Clean-up Procedures for Vomit/Fecal Events

The 2017 FDA Food Code requires that all food establishments have a procedure for responding to vomiting and diarrheal events. This is an example procedure for employees to follow when responding to vomiting or diarrheal events in a food establishment.

Regulation

2-501.11 FDA Food Code

A Food Establishment shall have procedures for employees to follow when responding to vomiting or diarrheal events that involve the discharge of vomitus or fecal matter onto surfaces in the Food Establishment. This document serves as recommended guidance for this requirement.

Vomit and diarrhea spreads viruses quickly

When there is a vomit or diarrheal event there is a high potential for the spread of viruses. A proper response to such an event in a timely manner can reduce the likelihood that food may become contaminated and that others may become ill as a result.

Environmental Protection Agency - other effective disinfectants

http://www.epa.gov/oppad001/chemregindex.htm

Center for Disease Control - Prevention Norovirus Infection

http://www.cdc.gov/norovirus/preventing-infection.html

Vomiting and diarrheal accidents should be cleaned up using the following recommended steps:

- Minimize the risk of disease transmission through the prompt removal of ill employees, customers, and others from areas of food preparation, service, and storage.
- Wear disposable gloves during cleaning. To help prevent the spread of disease, it is highly recommended that a disposable mask and/or cover gown, (or apron), and shoe covers be worn when cleaning liquid matter.
- Segregate the area and cover the vomit/fecal matter with single use disposable towel to prevent aerosolization.
- Mix a chlorine bleach solution that is stronger than the chlorine solution used for general sanitizing [the Centers for Disease Control and Prevention recommends 5000 ppm or 1 cup of regular household bleach (8.25%) per gallon of water. Other effective disinfectants can be found on Environmental Protection Agency's website listed below.
- Ensure the affected area is adequately ventilated (the chlorine bleach solution can become an irritant when inhaled for some individuals and can become an irritant on skin as well).
- Soak/wipe up the vomit and/or fecal matter with towels and dispose of them into a plastic garbage bag.
- Apply the bleach solution onto the contaminated surface area and allow it to remain wet on the affected surface area for the least 1 minute. Allow the area to air dry. Dispose of any remaining disinfectant solution once the accident has been cleaned up.
- Discard all gloves, masks, and cover gowns (or aprons) in plastic bag and dispose of the bag immediately.
- Take measures to dispose of and/or clean and disinfect the tools and equipment used to clean up the vomit and/or fecal matter.
- PROPERLY WASH YOUR HANDS - AND IF POSSIBLE, TAKE A SHOWER AND CHANGE YOUR CLOTHES.
- Discard any food that may have been exposed in the affected area. Document the information of the person(s) who was ill. Information such as: name, address, age, and travel history (itinerary of last few days), and a 3-day food consumption history should be included.
- Complete an incident report of actions taken. Include information such as: the location of the incident, the time and date, and procedures of the cleanup process. Keep the information on file by the business for at least a year. NOTE: the information may be useful for the health department's investigation.

TEXAS
Health and Human Services

Texas Department of State Health Services

Consumer Protection Division
Policy, Standards, And Quality Assurance Section
Public Sanitation And Retail Food Safety Unit

GUIDANCE FOR CLEANING UP OF BLOOD OR BODILY FLUIDS

Why are vomiting and diarrhea incidents high-risk for the spread of contamination? Often times, when a person with gastroenteritis vomits or has diarrhea, projectile or explosive vomiting or diarrhea can occur and propel small airborne virus particles within a 25-foot radius. Gastroenteritis viruses have been known to survive for 12 -60 days on environmental and hard surfaces such as toilets, faucets, door handles, handrails, carpets, upholstery, telephones, computers, touch screens, equipment, and kitchen preparation surfaces. These viruses, known scientifically as enteric viruses and more commonly as intestinal viruses, can cause gastroenteritis and include rotaviruses, hepatitis A, and norovirus. Blood, vomit and feces may contain germs that can cause serious infections. People who clean blood and other bodily fluids should reduce the risk of infection to themselves and others by following these procedures:

Norovirus is one of the best known and the most frequent cause of foodborne gastroenteritis. The U.S. Centers for Disease Control and Prevention (CDC) reported that about 21 million cases of norovirus occur each year in the U.S. and that it is responsible for 58% of the foodborne illnesses and 50% of the foodborne outbreaks in which a known microorganism is identified. While the duration of norovirus symptoms – nausea, vomiting, diarrhea, cramping and fever – lasts only one to five days in most people, it can develop into a serious illness for the very young and the elderly. Ill persons may shed the virus in their feces for up to two

weeks following their illness; improper hand washing could allow the virus to continue to spread.

Quaternary ammonium compounds that are typically used in daily foodservice environment cleaning will not eliminate viruses expelled during a vomiting or diarrheal event. If an appropriate disinfectant is not used to clean up potentially contaminated areas, it is likely that viruses will still be present. Because the viruses can survive for a number of days on hard surfaces, there is a potential for people to become infected days after the initial vomiting or diarrheal event.

Both CDC and the U.S. Occupational Safety and Health Administration (OSHA) recommend chlorine as the disinfectant of choice against norovirus; that also makes it an effective choice against other viruses and pathogens that commonly cause gastroenteritis. CDC has recommended various concentrations to be used dependent upon the type of contamination – directly on a spill or type of surface. A chlorine bleach solution can be made from regular, unscented household bleach, which is about 5.25% chlorine, or from the chlorine sanitizer used for low-temperature dish machines, which may be about 6% chlorine. Some concentrated household bleaches are now available at 8.25% chlorine.

Table 1 has examples of how to prepare appropriate dilutions of bleach at the recommended concentration. Note: The concentrations are approximate for ease of preparation. Use chlorine test strips to monitor lower concentrations of solutions.

Table 1: Dilution of Household Bleach for appropriate concentration for use in cleanup of vomiting or diarrheal spill			
Dilution: 5.25% household bleach, 6% dish machine concentration	**Dilution: 8.25% concentrated bleach (use 1/3 less)**	**Approximate Concentration**	**Use**
1 part bleach to 10 parts water 1-2/3 cup bleach/gallon of water	1 part bleach to 16 parts water 1 cup bleach/gallon of water	5,000	Directly on spill Porous Surfaces Wooden Floors
1 part bleach to 50 parts water 1/3 cup bleach/gallon of water	1 part bleach to 80 parts water 1/8 cup bleach/gallon of water	1,000	Non Porous Surfaces Hard Surfaces
1 part bleach to 250 parts water 1 tablespoon bleach/gallon of water	1 part bleach to 400 parts water 2 teaspoons bleach/gallon of water	200	Food Contact surfaces Stainless Steel Surfaces

When using chlorine as the disinfectant of choice, there are a few things to keep in mind:

- A fresh solution must be used, no older than 30 days, when preparing from household bleach.

- Chlorine can be dangerous to use. It must not be mixed with any other chemicals, especially the quaternary ammonium compounds due to the hazardous gas that can form.
- When using chlorine, try to use pump bottles or pour bottles rather than spraying bottles so the chlorine does not become aerosolized and inhaled by employees. Spray bottles can also disturb or "stir up" virus particles back into the air.
- When chlorine is not a possible choice for a disinfectant due to the type of surfaces being treated or because chlorine is not kept on the premises for safety reasons, there are alternatives to chlorine. It is important to ensure that any alternatives you choose are U.S. Environmental Protection Agency (EPA) or OSHA approved. The EPA has a list of disinfectants approved for use against norovirus. Not all products on this list are approved for food establishments, so check the label.

Some suggested actions immediately after a vomiting incident are as follows:

- Position signage and/or an employee to block entry into a contaminated area, whether in the food prep area or in a dining area.
- If the incident occurs in food prep area, stop all food prep and serving operations.
- Discard any food that has any possibility of being contaminated, whether it was in the process of preparation, cold holding, hot holding, or being served. Consider everything in the 25-foot radius of the incident as being contaminated. Because single-service items and portion packages are not practical to disinfect, discard these items.
- Begin spill clean-up and disinfection as soon as possible. (See next section)
- Have employees focus on frequent, proper hand washing and glove use.
- Monitor dish machine rinse water temperature or sanitizer concentration.
- Encourage hand washing for customers as well.

- If incident occurs in dining area, it is appropriate to remove/discard potentially contaminated self-service items such as mints, salt/pepper, creamers, etc. and having employees serve these items to prevent cross-contamination and carry over to other customers.
- Disinfect or discard menus that may have been contaminated.
- Remove customers within a 25-foot area of the incident and offer to reseat, when possible. Explain that these measures are being taken so that clean up and disinfection can be done immediately and carried out safely. Each establishment should develop its own protocol for compensating guests inconvenienced or affected by an illness incident.
- In a buffet situation, food items must be replaced if they are within the 25-foot radius. To avoid the use of any potentially contaminated plates, cuts and cutlery, have employees hand out these items and serve customers. If the food buffet is outside the contaminated area, consider replacing food items, where feasible.

While having to remove and relocate customers is challenging, it is important that the food establishment take all the appropriate steps to protect customers from exposure and perform due diligence. Most customers will understand and welcome these precautions. Employees charged with the responsibility for cleanup of these spills need to be provided the resources for protecting themselves as well as properly cleaning up and disinfecting the area. The next section details what these resources include and how to use them.

CLEANUP PROCEDURES AND SPILL KITS

One of the important tools or resources for cleaning up vomit or feces is a cleanup kit. This resource needs to be available and properly supplied for effective disinfection of areas contaminated during a vomit or diarrhea event. Keep the kit

in a readily available area and properly train employees that could potentially use the cleanup kit on its use.

What should the spill cleanup kit include? The following is a list of items that should be included:

- Personal Protective Equipment (PPE)
  - Disposable nitrile or non-latex gloves
  - Face and eye shields
  - Disposable apron
  - Shoe covers
  - Hair covers
- Absorbent powder to solidify or gel debris (baking soda, sand, cat litter, etc.)
- Scoop and/or scraper to remove the absorbent material – preferably disposable
- Large volume of disinfectant effective against norovirus to apply to the entire spill area (Chlorine, hydrogen peroxide, specially formulated quaternary ammonium compounds, etc.)
- Disinfectant wipes or paper towels
- Large plastic bag and twist tie closure for disposal of materials

The following sequence should be used for spill cleanup:

1. If they haven't been removed already, request that people clear the area that is to be disinfected and ensure they do not enter food preparation, service, or storage areas to prevent further contamination and so that the cleanup can be done immediately and safely.
2. PPE should be put on in the following order: apron, shoe covers, hair cover, face mask/shield or goggles for eye, and lastly, gloves. This order is important to prevent the gloves from being damaged while donning the equipment. It is easier to put this protective gear on without gloves.

3. Some may wish to consider the use of double gloves to further protect themselves.
4. Spread the absorbent over the vomit or diarrhea spill.
5. Allow the absorbent to soak up any liquid and become solidified.
6. Scrape and/or scoop up the absorbent and place without agitation or movement into the disposable bag. Keep in mind that if the incident occurs on a carpeted surface, it presents special circumstances as the carpet may absorb some of the spill. scooping/scraping up the debris may create spatter if the nap is scraped.
7. Apply disinfectant to the entire area and allow it to stand for the manufacturer's recommended time – 5-10 minutes for chlorine bleach.
8. Use paper towels or disinfectant wipes to clean up the disinfectant and place into disposable bag. You may also use additional wipes with disinfectant to further clean the spill area.
9. Remove PPE and place it into disposable bag, being careful to remove gloves last so that hands are not contaminated. Using double gloves is also an option so that the initial pair of gloves used in cleanup can be discarded and second gloves can be worn when contacting the disposal bag.
10. Close the bag with the twist tie and immediately transfer to outside dumpster. In most locations this material can be placed into the dumpster and is not considered a biohazard, but check with you local regulations to be sure.
11. The employee should then wash hands and any exposed part of arms using soap and water.

While the immediate spill is being disinfected, other surfaces in the area may also be disinfected as well. In a dining room, this may include tables and chairs, service counters, condiment stations, walls, etc. while in the food preparation area, those surfaces closest to the spill such as equipment surfaces, doors to

reach-in coolers could be disinfected. Focus first on areas that are closest to the spill.

Because the ill person or other customers may have also had incidents in the restroom, cleaning and disinfecting the restrooms should be part of any cleanup procedure. Typically, the industrial chemicals sold to disinfect bathrooms will be effective against pathogens that cause gastroenteritis. But just to be sure, check the label to verify it has effectiveness against norovirus (Feline calicivirus may be referenced) and use as directed.

As hand washing is the best way to prevent foodborne illnesses, increase awareness and handwashing for all employees, especially following a vomit or diarrheal event in an establishment. Not all hand sanitizers are effective against norovirus. A 70% alcohol solution in a liquid form is optimal compared to gels or foams. In some instances, it may be appropriate to close a location to facilitate a complete cleaning and disinfection, especially if there was a large amount of food contaminated. Complete and total disinfection of an establishment is one way to "break the cycle" so that lingering virus particles on hard surfaces do not continue to cause illnesses days later.

TYPES OF SURFACES AND APPROPRIATE DISINFECTION

Various types of surfaces will be found in foodservice establishments – hard, non-porous surfaces, porous surfaces, and items that can be machine-washed. Depending upon the surface or materials, the disinfectant choice and concentration will vary (refer to Table 1 for suggestions). It is important to note that before an area can be disinfected, visible debris must first be removed with disposable towels to which disinfectant has been applied. These should also be placed in a disposable bag. Employees cleaning should wear PPE to prevent exposure to pathogens.

What are the hard, non-porous surfaces to include in the disinfection?

- Countertops, stainless steel surfaces
- Tables, chairs – remember to include tops and bottoms of these areas
- Handles, doorknobs, hand rails
- Sinks, faucets, and toilets – all surfaces
- Items touched by everyone – light switches, elevator buttons and public telephones
- Walls, bare floors, and even ceilings may be considered for disinfection

Apply disinfectant and allow it to stand for the minimum contact time or to air dry so that any pathogens are killed. Remember, if a food contact surface was directly contacted by the spill, it must be rinsed with water after disinfection. All food contact surfaces or equipment suspected of being contaminated with virus fallout may be first washed and then disinfected with 200 ppm chlorine solution. Equipment and utensils can then be run through a dish machine. It is best to use disposable towels or equipment when removing debris, disinfecting or rinsing surfaces so that there are not items that must be disinfected after use, for example mops or cloth towels.

Some surfaces are porous and are more difficult to clean and disinfect:

- Carpets
- Upholstered chairs/sofas
- Draperies
- Wooden floors and surfaces

A caution: It is important to refrain from vacuuming a contaminated area prior to disinfectant as this will just allow any pathogens to become airborne and spread contamination.

On porous surfaces, chlorine bleach is obviously not an appropriate disinfectant due to the fabric bleaching/discoloration that would most likely occur. A disinfectant may be used, but may need to be tested first for color fastness. If a disinfectant is used, the area should be saturated and allowed to stand for the minimum contact time recommended on the label or to air dry. Steam cleaning may be a better option for carpets and upholstered surfaces. To inactivate norovirus, steam cleaning must be done at 158 -170°F for at least five minutes or if possible, 212°F for one minute. This means that hot water from the faucet would not be adequate and that the steamer used must be able to heat the water up to temperature.

Machine washing is an option for items such as:

- Tablecloths, aprons, cloth napkins, and towels
- Employee uniforms and clothing
- Window coverings

It is important that any contaminated items are not shaken but folded and placed in an isolated laundry bag so they can be removed to a laundry area without causing further airborne particles that might contaminate other surfaces. Do not launder contaminated articles with other items; wash these separately with a pre-wash and then a regular wash with detergent. Most importantly, dry at a temperature on a high heat cycle that reaches 170°F.

Texas Department of State Health Services

DEPARTAMENTO ESTATAL DE SERVICIOS DE SALUD DE TEXAS

DIVISIÓN DE SERVICIOS REGULADORES

GRUPO DE SANIDAD PÚBLICA Y SEGURIDAD DE ALIMENTOS DE VENTA AL POR MENOR

GUÍA PARA LA LIMPIEZA DE SANGRE O LÍQUIDOS CORPORALES

¿Por qué el vómito y la diarrea son incidentes con un alto riesgo de transmisión de contaminación? A menudo, cuando una persona con gastroenteritis vomita o tiene diarrea, puede suceder que el vómito o la diarrea se produzcan en proyectil o de forma explosiva y lancen pequeñas partículas víricas al aire en un radio de 25 pies. Se sabe que los virus de la gastroenteritis han sobrevivido de 12 a 60 días en el ambiente y en superficies duras como excusados, grifos, manijas de puertas, barandales, alfombras, tapicería, teléfonos, computadoras, pantallas táctiles, equipo, y superficies de cocina para la preparación de alimentos. Estos virus, científicamente conocidos como virus entéricos y más comúnmente como virus intestinales, pueden causar gastroenteritis e incluyen los rotavirus, el virus de la hepatitis A y los norovirus. La sangre, el vómito y las heces pueden contener gérmenes que son causa de infecciones graves. Las personas que limpian sangre y otros líquidos corporales deben reducir el riesgo de infectarse e infectar a otros siguiendo estos procedimientos:

El norovirus es uno de los virus mejor conocidos y constituye la causa más frecuente de gastroenteritis transmitida por alimentos. Los Centros para el Control y la Prevención de Enfermedades (CDC) de EE. UU. han informado que aproximadamente 21 millones de casos de norovirus ocurren cada año en EE. UU., y que el norovirus es responsable del 58% de las enfermedades transmitidas por alimentos y del 50% de los brotes por transmisión alimentaria en los que se identifica un microorganismo conocido. Mientras que la duración de los síntomas

por norovirus –náusea, vómito, diarrea, retortijones y fiebre– es solo de uno a cinco días en la mayoría de la gente, la enfermedad puede llegar a ser grave en los niños muy pequeños y las personas mayores. Los enfermos de gastroenteritis pueden excretar el virus en sus heces por un periodo de hasta dos semanas después de haberse enfermado; un lavado de manos inadecuado puede dar lugar a que el virus continúe transmitiéndose.

Los compuestos de amonio cuaternario que típicamente se usan para la limpieza diaria en el ambiente de los servicios de alimentos no eliminan los virus que han sido expulsados con el contenido de un vómito o una deposición con diarrea. Si no se usa un desinfectante adecuado para limpiar las áreas que pueden estar contaminadas, es probable que los virus sigan ahí presentes. Dado que los virus pueden sobrevivir durante varios días sobre una superficie dura, existe la posibilidad de que la gente se infecte días después de haber ocurrido el evento inicial de vómito o diarrea.

Tanto los CDC como la Administración de Seguridad y Salud Ocupacional (OSHA) de EE. UU. recomiendan el uso de cloro como el desinfectante de preferencia contra los norovirus; su uso también es eficaz contra otros virus y gérmenes patógenos que comúnmente causan gastroenteritis. Los CDC recomiendan diversas concentraciones para su uso, dependiendo del tipo de contaminación – directamente sobre un derramamiento contaminante o sobre un tipo determinado de superficie. Es posible preparar una solución de cloro con el uso de blanqueador casero de tipo normal y sin aroma, el cual contiene aproximadamente 5.25% de cloro, o con desinfectante (*sanitizer*) de cloro para uso en máquinas lavavajillas de baja temperatura, el cual puede contener aproximadamente 6% de cloro. Actualmente están disponibles algunos blanqueadores domésticos concentrados en una solución al 8.25% de cloro.

En la **Tabla 1** se muestran ejemplos de cómo preparar diluciones de blanqueador en la concentración recomendada. Nota: Las concentraciones se dan en cantidad aproximada para facilitar su preparación. Use tiras reactivas de prueba para cloro para monitorear concentraciones más bajas de las soluciones.

Tabla 1: Dilución de blanqueador casero en una concentración adecuada para el uso en la limpieza de derrames de vómito o diarrea			
Dilución: concentración con blanqueador casero al 5.25%, con líquido lavavajillas al 6%	**Dilución: blanqueador concentrado al 8.25% (use 1/3 menos)**	**Concentración aproximada**	**Uso**
1 parte de blanqueador por 10 partes de agua De 1/3 a 2/3 de taza de blanqueador por cada galón de agua	1 parte de blanqueador por 16 partes de agua 1 taza de blanqueador por cada galón de agua	5,000	Directamente sobre el derrame Superficies porosas Pisos de madera
1 parte de blanqueador por 50 partes de agua 1/3 de taza de blanqueador por cada galón de agua	1 parte de blanqueador por 80 partes de agua 1/8 de taza de blanqueador por cada galón de agua	1,000	Superficies no porosas Superficies duras
1 parte de blanqueador por 250 partes de agua 1 cucharada de blanqueador por cada galón de agua	1 parte de blanqueador por 400 partes de agua 2 cucharaditas de blanqueador por cada galón de agua	200	Superficies de contacto con alimentos Superficies de acero inoxidable

Cuando el cloro sea el desinfectante de uso, deben tenerse presentes unas cuantas cosas:

- Cuando la preparación se haga con blanqueador casero, debe utilizarse una solución recién preparada, con una antigüedad no mayor de 30 días.
- El uso del cloro puede ser peligroso. No se debe mezclar con ningún otro producto químico, especialmente los compuestos de amonio cuaternario, debido al gas peligroso que se puede formar.
- Cuando use cloro, trate de usar botellas de bombeo o botellas de vertido normal, en lugar de botellas con rociador, para evitar que el cloro se expulse en aerosol y sea inhalado por los empleados. Las botellas con rociador también pueden perturbar o "revolver" las partículas víricas y regresarlas al aire.
- Cuando el uso del cloro como desinfectante no es posible debido al tipo de superficies que deban tratarse o porque el cloro no se encuentre para su uso en las instalaciones por razones de seguridad, existen otras alternativas al cloro. Es importante asegurarse de que cualquier alternativa que usted elija esté aprobada por la Agencia de Protección Ambiental (EPA) de EE. UU., o por la OSHA. La EPA tiene una lista de desinfectantes aprobados para su uso contra los norovirus. No todos los productos en esta lista están aprobados para su uso en establecimientos alimentarios, de manera que debe verificar la etiqueta.

A continuación se sugieren algunas acciones que deben realizarse inmediatamente después de un incidente de vómito:

- Colocar una señal o un empleado que bloqueen el paso al área contaminada, ya sea en el área donde se preparen los alimentos o en un área de comedores.
- Si el incidente ha ocurrido en el área de preparación de alimentos, detenga todas las operaciones de preparación y servicio de alimentos.

- Deseche cualquier alimento que pueda haberse contaminado, tanto si estaba en el proceso de preparación, de mantenimiento en frío, de mantenimiento en caliente o de servirse. Considere contaminado todo lo que se encuentre dentro de un radio de 25 pies en donde ocurrió el incidente. Dado que no es posible desinfectar los artículos para servicio único y los envases en porciones para su uso, deseche estos artículos.
- Empiece lo antes posible la limpieza y desinfección del derrame. (Vea la sección siguiente).
- Haga que sus empleados centren su atención en lavarse las manos con frecuencia y adecuadamente y en el uso de guantes.
- Monitoree la temperatura del agua del ciclo de enjuague o la concentración de desinfectante (*sanitizer*) en la máquina lavavajillas.
- Anime también a los clientes a que se laven las manos.
- Si un incidente de vómito ocurre en el área de comedores, lo adecuado es eliminar/desechar los artículos de autoservicio que pueden haberse contaminado, como pastillas de menta, saleros y pimenteros, jarritas para crema, etc. y hacer que los empleados sirvan estos artículos a fin de evitar la contaminación cruzada y que se transmita a otros clientes.
- Desinfecte o deseche las cartas de menú que puedan haberse contaminado.
- A los clientes que se encuentren dentro de un área de 25 pies de donde haya ocurrido el incidente retírelos de ahí y ofrézcales acomodarlos fuera del área, de ser posible. Explíqueles que estas medidas son necesarias para que la limpieza y desinfección puedan llevarse a cabo de forma inmediata y sin riesgos. Cada establecimiento debe desarrollar su propio protocolo que sirva para compensar a los clientes que sufran las molestias o sean afectados por un incidente de riesgo a la salud.
- Si un incidente de este tipo ocurre en un buffet, los artículos alimenticios deberán reemplazarse cuando se encuentren dentro de un radio de 25 pies de donde ocurrió el incidente. Con el fin de evitar el uso de algún plato,