



FACT SHEET

Pennsylvania Chapter

UNIVERSAL, STANDARD AND TRANSMISSION-BASED PRECAUTIONS AS THEY APPLY TO CHILD CARE SETTINGS

The terms “Universal Precautions” “Standard Precautions” and “Transmission-based Precautions” were developed for applications in medical and industrial settings. They apply to child care with some adjustments from their meaning in other settings.

What are Standard Precautions?

Standard Precautions apply to contact with non-intact skin, mucous membranes, blood, all body fluids, and excretions except sweat, whether or not they contain visible blood. They include general methods of infection prevention are indicated for both children and adults in the early education and child care setting. These methods reduce the risk of transmission of microorganisms that can cause infection, even when those spreading the micro-organisms do not appear to be ill.

Standard precautions involve cleaning and sanitizing contaminated surfaces in addition to the use of barriers described in Universal Precautions. Unlike medical care settings, gowns and masks are not required in early education and child care facilities. Appropriate barriers to use in include materials such as disposable diaper table paper, disposable towels, and surfaces that can be sanitized. Use of non-porous gloves is optional except when blood or blood containing body fluids may be involved. (See “Wearing Gloves” below.)

What are Universal Precautions?

Universal Precautions apply to blood, other body fluids containing blood, semen, and vaginal secretions, but not to feces, nasal secretions, sputum, sweat, tears, urine, saliva and vomit unless these others contain visible blood or are likely to contain blood. Universal precautions include avoiding injuries caused by sharp instruments or devices and the use of protective barriers such as gloves, gowns, aprons, masks, or protective eyewear, which can reduce the risk of exposure of the worker's skin or mucous membranes that could come in contact with materials that may contain blood-borne pathogens while the worker is providing first aid or care.

What are Transmission-based Precautions?

Transmission-based Precautions are precautions in addition to Standard Precautions that are required where airborne, droplet and contact transmission of infectious organisms may occur. In addition to hand washing, cleaning and sanitation of surfaces, these include use of a room shared only by those who are infected with the same infectious agent (with negative-pressure ventilation when airborne spread is involved), use of masks for infections spread by the airborne and droplet routes, and use of gowns and gloves for diseases spread by contact.

Although gloves need not be worn in feeding human milk (breastmilk) or cleaning up spilled human milk, human milk can be contaminated with infectious materials. Wearing gloves to clean up a big spill of human milk is a reasonable, but is an optional additional precaution. While human milk can be contaminated with blood from a cracked nipple, the risk of transmission of infection to caregivers who are feeding expressed breast milk is very low.

Either single-use disposable gloves or utility gloves should be used. Single-use disposable gloves should be used only once and then discarded immediately without being handled. If utility gloves are used, they should be cleaned after every use with soap and water and then dipped in bleach solution up to the wrist. The gloves should then be taken off and hung to dry. The utility gloves should be worn, not handled, during this cleaning and sanitizing procedure.

What method should be used to apply Standard Precautions?

For spills of body fluids, urine, feces, blood, saliva, nasal discharge, eye discharge, injury or tissue discharges, and human milk, use the following step-by-step approach:

1. Pick up the spill using disposable towels and tools that can be sanitized afterward. Be careful not to splash any of the contaminated materials around.
2. Use a detergent to clean all surfaces in contact with the spill. Clean floors, rugs and carpeting that have been contaminated by body fluids by blotting to remove the fluid as quickly as possible, then clean and sanitize by spot-cleaning, shampooing, or steam-cleaning the contaminated surface. Cleaning and sanitizing rugs and carpeting that have been contaminated by body fluids is challenging. Trying to extract as much of the contaminating material as possible before it penetrates the surface to lower layers helps to minimize this challenge. Cleaning and sanitizing the surface without damaging it requires use of special cleaning agents designed for use on rugs, or steam cleaning.
3. For spills of vomit, urine, human milk, and feces, on floors, walls, bathrooms, tabletops, toys, kitchen counter tops, and diaper-changing tables: first clean the surface with detergent, then rinse the cleaned surface, and then apply a sanitizing solution. If the solution is a 1:64 dilution of bleach water (1 tablespoon of bleach to a quart of water prepared fresh daily from domestic bleach) the surface must be thoroughly wet and left in contact with the bleach solution for 2 minutes. If some other dilution or chemical is used to sanitize, follow the manufacturer's instructions.
4. Dispose of any blood-contaminated material in a plastic bag with a secure tie.

What should caregivers do when there has been a possible exposure to blood?

Stay calm and rational. Bacteria and viruses carried in the blood, such as hepatitis B virus, pose a small but specific risk in the child care setting. Blood and direct blood-derived fluids (such as watery discharges from injuries) pose the highest potential risk, because these body fluids contain the highest concentration of viruses. Hepatitis B virus can survive in a dried state in the environment for at least a week and perhaps even longer. Some other body fluids such as saliva contaminated with blood or blood-associated fluids may contain live virus (such as hepatitis B virus) but at lower concentrations than are found in blood. Other body fluids, including urine and feces, do not pose a risk with blood borne diseases unless they are visibly contaminated with blood, although these fluids do pose a risk with other infectious diseases.

Mucous membrane exposure to blood is unlikely to cause disease unless the person whose blood was transferred has a blood-borne disease. Instances in which one child draws blood of another individual during biting or otherwise gets blood from another person on mucous membranes are very rare, but can cause considerable concern. Child bites do not often break the skin and when the skin is broken, bleeding begins a few seconds later, usually after the biter releases the bitten flesh. Despite the fact that biting is a common behavior by young children, transmission of blood borne disease by biting in child care has not been reported.

Nevertheless, if blood transfer has occurred, exposing a mucous membrane to blood from another individual (e.g. blood from another individual is visible in the mouth of a biter), this should be treated as an accidental exposure to a potential HIV-containing body fluid. HIV testing may not account for a potential exposure to the virus from the time between a previous test and the exposure. The person who has experienced a mucous membrane exposure to blood should be tested up to 9 months after the exposure if the status of the donor of the blood is unknown.

When a mucous membrane blood exposure occurs, child care providers should:

- Inform the exposed adult or the parents of the child who had a mucous membrane exposure to someone else's blood that:
 - 1) The adult or child was exposed to another person's blood;
 - 2) The risk of transmission of HIV is very small;
 - 3) The exposed adult or the parents of the exposed child should notify the primary care physician of the exposure;
 - 4) The person who was exposed to blood should have a baseline test for HIV.
- Inform the person whose blood was involved (or the legal guardians if that person is a child) about the incident and ask:
 - 1) If the person whose blood is involved ever had an HIV test and, if so, if those results could be shared with the exposed adult or parents of the exposed child;
 - 2) If that person does not know or has never had an HIV test if that person would be willing to have one and share results with the exposed adult or the parents of the child who was exposed.

Some children and adults may unknowingly be infected with HIV or other infectious agents, such as hepatitis B virus, as these agents may be present in blood or body fluids. Thus, the staff in all facilities should adopt standard precautions for all blood spills and possible exposure to blood. The Occupational Safety and Health Administration (OSHA) requires a facility plan and annual training of staff members who may be exposed to blood as a condition of their employment. These OSHA requirements apply to child care workers who are employees. The sanctions for failing to comply with OSHA requirements can be costly, both in fines and in health consequences. Child care providers should take the necessary steps to meet OSHA requirements. Regional offices of OSHA are listed with other federal agencies in the telephone directory. ECELS-Healthy Child Care PA has an On-line Self-Learning Module that guides early education and child care providers through the development of a facility plan at www.ecels-healthychildcarepa.org.

What should caregivers do if a child has been fed the milk of another child's mother?

Promote breastfeeding at every opportunity, but be careful so a human milk mix-up doesn't happen. Feeding human milk to babies has benefits that include preventing disease in the short term as well as throughout life. Child care providers should do everything they can to encourage families of infants to try to use human milk for as many milk feedings as possible. Human milk is a body fluid, and can carry infectious agents. So, with rare exceptions, babies should drink their own mother's milk only.

Instances in which one child is mistakenly fed another child's bottle should not occur if proper procedures are used. Caregivers must be sure that all infant feeding bottles are labeled with the child's name and date of preparation and that they check the label on the bottle every time they start to feed. A mix-up could happen if the caregiver picks up a bottle that was prepared for another child, or one that another child dropped or put down. Risk of HIV transmission from expressed human milk that another child has drunk is believed to be low because:

- In the United States, women who know they are HIV-positive are advised not to breastfeed their infants;
- Compounds present in human milk, together with time and cold temperatures, act to destroy the HIV present in expressed human milk.

If a mix-up occurs, it must be treated as an accidental exposure to a potential hepatitis B, hepatitis C, CMV (cytomegalovirus) or HIV-containing body fluid. All infants should have been immunized against hepatitis b, and CMV is a common infection for young children. To address the concern about transmission of HIV by human milk when a mix-up occurs, providers should:

- Inform the parents of the child who was given the wrong bottle that:
 1. Their child was given another child's bottle of expressed human milk;
 2. The risk of transmission of HIV is very small;
 3. They should notify the child's physician of the exposure;
 4. The child should have a baseline test for HIV.
- Inform the mother who expressed the human milk of the bottle switch and ask:
 1. If she has ever had an HIV test and, if so, if she would be willing to share the results with the parents of the exposed child;
 2. If she does not know if she has ever had an HIV test, if she would be willing to contact her obstetrician and find out, and if she has, share the results with the parents;
 3. If she has never had an HIV test, if she would be willing to have one and share results with the parents;
 4. When the human milk was expressed and how it was handled before being brought to the facility.
- Since HIV testing may not account for a potential exposure to the virus from the time in between the previous test and the exposure, an infant should be tested up to 9 months after the exposure if the status of the donor mother is unknown. If an infant is exposed to expressed human milk from someone else's mother, that infant should complete the hepatitis b vaccination series, if the series is not complete already.

Reference: American Academy of Pediatrics and the American Public Health Association. *Caring for Our Children, the National Health and Safety Performance Standards: Guidelines for Out-of-Home Care*, 2nd edition, 2002.

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