Infection Prevention and Control

1

General Infection Prevention & Control Background and Basics

VIRGINIA DEPARTMENT OF
SOCIAL SERVICES

2

Objectives

» Define Infection Prevention and Control
» Discuss the goal of infection prevention and control
» Discuss the importance of infection prevention and control in congregate care settings, including specific risk factors
» Describe the purpose and components of an infection control plan/program (ICP)
» Describe how to access the ICP
» Discuss Standard Precautions
» Describe how infections occur (the chain of infection)
» List signs and symptoms of infections/communicable disease
» Discuss Disease Surveillance & Reporting
» Describe the role of staff in infection prevention and control
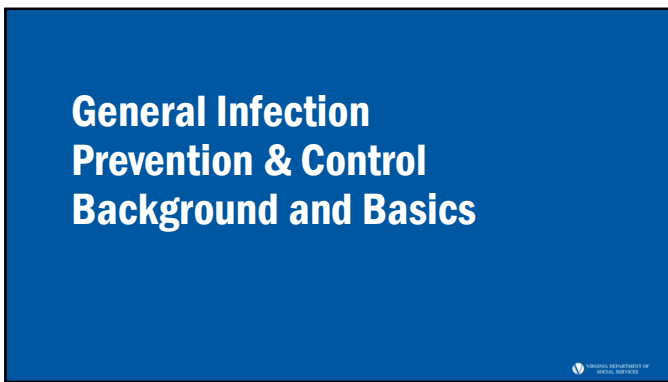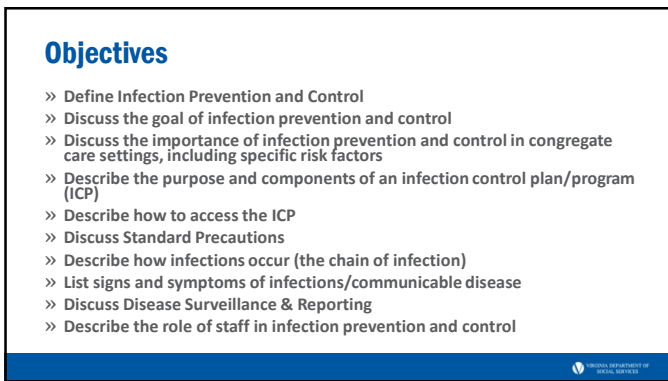
VIRGINIA DEPARTMENT OF
SOCIAL SERVICES

3

What is Infection Prevention and Control?

» A set of behaviors and practices that prevents or stops the spread of infections in settings where healthcare/personal care is delivered.

VIRGINIA DEPARTMENT OF
SOCIAL SERVICES

4

The Goal of Infection Prevention

» To implement practices that prevent the development and transmission of communicable diseases and infections among staff, residents/participants, and visitors.

VIRGINIA DEPARTMENT OF
SOCIAL SERVICES

5

Why is Infection Prevention Important In Adult Congregate Care Settings?

» To protect residents or participants, staff, and visitors in a high-risk environment from contracting communicable diseases

VIRGINIA DEPARTMENT OF
SOCIAL SERVICES

6

What are the Risk Factors for Communicable Disease Associated with Adult Congregate Care Settings?

» Age
» Comorbidities and Chronic Illnesses
» Medications
» Congregation (Spending time in the same spaces)
» Physical Decline & Cognitive Impairment

7

Where is **your** facility's ICP located?

8

Infection Control Plan/Program (ICP)

» Should be developed using evidence-based guidance and agency standards that determine what policies and procedures to include
» Establish how to prevent, identify, investigate, report and control communicable diseases and infections
» Establishes a set of expected practices or behaviors for infection prevention and control
» May include definitions and provide background and rationale for a required ICP practice, including guidance about practice implementation.
» Should include procedures that outline the specific steps and actions for performing infection prevention behaviors

9

Components of an Infection Control Program

» **Standard Precautions**
  • Use of Personal Protective Equipment
  • Respiratory Hygiene & Cough Etiquette
» **Transmission Based Precautions**
» **Surveillance and Disease Reporting**
» **Hand Hygiene**
» **Prevention of Bloodborne Pathogens Transmission**
  • Injection Safety
» **Environmental Cleaning and Disinfection**
  • Laundry
  • Personal Care Equipment
» **Waste Disposal**
» **Pest Control**

VIRGINIA DEPARTMENT OF SOCIAL SERVICES

10

Putting the Plan into Practice

» **Follow Policies and Procedures**
  • Practice correct hand hygiene
  • Use PPE appropriately when necessary
  • Handle sharps safely
  • Clean high touch surfaces at least daily
  • Many more!
» **Hold Each Other Accountable**

VIRGINIA DEPARTMENT OF SOCIAL SERVICES

11

Standard Precautions

» **Standard Precautions are the minimum infection prevention practices that apply to all resident/participant care, regardless of infection status.**

VIRGINIA DEPARTMENT OF SOCIAL SERVICES

12

Standard Precautions Practices

» Perform hand hygiene
» Use of personal protective equipment (PPE) whenever there is a possibility of being exposed to infectious material
» Follow respiratory hygiene/cough etiquette principles
» Ensure appropriate placement (use isolation when indicated)
» Properly handle, clean and disinfect direct care equipment and devices; clean & disinfect the environment appropriately
» Handle textiles and laundry carefully
» Follow safe injection practices
» Ensure staff safety, including proper handling of needles and other sharps

VIRGINIA DEPARTMENT OF SOCIAL SERVICES

13

How Infections Happen

Source	Mode of Transmission	Host
• A place where germs live	• A way for germs to move from place to place	• A susceptible person with a way for the germs to enter their body

VIRGINIA DEPARTMENT OF SOCIAL SERVICES

14

Signs of Infection & Communicable Disease

» Fever
» Feeling Feverish or Experiencing Chills or Sweats
» New Respiratory Symptoms (e.g., Coughing, Sneezing, Trouble Breathing)
» Gastrointestinal Symptoms (e.g., Nausea, Vomiting, Diarrhea)
» Change in Mental Status
» Skin Symptoms (e.g., Redness, Swelling, Soreness)
» Genitourinary Symptoms (e.g., burning or pain with urination, genital discharge)

VIRGINIA DEPARTMENT OF SOCIAL SERVICES

15

Surveillance for Communicable Diseases

» Systematic collection of health information (like symptoms) that helps to identify the presence of communicable diseases or infections

» Applies to staff and residents/participants

» Ongoing surveillance helps determine when unusual levels or types of illness are occurring and when reporting to VDSS and VDH is necessary

VIRGINIA DEPARTMENT OF SOCIAL SERVICES

16

_____

_____

_____

_____

_____

_____

_____

What is the Process for Reporting Illnesses?

» What's the process for reporting when YOU are sick?

» What if you notice signs of infection in someone else?
  • What if a resident/participant is showing signs of illness?
  • What if a coworker is showing signs of illness?

VIRGINIA DEPARTMENT OF SOCIAL SERVICES

17

_____

_____

_____

_____

_____

_____

_____

_____

Reporting Communicable Diseases and Outbreaks

» Certain illnesses and outbreaks of illness require reporting

» VDH publishes a Reportable Disease List – reporting of diseases on this list to VDH within the timeframe on the list is required by state law
  • https://www.vdh.virginia.gov/content/uploads/sites/134/2023/03/VIRGINIA-REPORTABLE-DISEASE-LIST.pdf

» VDSS regulatory standards requires that outbreaks of illness be reported within 24 hours to both VDSS and VDH (local health department)

VIRGINIA DEPARTMENT OF SOCIAL SERVICES

18

_____

_____

_____

_____

_____

_____

_____

_____

Infection prevention and control takes effort from **everyone**

19

Infection Control Scavenger Hunt Activity

20

References

Centers for Disease Control and Prevention (CDC)
» **CDC - How Infections Spread**
   https://www.cdc.gov/infectioncontrol/spread/index.html
» **CDC - Infection Control Basics**
   https://www.cdc.gov/infectioncontrol/basics/index.html
» **CDC - Standard Precautions for All Patient Care**
   https://www.cdc.gov/infectioncontrol/basics/standard-precautions.html
Virginia Department of Health
» **Disease Reporting and Control Regulations**
   https://www.vdh.virginia.gov/clinicians/disease-reporting-and-control-regulations/
Virginia Department of Social Services (VDSS)
» **Adult Day Care Center Regulatory Standards**
   https://www.dss.virginia.gov/files/division/licensing/adcc/intro_page/code_regulations/regulations/final_adcc_reg.pdf
» **Assisted Living Facility Regulatory Standards**
   https://www.dss.virginia.gov/files/division/licensing/alf/intro_page/code_regulations/regulations/final_alf_reg.pdf

21

Hand Hygiene

22

Objectives

» Define hand hygiene
» Discuss why hand hygiene is important
» Discuss chain of transmission
» Discuss when to use hand hygiene
» Discuss gloves and fingernails in relation to hand hygiene
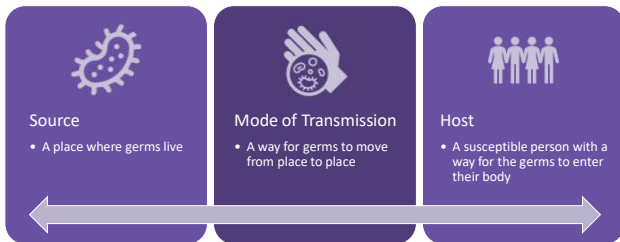» Compare hand hygiene methods

23

What is **Hand Hygiene**?

24

Hand Hygiene is ... the act of cleaning your hands

» **Washing with soap and water**
» **Using antiseptic hand wash or rub**
  • Includes gel or foam alcohol-based hand sanitizer
» **Surgical hand antisepsis**
  • Surgical scrub

VIRGINIA DEPARTMENT OF SOCIAL SERVICES

25

Why is Hand Hygiene Important?

Source	Mode of Transmission	Host
• A place where germs live	• A way for germs to move from place to place	• A susceptible person with a way for the germs to enter their body

VIRGINIA DEPARTMENT OF SOCIAL SERVICES

26

Hand Hygiene is a **simple** and **effective** way to prevent the spread of pathogens that cause infections.

VIRGINIA DEPARTMENT OF SOCIAL SERVICES

27

When to Perform Hand Hygiene

» Whenever hands are visibly dirty or contaminated
» Immediately before touching a resident/participant OR their immediate surroundings
» Immediately after touching a resident/participant OR their immediate surroundings (even if you didn't touch the resident/participant)
» Before AND after putting on and removing personal protective equipment (PPE), like gloves
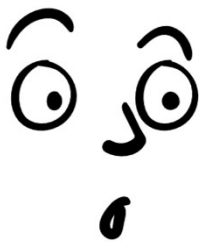» After using the restroom
» Before and after eating

28

Other Important Moments for Hand Hygiene

| After blowing your nose, coughing, or sneezing | After touching an animal or their food, treats, cages, or waste | After touching or taking out the garbage | After coming in from outdoors or outings | After contact with chemicals |
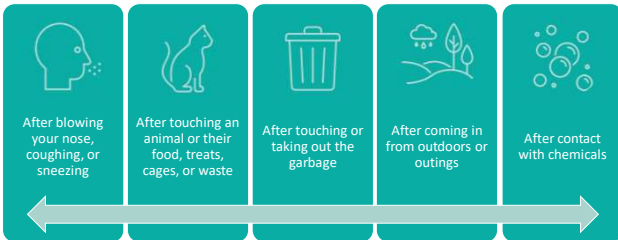
29

Some healthcare personnel practice hand hygiene about **half** the time they should.

Do **you** clean your hands as often as you should?

30

Hand Hygiene is
everyone's responsibility.

31

What are some **barriers** that could **prevent** you or others from practicing proper hand hygiene?

32

Which hand hygiene method is recommended for most clinical situations?

A. Soap and water
B. Alcohol-based hand sanitizer
C. Use soap and water after every third use of hand sanitizer
D. Use soap and water after every fifth use of hand sanitizer

33

B. Alcohol-based hand sanitizer

34

ABHS is recommended for most clinical situations, because it:

» **Is more effective at killing potentially deadly germs on hands than soap**
» **Is easier to use while providing care, especially**
  • when moving from soiled to clean activities with the same resident/participant between glove changes
  • when moving between residents/participants in shared rooms or common areas
» **Improves skin condition with less irritation and dryness than soap and water**
» **Improves compliance with hand hygiene**

35

When to Wash Hands with Soap and Water

» **When hands are visibly soiled**
» **Before and after preparing food**
» **Before and after serving food to others**
» **Before and after eating**
» **After using the restroom**
» **After caring for individuals with spore-producing illness (e.g., *C difficile*)**
» **After exposing hands to chemicals (e.g., smoking or vaping)**

36

Don't Forget About Your Fingernails!

» Appropriate hand hygiene includes diligently trimming and cleaning fingernails, which can harbor dirt and germs and can contribute to the spread of some infections

» Staff should keep nails short and scrub the underside of nails with ABHS or soap and water every time hand hygiene is performed

» An ideal length for nails is no longer than ¼ inch past the top of the finger

37

Caught Red-Handed Activity

38

How to Clean Hands with ABHS

» Apply the right amount of sanitizer, this should be enough to cover all surfaces of the hands and fingers

» Rub hands together, covering all surfaces (including thumbs, fingertips, under fingernails and between fingers, which are frequently missed) until the hands feel dry

» This should take around 20 seconds.

» Don't wave or blow on your hands to try and make them dry faster.

39

How to Use Pocket ABHS

CLEAN HANDS COUNT
Use these steps to avoid contaminating your hands after you clean them.

Step 1: Hold container in one hand and dispense enough gel or foam to cover both hands into the other hand.
Step 2: Close lid and store container before rubbing hands together.
Step 3: Rub for approximately 20 seconds, coating all surfaces of both hands, until hands feel dry.
Step 4: Go directly to patient or resident without putting hands back into pockets or touching anything else.

VIRGINIA DEPARTMENT OF SOCIAL SERVICES

40

How to Wash Hands with Soap and Water

» Wet your hands first with water
» Apply the amount of soap recommended by the manufacturer to your hands
» Rub your hands together vigorously for at least 15-20 seconds, covering all surfaces of the hands and fingers (including thumbs, fingertips, under fingernails and between fingers).
» Rinse your hands with water and use disposable towels to dry.
» Use a disposable towel to turn off the faucet.
» Avoid using hot water, to prevent drying of skin.

VIRGINIA DEPARTMENT OF SOCIAL SERVICES

41

A Note About Gloves

» Glove Use is Never a Substitute for Cleaning Your Hands

» Always clean your hands after removing gloves, dirty gloves can soil hands

VIRGINIA DEPARTMENT OF SOCIAL SERVICES

42

Proper hand hygiene
could save
ONE MILLION LIVES
every year

43

References

Centers for Disease Control and Prevention
» **ABHS Pocket Cards**
   https://www.cdc.gov/handhygiene/pdfs/ABHS-PocketCards-P.pdf
» **Hand Hygiene in Healthcare Settings**
   https://www.cdc.gov/handhygiene/index.html
» **When and How to Wash Your Hands (Community Settings)**
   https://www.cdc.gov/handwashing/when-how-handwashing.html

44

Use of Personal Protective Equipment (PPE)

for Standard Precautions and Transmission-Based Precautions

45

Objectives

» **Define personal protective equipment (PPE)**
» **Discuss importance of use of PPE and impact on staff and resident/participant safety and transmission of infections**
» **Describe use of PPE for Standard Precautions**
» **Discuss types of PPE and their use**
» **Describe use of Transmission-Based Precautions, including selection of proper Personal Protective Equipment**

VIRGINIA DEPARTMENT OF SOCIAL SERVICES

46

What is Personal Protective Equipment (PPE)?

PPE refers to protective clothing or other equipment designed to protect the wearer from physical harm.

This includes protection from injuries or exposure to dangerous substances, including germs.

Use of PPE can be traced back to ancient times.

VIRGINIA DEPARTMENT OF SOCIAL SERVICES

47

Early healthcare PPE was based on **current understanding** of diseases and how they are transmitted, **just like it is today.**

VIRGINIA DEPARTMENT OF SOCIAL SERVICES

48

Types of PPE Used in Healthcare Settings

» **Gloves**
» **Facemasks**
» **Gowns**
» **Goggles**
» **Face Shields**
» **Respirators**

VIRGINIA DEPARTMENT OF
SOCIAL SERVICES

49

Importance of PPE

» **PPE protects staff against contamination by pathogens (harmful germs) and helps break the chain of transmission of infections**
» **PPE protects staff from injury or contamination from hazards that they encounter as a part of their jobs (like cleaning and disinfecting agents).**

VIRGINIA DEPARTMENT OF
SOCIAL SERVICES

50

How Does PPE Stop Transmission of Infections?

Source	Mode of Transmission	Host
• A place where germs live	• A way for germs to move from place to place	• A susceptible person with a way for the germs to enter their body

VIRGINIA DEPARTMENT OF
SOCIAL SERVICES

51

OSHA & CDC

The OSHA Bloodborne Pathogens standard (29 CFR 1910.1030) and CDC Standard Precautions guidelines both include requirements for the use of **personal protective equipment**, such as gloves, gowns, masks, eye protection (e.g., goggles), and face shields, to protect workers from exposure to infectious diseases.

52

CDC - Standard Precautions

» **Standard Precautions are the minimum infection prevention practices that apply to all resident/participant care, regardless of infection status.**

» **Proper use of PPE is an important component of Standard Precautions**

» **Standard Precautions are designed to protect staff from potential infection from exposure to blood, saliva or other potentially infection materials (OPIM)**

» **PPE for Standard Precautions includes gloves, face masks, protective eye wear, face shields, and protective clothing (gowns or lab coats)**

53

Use of Gloves

54

CDC Standard Precautions – Glove Use

» Wear gloves when it can be **reasonably anticipated** that contact with blood or other potentially infectious materials (OPIM), mucous membranes, nonintact skin, or potentially contaminated intact skin (e.g., of a person incontinent of stool or urine) could occur

» Exposure to OPIM also includes contact with contaminated or potentially contaminated environmental surfaces, laundry, equipment or devices.

55

Donning (Putting On) Gloves*

Hand Hygiene	Always perform hand hygiene immediately before putting on any PPE, including gloves
Select	Select gloves of an appropriate material and size
Inspect	Inspect gloves for any rips or tears; discard damaged gloves
Hold	Hold gloves by the cuff and work hand and fingers down into the glove
Pull	Pull the cuff up over your wrist

*When wearing multiple items of PPE, gloves are typically the last piece that you will put on

56

Donning (Putting On) Gloves
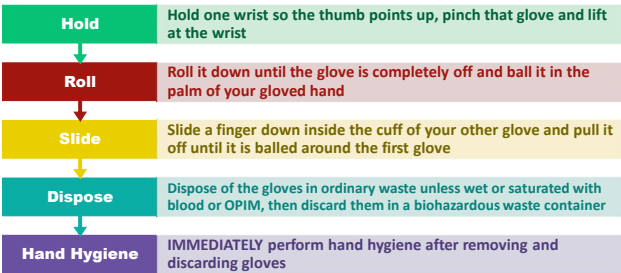
57

19
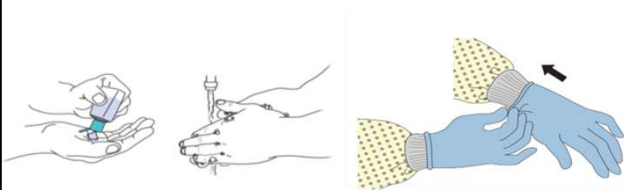
Doffing (Taking Off) Gloves

Remove gloves **carefully** to avoid contaminating your hands
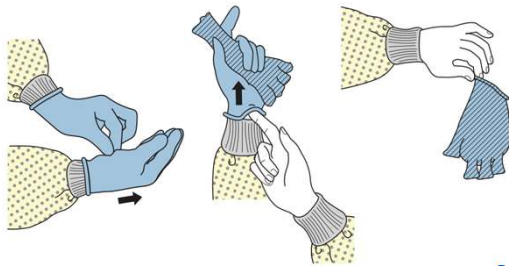
Don't **snap** gloves, which could cause germs to spray

58

Doffing (Removing) Gloves

Hold	Hold one wrist so the thumb points up, pinch that glove and lift at the wrist
Roll	Roll it down until the glove is completely off and ball it in the palm of your gloved hand
Slide	Slide a finger down inside the cuff of your other glove and pull it off until it is balled around the first glove
Dispose	Dispose of the gloves in ordinary waste unless wet or saturated with blood or OPIM, then discard them in a biohazardous waste container
Hand Hygiene	IMMEDIATELY perform hand hygiene after removing and discarding gloves

59

Doffing (Removing) Gloves

60

Change Gloves & Clean Hands

» **Don't attempt to clean disposable gloves with soap and water or alcohol-based hand sanitizer!**

» **Remove gloves, perform hand hygiene and put on new gloves if:**
  • Gloves become damaged
  • Gloves become visibly soiled with flood or body fluids during a task
  • You are moving from work on a soiled body site to a clean body site on the same resident/participant
  • You are moving from providing care for one resident/participant to another

61

Gloves Don't Prevent Cross-Contamination

Gloves can **transfer germs** from people to surfaces and from surfaces to people.

This Photo by Unknown Author is licensed under CC BY-NC

62

Use of Mouth, Nose and Eye Protection

Masks, Face Shields and Goggles

63

Cloth Face Coverings

Are probably better than no facial covering at all for source control but are **NOT for use in direct care environments** and **cannot be considered proper PPE**

64

CDC Standard Precautions – Mouth, Nose and Eye Protection

» **Full facial protection should be worn to protect the mucous membranes of the eyes, nose and mouth during procedures and care activities that are likely to generate splashes or sprays of blood, body fluids, secretions and excretions.**

» **Select masks, goggles, face shields, and combinations of each according to the need anticipated by the task performed**

65

Surgical or Procedure Masks

» **Loose-fitting disposable device that covers the mouth and nose of the wearer and helps to protect against contaminants**
» **Regulated by the FDA**
» **May have ear loops or ties**
» **May be referred to as surgical, isolation, dental or medical procedure masks**
» **Come with or without attached eye protection**
» **Come in different thicknesses and different levels of fluid resistance**
» **When used properly are meant to block large-particle droplets, splashes, sprays or splatter that contain germs and keep them from reaching your mouth and nose**

66

CDC Standard Precautions – Respiratory Hygiene & Cough Etiquette

» Offer facemasks to anyone with symptoms of respiratory infection (excluding sick staff or visitors from work or visitation is preferred)

» Request that all residents/participants with respiratory symptoms wear a facemask while receiving face-to-face care and when in common areas

67

Two Main Reasons to Use Masks

Protect Others

Source Control: Use of a face mask to cover the mouth and nose when talking, sneezing, or coughing to reduce the likelihood of spreading germs

Personal Protection (PPE): Use of a regulated surgical mask or respirator to protect the wearer from exposure to potentially harmful contaminants

Protect the Wearer
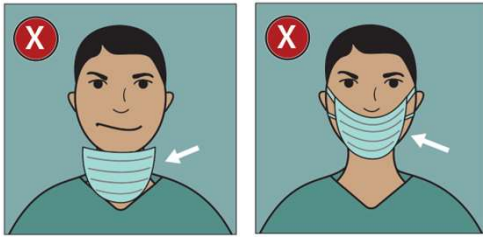
68

Donning (Putting On) Masks

» Perform hand hygiene before donning any PPE, including masks

» Secure all ties or elastic bands in proper locations (at middle of head and neck or behind ears)

» Shape the flexible band to the bridge of your nose

» Fit the mask snug to your face, over your nose and extending below your chin

69

Mask Don'ts

**Don't** wear your facemask under your mouth or nose.

70

Doffing (Removing) Masks

» Perform hand hygiene before removing any PPE. If your hands become contaminated during mask removal, immediately hand hygiene again.

» Grasp ties or elastics and remove them without touching the front of the mask. If there are two sets, remove the bottom ties or elastics first.

» Dispose of masks in the ordinary waste unless they are wet or saturated with blood or OPIM, then discard them in a biohazardous waste container

» IMMEDIATELY perform hand hygiene after removing and discarding mask

71

Doffing (Removing) Masks

Remember:
The front of the mask is contaminated!
DO NOT TOUCH
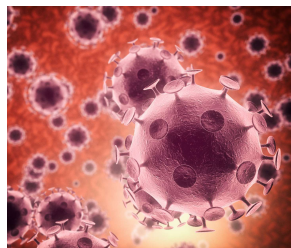
72

Eye Protection

Goggles

» Appropriately fitted, indirectly-vented goggles with a manufacturer's anti-fog coating provide the most reliable practical eye protection from splashes, sprays, and respiratory droplets

» While highly effective as eye protection, goggles do not provide splash or spray protection to other parts of the face

Face Shields

» Are commonly used as an infection control alternative to goggles

» Can provide protection to more areas of the face than goggles.

» Should have crown and chin protection and wrap around the face to the point of the ear, which reduces the likelihood that a splash could go around the edge of the shield and reach the eyes

73

Safety Glasses

» Safety glasses provide impact protection but do not provide the same level of splash or droplet protection as goggles and generally should not be used for infection control purposes

74

Regular Prescription Glasses DO NOT Count!

» Regular prescription eyeglasses and contact lenses are not considered eye protection

» Regular prescription eyeglasses do not provide protection against splashes, sprays or splatters of potentially infectious materials

» Contact lenses or glasses can be worn in conjunction with certain types of approved protective eyewear

75

Donning (Putting On) Eye Protection

» **Perform hand hygiene**
» **Remove clean eye protection from packaging**
» **Put on eye protection, securing any straps or bands to ensure a snug fit**

Note: When you are wearing eye protection with a mask or respirator, your mask or respirator must be put on first.

76

Doffing (Removing) Eye Protection

» **Remember – the outside of your eye protection is contaminated!**
» **Remove eye protection with un-gloved hands (used gloves are contaminated)**
» **Grasp the strap or band toward the back of the head and lift eye protection away from the face**
» **Dispose of disposable eye wear in a waste container or place reusable eyewear in a designated receptacle for reprocessing**
» **Perform hand hygiene after removing PPE and at any point during the removal process if hands become accidentally contaminated**

77

Use of Gowns

78

CDC Standard Precautions - Gowns

» Worn to protect skin and prevent soiling of clothing during activities that are likely to generate splashes or sprays of blood, body fluids, or OPIM

» Should be worn during handling of soiled laundry to prevent transfer of pathogens to skin and clothes from contaminated linens

79

Types of Gowns

Surgical Isolation Gowns & Surgical Gowns

**Non-Surgical Gowns (Isolation, Procedure, or Cover Gowns)**

80

Donning (Putting On) Gowns

» When multiple pieces of PPE are to be worn, gowns are typically put on first

» Perform hand hygiene

» Put on gown so that the torso is fully covered from the neck to the knees and arms are covered down to the wrist, then wrap the gown around to the back

» Secure ALL ties or fasteners (usually are present at neck and waist)
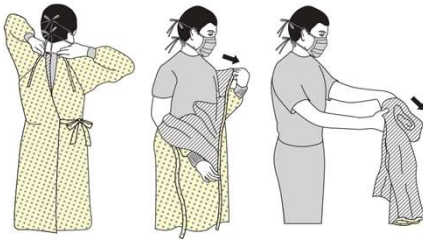
  • Do not wrap ties around to the front of the gown!

81

Doffing (Removing) Gowns – Option 1
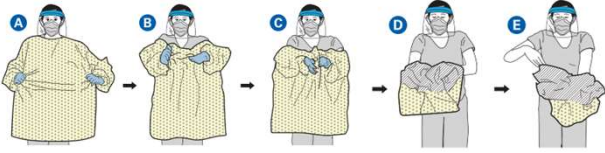
82

Doffing (Removing) Gowns – Option 2

83

Cleaning and Disinfection of Reusable Gowns

» Typically made of polyester or polyester-cotton fabrics. Gowns made of these fabrics can be safely laundered after each use according to routine procedures and reused

» Reusable gowns should be placed into appropriately labeled laundry receptacles with lids after doffing

» Routinely inspect & maintain (e.g., mend a small hole in a gown, replace missing fastening ties) reusable gowns

» Replace reusable gowns when needed (e.g., when they are thin or ripped)

» Store laundered gowns in a manner such that they remain clean until use

84

Donning (Putting On) & Doffing (Taking Off) Personal Protective Equipment Activity

85

Use of Respiratory Protection

Particulate Respirators

86

Respiratory Protection Program Elements

» Selecting a respirator

» Medical evaluations

» Fit testing procedures

» Use of respirators

» Procedures and schedules for cleaning, disinfecting, storing, inspecting, repairing, and otherwise maintaining respirators

» Training employees in respiratory hazards

» Training employees in the proper use of respirators, including putting on and removing them, any limitations on their use, and maintenance procedures

» Policy/procedure for regularly evaluating the effectiveness of the program

87

Types of Respiratory Protection

88

Standard Precautions

» Standard Precautions are the minimum infection prevention practices that apply to all residents/participants, regardless of infection status.

89

Transmission-Based Precautions

» Contact Precautions
» Droplet Precautions
» Airborne Precautions

90

Contact Precautions

» Used for the care of persons known or suspected to be infected with pathogens that have increased risk for transmission through contact with the person or their immediate environment (e.g., *C. Difficile*, norovirus, infectious diarrhea of unknown cause)

» Wear a gown and gloves for all interactions that may involve contact with the resident/participant or their environment

» Ensure disinfection products used are effective against the known or suspected pathogen

» Contact Precautions may be combined with Droplet Precautions for some pathogens

91

Droplet Precautions

» Used for the care of persons known or suspected to be infected with pathogens transmitted by respiratory droplets that are generated by a resident/participant who is coughing, sneezing, or talking (e.g., influenza)

» Wear a mask
  • Put on mask upon entry to the room or space
  • Individual settings or situations may additionally require goggles or a face shield for full face protection

» Resident/participant should use source control (wear a mask) if able to do so safely

» Droplet precautions may be combined with Contact Precautions for some pathogens

92

Airborne Precautions

» Used for the care of persons known or suspected to be infected with pathogens transmitted by the airborne route (e.g., tuberculosis, measles, chickenpox, disseminated herpes zoster)

» Ensure placement in an airborne infection isolation room (AIIR).
  • If unavailable ensure placement in a private room and keep the door closed

» Wear a fit-tested NIOSH-approved N95 or higher-level healthcare respirator
  • Individual settings or situations may additionally require goggles or a face shield for full face protection

» Resident/participant should use source control (wear a mask) if able to do so safely

» Airborne precautions may be combined with Contact Precautions for some pathogens

93

General Guidelines when Transmission-Based Precautions are in Use

» Limit transport and movement of residents/participants outside of the room to medically-necessary purposes.

» Use disposable or dedicated resident/participant-care equipment (e.g., blood pressure cuffs).

» Prioritize cleaning and disinfection of the rooms of residents on transmission-based precautions ensuring rooms are frequently cleaned and disinfected (e.g., at least daily) focusing on frequently-touched surfaces and equipment in the immediate vicinity of the resident/participant.

- Ensure disinfectants are listed as effective against the known or suspected pathogen

94

References

Centers for Disease Control and Prevention (CDC)
» CDC Infection Control Home
  https://www.cdc.gov/infectioncontrol/index.html
» CDC How Infections Spread
  https://www.cdc.gov/infectioncontrol/spread/index.html
» CDC Infection Control Basics
  https://www.cdc.gov/infectioncontrol/basics/index.html
» CDC Infection Control Guidelines Library
  https://www.cdc.gov/infectioncontrol/guidelines/index.html
» CDC PPE Sequence
  https://www.cdc.gov/hai/pdfs/ppe/ppe-sequence.pdf
Occupational Safety and Health Administration (OSHA)
» OSHA Bloodborne Pathogens Standard
  https://www.osha.gov/bloodborne-pathogens/standards
» OSHA Respiratory Protection Standards
  https://www.osha.gov/respiratory-protection/standards
Virginia Department of Health
» How to Develop a Respiratory Protection Program
  https://www.vdh.virginia.gov/content/uploads/sites/174/2022/01/Resource-Guide-for-Developing-a-Respiratory-Program-21.pdf

95

Preventing Transmission of Bloodborne Pathogens

96

Objectives

» **Define bloodborne pathogens**
» **Describe risks for exposure to bloodborne pathogens**
» **Discuss the chain of infection for bloodborne pathogens**
» **Discuss the components of an exposure control plan**
» **Define engineering and work practice controls for the prevention of bloodborne pathogen exposure**
» **Discuss safe injection practices, use of PPE, and Hepatitis B vaccination**
» **Describe steps to take if an exposure occurs**

VIRGINIA DEPARTMENT OF
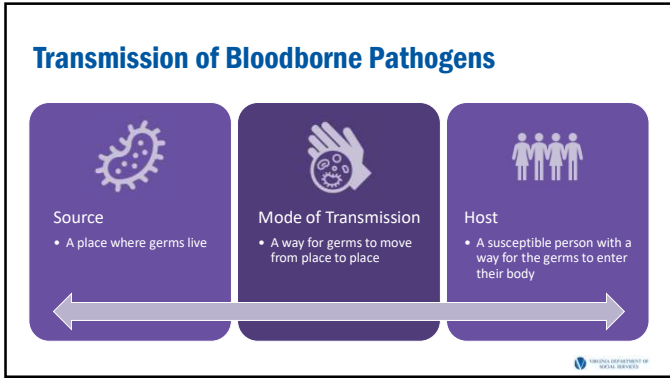SOCIAL SERVICES

97

What are Bloodborne Pathogens?

» **Bloodborne pathogens (BBP) are microorganisms present in human blood, saliva, and other body fluids that cause disease.**
» **The human bloodborne pathogens of greatest concern include:**
  • Hepatitis B Virus (HBV)
  • Hepatitis C Virus (HCV)
  • Human Immunodeficiency Virus (HIV)

VIRGINIA DEPARTMENT OF
SOCIAL SERVICES

98

Risks for Bloodborne Pathogen Exposure

» **Anyone who could come into contact with blood or other potentially infectious materials (OPIM) or to surfaces contaminated by blood or OPIM is at risk for exposure to bloodborne pathogens**

VIRGINIA DEPARTMENT OF
SOCIAL SERVICES

99

Transmission of Bloodborne Pathogens

Source	Mode of Transmission	Host
• A place where germs live	• A way for germs to move from place to place	• A susceptible person with a way for the germs to enter their body

100

OSHA Requirements for Control of Exposure to Bloodborne Pathogens

"In order to reduce or eliminate the hazards of occupational exposure to bloodborne pathogens, an employer must implement an exposure control plan for the worksite with details on employee protection measures. The plan must also describe how an employer will use engineering and work practice controls, personal protective clothing and equipment, employee training, medical surveillance, hepatitis B vaccinations, and other provisions as required by OSHA's Bloodborne Pathogens Standard (29 CFR 1910.1030)."

https://www.osha.gov/laws-regs/regulations/standardnumber/1910/1910.1030

101

Some Exposure Control Plan (ECP) Elements

» **Employee Education and Training**

» **Implementation of Universal Precautions**

» **Engineering and Work Practice Controls**

» **Personal Protective Equipment**

» **Housekeeping (including removal of regulated waste)**

» **Hepatitis B Vaccination**

» **Post-Exposure Evaluation and Follow-Up**

102

Treat **all** blood and bodily fluids
as if they are infectious.

103

Examples of Engineering Controls

» **Reduce risk for exposure by removing or isolating the hazard**
» **Includes implementation of commercially available and effective safer medical devices designed to eliminate or minimize occupational exposure**
  • Employers must provide proper training on the use of devices
» **Includes things like safety needles, single-use, auto-disabling lancets and sharps disposal containers**

104

Examples of Work Practice Controls

» **Development and Implementation of the Exposure Control Plan (ECP)**
» **Policies and Procedures that Reduce Risks**
  • Labeling biohazardous waste
  • Not overfilling sharps containers
  • Performing hand hygiene after removing gloves
  • Not bending or breaking sharps
  • Additional safe injection practices

105

Safe Injection Practices

» **Use aseptic technique to avoid contamination of sterile injection equipment**
» **Do not administer medications from a single syringe to multiple individuals**
  • Changing the needle is not sufficient to prevent transmission of bloodborne pathogens
» **Use single-dose vials for injectable medications whenever possible**
» **If multidose vials must be used**
  • They must be used and stored according to manufacturer's instructions
  • They must be accessed only with a sterile syringe and sterile needle/cannula

106

Personal Protective Equipment

» **Gloves**
» **Masks**
» **Gowns**
» **Face Shields**
» **Goggles**

107

Hepatitis B Vaccination

» **OSHA requires employers to make Hepatitis B vaccination available to all staff with potential exposure to bloodborne pathogens**

108

36

If an Exposure Occurs

» Wash needlesticks and cuts with soap and water
» Flush splashes to nose, mouth, or skin with water
» Irrigate eyes with clean water, saline, or sterile wash
» Report all exposures promptly to ensure that appropriate follow-up care is received

109

References

National Institute of Occupational Safety and Health (NIOSH)
» NIOSH Bloodborne Infectious Diseases
  https://www.cdc.gov/niosh/topics/bbp/default.html
» NIOSH Bloodborne Pathogen Exposure
  https://www.cdc.gov/niosh/docs/2007-157/default.html
Occupational Safety and Health Administration (OSHA)
» OSHA Bloodborne Pathogens and Needlestick Prevention
  https://www.osha.gov/bloodborne-pathogens
» OSHA Quick Reference Guide to the Bloodborne Pathogens Standard
  https://www.osha.gov/bloodborne-pathogens/quick-reference
» OSHA Worker Protection Against Occupational Exposure to Infectious Diseases
  https://www.osha.gov/bloodborne-pathogens/worker-protections

110

Environmental Infection Control & Considerations for Non-Care Areas
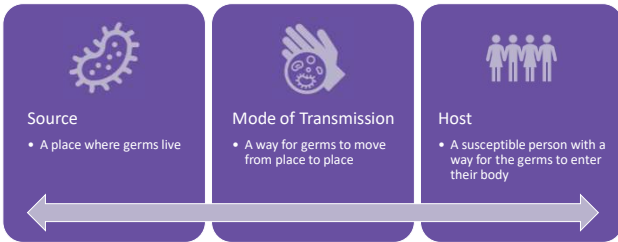
111

Objectives

» **Explain how cleaning and disinfection interrupts the chain of infection**
» **Describe the differences between cleaning and disinfection**
» **Identify information on disinfectant labels**
» **Define the following terms: contact time, high-touch surfaces, routine cleaning and terminal cleaning**
» **Describe general techniques for environmental cleaning and disinfection and cleaning and disinfection of care equipment & devices**
» **Describe infection control practices for the dining, kitchen and laundry areas**

112

Eliminating Sources of Infection on Surfaces

Source
• A place where germs live

Mode of Transmission
• A way for germs to move from place to place

Host
• A susceptible person with a way for the germs to enter their body

113

Cleaning & Disinfection

Cleaning
» **The process of physically removing foreign material (e.g., soil and organic material) from surfaces**
» **Uses water and detergent or enzymatic products that help lift soil from surfaces**
» **Reduces the number of germs by removing them from surfaces, but does not always kill them**

Disinfection
» **Use of products designed to kill germs on surfaces**
» **Most products are designed for a specific purpose (e.g., for use on hard surfaces)**
» **One of the most reliable ways to eliminate germs from surfaces**
» **Requires that soil has been physically removed from surfaces before use**

114

38

Disinfectant Labels Contain Important Information

» Active ingredients
» EPA registration number
» Signal words (caution, warning, danger)
» Precautionary statements
» First aid/accidental Exposure
» Storage and disposal

» Directions for Use
• Where to use
• What germs are killed
• What surfaces
• Preparation instructions (e.g., dilution measurements)
• How to apply or use
• Contact time

115

Finding Important Information on a Disinfectant Label Activity

116

Defining Contact Time

» Also referred to as dwell time, wet time, kill time
» The amount of time a surface must remain wet with disinfectant in order for germs to be killed
» Contact times vary widely between products and may depend on what germ you are attempting to kill
» May require multiple applications of product to keep the surface wet for the required amount of time

117

Defining High Touch Surfaces

» Surfaces most likely to be touched by residents/participants and staff
» Examples: handrails, doorknobs, light switches, elevator buttons, arms of chairs
» Pose the highest risk for touch transmission of pathogens
» Should be cleaned and disinfected more frequently than surfaces that are not touched as often

VIRGINIA DEPARTMENT OF SOCIAL SERVICES

118

Routine & Terminal Cleaning

Routine Cleaning

» Focuses on the resident/participant areas that are used frequently
» Includes cleaning high touch surfaces, common areas and bathrooms
» May be scheduled, but also includes addressing typical soil, such as spills or accidents as they occur
» Frequency of routine cleaning depends on setting-specific policies and how much the space gets used
» Includes both cleaning and disinfection, depending on surface type and use

Terminal Cleaning

» Refers to a type of deep cleaning that occurs when a room or space is changed over
» May occur when:
  • A resident moves out of a room in a residential setting (e.g., transfers or dies)
  • When a person who has been ill permanently leaves a space (e.g., sick holding rooms in ADCCs or COVID unit rooms)
  • When a person who has been ill recovers and transmission-based precautions are discontinued
» Always includes both cleaning and disinfection

VIRGINIA DEPARTMENT OF SOCIAL SERVICES

119

General Environmental Cleaning and Disinfection Techniques

» Always read and follow manufacturer instructions
  • Includes wearing and changing PPE when needed
» Keep clean and soiled supplies separate
» Start with cleaner areas and then proceed to dirtier areas
  • Includes cleaning healthy areas before sick areas, cleaning common spaces before individual care areas, and cleaning low touch surfaces before high touch surfaces
» Start with high surfaces within a space and proceed to lower surfaces
» Establish a pattern for cleaning to make sure you do not miss areas within a space (e.g., moving clockwise or up and down rows within a room)

VIRGINIA DEPARTMENT OF SOCIAL SERVICES

120

Cleaning & Disinfection of Care Equipment and Medical Devices

» **Equipment & devices that are used for more than one person must be cleaned and disinfected (if applicable) between uses**
» **NEVER reuse single-use items**
» **Clean before disinfection**
» **Ensure there is process that denotes and separates clean & soiled equipment**
   • Clean items should be stored in a dedicated clean storage area
   • Soiled items should be held in a dedicated area until reprocessed
   • NEVER place soiled items in clean storage spaces
» **Clean all surfaces, including crevices**
» **Use the correct products, and follow manufacturer's instructions**
» **Ensure that disinfectants achieve the proper contact time**

VIRGINIA DEPARTMENT OF SOCIAL SERVICES

121

Infection Control in the Dining Area

» **Ensure that hand hygiene is available and encouraged prior to entry into the dining room, provide help as necessary**
» **Tables should be set immediately prior to meals**
» **Rolled silverware may be less likely to be contaminated than open settings**
» **Unused place settings should be removed after each meal**
» **Tablecloths and cloth placemats should be replaced and laundered after every meal**
» **Tabletops, chair arms and backs and items on tables (like salt and pepper shakers, condiments, etc.) should be cleaned after each meal**

VIRGINIA DEPARTMENT OF SOCIAL SERVICES

122

Fluorescent Marker (Glo Germ) Evaluation of Cleaning and Disinfection Activity

VIRGINIA DEPARTMENT OF SOCIAL SERVICES

123

Infection Control & Food Safety in the Kitchen

» Clean your hands and surfaces often
» Separate, don't cross-contaminate
» Cook to the right temperature, use a thermometer
» Chill, refrigerate perishable foods promptly

This Photo by Unknown Author is licensed under CC BY

VIRGINIA DEPARTMENT OF SOCIAL SERVICES

124

Infection Control & Food Safety in the Kitchen

» Ensure all food items are dated
» Check expiration dates and discard expired/expiring foods regularly (at least every two days is a good guideline)
» Wash hands in handwashing sinks only
» Clean ice bins/ice machines routinely
  • Never store the scoop in the ice
» Keep staff food separate from resident/participant food

VIRGINIA DEPARTMENT OF SOCIAL SERVICES

125

Infection Control in the Laundry Area

» Laundry should be placed into bags or other closed/covered containers for transport
» Use appropriate PPE when handling soiled laundry
» Keep soiled and clean areas separate

VIRGINIA DEPARTMENT OF SOCIAL SERVICES

126

References

Centers for Disease Control and Prevention (CDC)

» Environmental Infection Control Guidelines -
https://www.cdc.gov/infectioncontrol/guidelines/environmental/index.
html

» Food Safety -
https://www.cdc.gov/foodsafety/

» Healthcare Environmental Infection Prevention -
https://www.cdc.gov/hai/prevent/environment/index.html

» How to Read a Disinfectant Label -
https://www.cdc.gov/hai/pdfs/howtoreadalabel-infographic-508.pdf

VIRGINIA DEPARTMENT OF
SOCIAL SERVICES

127