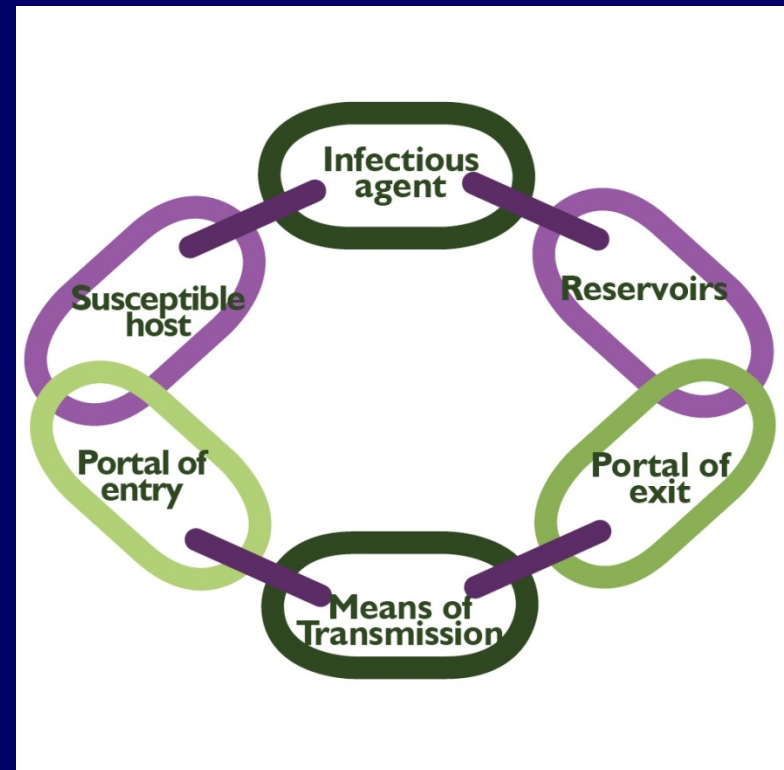
Recall



The Chain of Infection

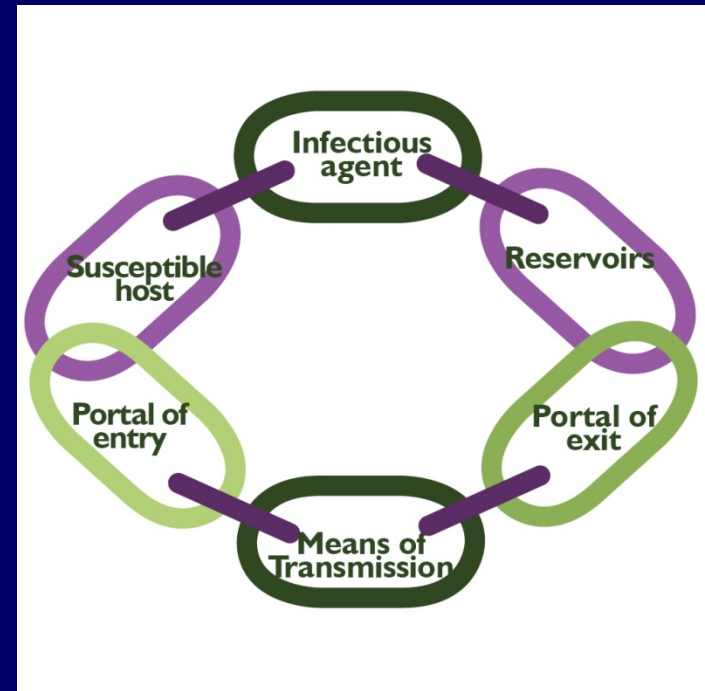
Bloodborne Pathogens

- 1st Link – infectious agents are HBV, HCV, HIV
- 2nd Link – reservoir is the person who is infected, specifically blood



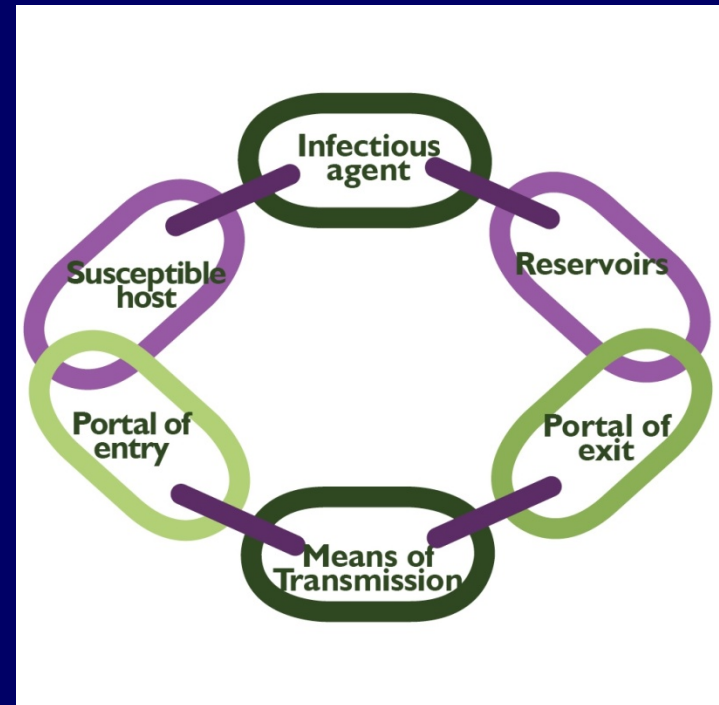
Bloodborne Pathogens

- 3rd Link – portals of exit are cuts, open sores, needles, lancets
- 4th Link – mode of transmission is blood by direct contact (contact with blood) or by indirect contact (needles, lancets, syringes, blood glucose meters, care worker's hands)



Bloodborne Pathogens

- 5th Link – portals of entry are open sores, wounds, puncture sites from injections and lancets)
- 6th Link – susceptible host is a person who is not infected but at risk for infection (residents and care workers who do not practice Standard Precautions)



High Risk Resident

A resident is at a higher risk for getting HBV, HBC, and HIV if the resident.....

- Is tested using fingerstick devices
- Receives injections

A resident who has diabetes mellitus



Diabetes Mellitus

- Also called diabetes or sugar diabetes
- Common disease
- Caused by body's inability to use glucose, in the blood, for energy
- Usually requires blood glucose checks
- May or may not need insulin injections



Blood Glucose Monitoring and Insulin Administration

- Assisted monitoring of blood glucose and insulin administration and
- Self-monitoring of blood glucose and insulin administration

Blood Glucose Monitoring

- Tests resident's level of glucose (sugar) in blood
- Pricks skin with lancet and places drop of blood on test strip
- Test strip is placed in machine and blood glucose (sugar) level shows up on screen
- Depending on doctor's orders or level of blood glucose (sugar), the resident may or may not receive a dose of insulin



Point of Care Testing (POCT)

Common practice in health care settings

- Care workers monitor residents at the bedside
- Quick, easy, provides useful info
- Example – blood glucose monitoring at home



Blood Glucose Meter

- Measure a resident's blood glucose level
- Should be assigned to a single resident and not shared
- Used by millions of people a day
- Smaller, faster, and more accurate
- Very important to a diabetic resident's health



Blood Glucose Meter

HBV, HCV, and HIV can get onto blood glucose meters even if you do not see any blood.

- If shared, device must be cleaned and **disinfected after every use**, based on manufacturer's instructions
- If manufacturer does not state instructions on how to **disinfect**, then it should not be shared

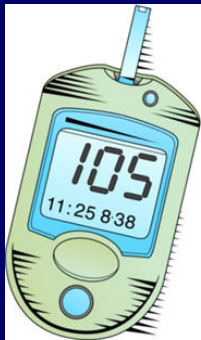
Blood Glucose Meter

HBV, HCV, and HIV can get onto blood glucose meters even if you do not see any blood.

- Blood glucose meters, whether shared or not, must be cleaned after each use, based on manufacturer's instructions
- Any agent used to clean or disinfect the device must be approved and used exactly per instructions, i.e., leave on device for 5 minutes

Blood Glucose Meter

A SIMPLE GUIDELINE FOR SAFE CARE:
blood glucose meters should be assigned
to individual residents and not shared



George's



Bob's



Ann's



Mary's



John's



Devices used to prick the skin and obtain drops of blood for testing

Fingerstick devices use a lancet to jab the skin

Two main types of fingerstick devices:

- Those that are designed for reuse on a single person
- Those that are disposable and for single use



Re-usable Devices for a Single Person

- Used for residents who self-monitor
- NEVER shared with other residents
- Often resemble a pen
- Lancet removed, discarded, and replaced after each use
- Label with resident's name
- Store with resident's blood glucose monitoring equipment/supplies



Single-use, Auto-disabling Fingerstick Devices

- Typically used for assisted monitoring
- Used once and then discarded
- Has a single-use lancet that retracts after use



Outbreaks. . .

- Outbreaks of Hepatitis B infection in health care settings have been caused by sharing of blood glucose meters and fingerstick devices among residents
- Critically important that you know what you are doing and know what you are using when you perform fingersticks on your residents and work with blood glucose monitors
- Your knowledge is key to preventing the spread of bloodborne pathogens in the adult care home

Point of Care Testing Guidelines for Blood Glucose Testing

- Wear gloves
- Change gloves between residents
- Change gloves immediately if they touch blood
- Perform hand hygiene afterwards
- Discard lancet in sharps container



Point of Care Testing Guidelines for Blood Glucose Testing

- Never, ever reuse lancets
- Never, ever recap, bend, or break lancets
- Never share blood glucose meters if designed for single resident use
- If blood glucose meter designed for use on multiple residents, follow manufacturer's instructions

Point of Care Testing Guidelines for Blood Glucose Testing

- Clean up/disinfect blood contaminated surfaces immediately
- Do not carry supplies in pockets
- Only carry needed supplies to bedside
- If you jab your finger **IMMEDIATELY** follow your facility's exposure policy

Insulin Administration

May be:

- Administered to the resident by the trained medication aide
- Self-administered by the resident

Methods:

- By injection using an insulin pen
- By using a syringe, with insulin withdrawn, from a multiple-dose vial

Insulin Administration Using Insulin Pen

- Injector devices shaped like an ink pen
- Has an insulin reservoir or cartridge that may have enough for a single dose or several doses
- Are intended for use by single resident and not shared, labeled with name
- Needle changed after each injection



Insulin Administration Using Syringe and Multiple-dose Vial

- Uses insulin syringe and multiple-dose vial of insulin
- Multiple-dose vials should only be used for a single resident, labeled
- If multiple-dose vials used for multiple residents, stored and prepared in special area



Insulin Administration Using Syringe and Multiple-dose Vial

- Always enter multiple-dose vials with new needle and new syringe after cleaning vial top with alcohol
- Needles and syringes never be used to administer insulin to more than one resident



The CDC is concerned. . .



**** CRITICALLY IMPORTANT ****

**Only use syringes, needles, lancets
ONE TIME AND ONE TIME ONLY**

**Dispose of them in sharps container
IMMEDIATELY AFTER USE**

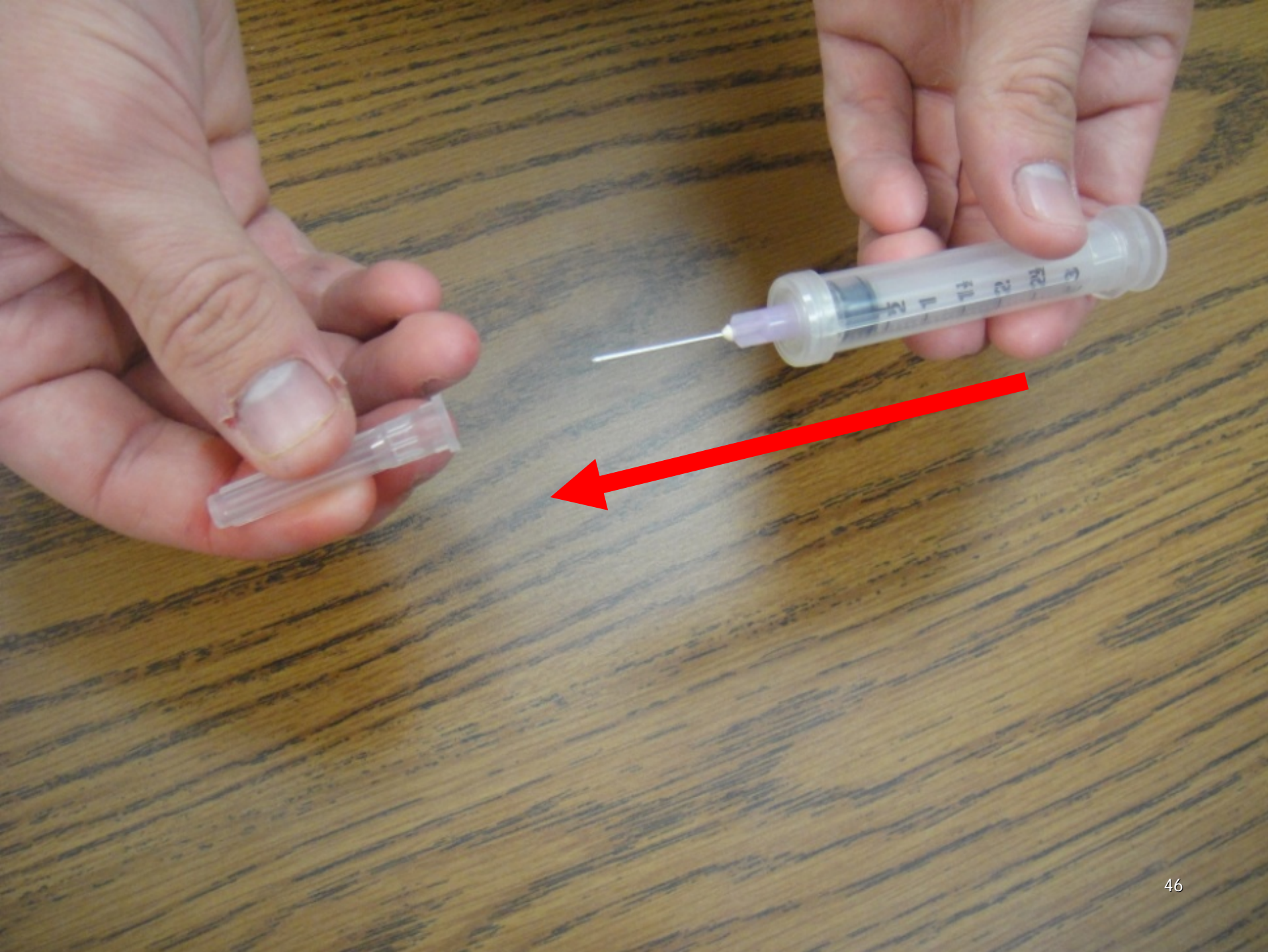
**** CRITICALLY IMPORTANT ****

Check for Understanding





**NEVER
EVER DO
THIS**





**NEVER
EVER DO
THIS**





**NEVER
EVER DO
THIS**



A close-up photograph of a hand wearing a white latex glove. The glove is heavily stained with bright red blood, with the stains spreading across the fingers and palm. The hand is positioned to grasp a silver metal door handle. The background shows a dark wood door with a keyhole and a lock mechanism. The overall scene is dimly lit, emphasizing the stark contrast of the red blood on the white glove.

**NEVER
EVER DO
THIS**





**NEVER
EVER DO
THIS**

A festive background featuring several colorful balloons in shades of green, purple, red, and blue, with a yellow balloon on the right. The scene is filled with multi-colored streamers and confetti scattered across a white background.

CONGRATULATIONS!!!!

**YOU HAVE COMPLETED YOUR
INFECTION CONTROL
TRAINING**

