Guidelines for the Control of Norovirus in Hotels and Casinos



The Southern Nevada Health District has developed these guidelines to offer direction for hotels and casinos in the prevention and control of norovirus outbreaks. The recommendations are made in addition to the Health District's "Regulations Governing the Health and Safety of Public Accommodation Facilities."

While these guidelines are specific to norovirus, the controls detailed in this document are effective against a variety of gastrointestinal outbreaks. Therefore, even if the cause is unknown, these guidelines should be put in place as soon as a gastrointestinal outbreak is suspected. Rapidly implementing control measures can prevent additional illnesses.

Because each outbreak is unique to the circumstances and the property, it is not possible to predict which of the environmental controls would be most important in preventing the spread of disease. However, following as many of the recommendations as possible will reduce the chances of illness spreading in your facility. During an outbreak, some of these recommendations, as well as other items not on this list, may be required by the Health District.

Representatives from the Health District are available to help answer any questions about norovirus, these guidelines, or the process of outbreak investigation and control. If an outbreak is suspected at your facility, it is important to contact the Health District immediately so that staff can work with you to quickly minimize and end the spread of illness. For more information, contact your assigned inspector assigned to your facility, or the Health District's Office of Epidemiology and Disease Surveillance at (702) 759-1300. Additional resources are included at the end of this document and at www.snhd.info.

How to Use This Document

This document is intended to be used as a checklist. Review all of the control measures listed below. For each item, identify if it is already a part of your Standard Operating Procedures. If so, check the box under "SOP." If not, and you plan to implement the item, fill in the date your facility plans to implement that control measure under "Starting Date." If the outbreak is ongoing, continue to refer to this document and update responses as needed.

Section	on 1: General Recommendations	SOP	Starting Date
1.1	Increase employee handwashing in all employees to: At least once per hour Upon entering a kitchen After using the restroom After shaking hands or other physical contact with peers and guests After sneezing After touching the face After blowing the nose After rubbing hands on clothing and similar activities After handling raw foods After handling dirty kitchen utensils and kitchenware After cleaning, sweeping, or mopping After a break After smoking, eating, or drinking Before handling any food, especially ready-to-eat foods and ice After handling money (tips) When entering and leaving the gaming floor Before going on break Before starting a shift After ending a shift		
1.2	Retrain staff on the importance of handwashing, when handwashing is required and how to wash hands properly. Handwashing resources available at www.snhd.info.		
1.3	Supervise staff and monitor for handwashing compliance. Provide corrections as needed.		
1.4	Implement strict glove use policy for all food preparation. Make sure that gloves are worn properly, changed frequently, and that hands are washed between glove changes.		
1.5	Discontinue the practice of having cocktail servers handle ashtrays and drink cups. Have a designated person, who is not a server, perform this task.		
1.6	Contact transportation companies affiliated with your property to advise them to start similar clean-up and sanitizing/disinfecting procedures as those started in the hotel properties.		

1.7	Regularly inspect all areas of the property (including, but not limited to, elevators,		
1.,	restroom, walkways, garages and parking lots, casino floor, and employee break rooms) for evidence of biohazard events, such as vomiting or diarrhea, which should be cleaned up following the procedures in Section 8.		
1.8	Use single-use ticket system for automobile valet check-in and pick up.		
1.9	Switch to auto-dispensing paper towel dispensers throughout the hotel including all patron restrooms, employee restrooms, kitchen and locker rooms.		
1.10	Use disposable ice buckets and drink cups in all guest rooms, and discard when visibly soiled and between guests.		
1.11	Make sure that existing SOPs are being properly carried out by staff through management's observation and trainings.		
1.12	Install hand sanitizer stations and or provide ethanol towelettes in all dining facilities, restaurants, restrooms, break areas, and on casino floor.		
1.13	Install signs in all restrooms on the need for proper hand washing.		
Section	on 2: Basic Clean-up and Disinfection Recommendations	SOP	Starting Date
Section 2.1	Review the labels of all chemicals used for cleaning, sanitizing, and disinfecting. During a norovirus outbreak, all chemical labels must state that they are effective against norovirus and provide specific instructions such as contact time required to kill norovirus. Follow chemical label recommendations for proper usage.	SOP	Starting Date
	Review the labels of all chemicals used for cleaning, sanitizing, and disinfecting. During a norovirus outbreak, all chemical labels must state that they are effective against norovirus and provide specific instructions such as contact time required to	SOP	Starting Date

2.4	Restrict the use of ware washing machines on after a disinfection step. Norovirus is heat-res be effective, and the sanitizers used in chemic norovirus.	istant so high-temp machines may not		
2.5	Discard the ice in all ice machines once per wand clean and disinfect according to section 2 ice, including bins, sinks, and buckets should least daily.	2.3. Any other equipment used to store		
2.6	a. Casino floor and guest areas • Slot and video machine buttons and have a ATM machines • Coin cups • Self-serve coin redemption kiosks • Door handles and push plates • Elevator buttons and panels • Balcony rails • Public telephones, courtesy phones • Restaurant menus • Gaming chair backs • Table game cup holders • Counters and pens in public areas (e.g., and pens) • Employee areas • Counters and pens in staff areas (e.g., and poor handles and push plates (both in service elevators) • Common use phones in employee areas • Common use phones in employee areas • Common use phones in employee areas • Toilet handles • Paper towel dispenser handles	 Coin trays Ash trays Drinking fountains Escalator roller bars Stair rails Bar rails Light switches Casino cage counters Contact areas of gaming tables Beer buckets registration, bell desk, concierge) bag toss game and Jenga 		
Secti	on 3: Routine Guest Room Cleaning Proce	dure	SOP	Starting Date
3.1	Use disposable cleaning cloths.			
3.2	Use one cloth for cleaning and a new cloth for	r sanitizing/disinfecting surfaces.		

3.3	Use separate colored cloths in toilet areas.		
3.4	Use a new set of cleaning cloths for each guest room.		
3.5	Clean and disinfect high touch areas such as taps, faucets, door and drawer handles, door latches, toilet or bath rails, telephones, rails on balconies, light and lamp switches, thermostats, remote controls, curtain pulls and wands, covers on guest information books, alarm clocks, hair dryers, irons, and pens.		
Secti	on 4: Guest Room Cleaning Procedures for Rooms with Known III Guests	SOP	Starting Date
4.1	Treat all areas of rooms with known ill guests as if they are contaminated with a highly infectious organism.		
4.2	Staff entering the room should wear the correct personal protection equipment (PPE), including a disposable mask, gloves, eye shield, disposable shoe covers, and plastic disposable apron/gown.		
4.3	Vomiting or diarrheal events should be reported and cleaned as per Section 8.		
4.4	 Once the ill guests have checked out, treat the room as "hot room" and deep clean to make sure, that any contamination has been removed. Consideration should be given to a specifically trained team available for cleaning of the rooms with known ill guests. Discard all disposable paper products (e.g., tissues and toilet papers) Remove all towels, linens, pillows, bedspreads and blankets, and launder per directions in Section 9.1. Examine the mattress for biohazard events, and discard per directions in Section 9.3 if visibly soiled. Clean and disinfect all high touch surfaces throughout the room as per directions in Section 3.5. Clean the carpet per directions in Section 9.4. 		

NOTE: A sample response plan can be found in the Southern Nevada Health District regulations entitled "Regulations Governing the Sanitation and Safety of Public Accommodations Facilities 2006 Appendix G. Example Guest Room Clean Up Standard Operating Procedure."

• Use an aerosol or fogging device to sanitize/disinfect all surfaces in the room.

Section	on 5: Monitoring Employee and Guest Illness	SOP	Starting Date
5.1	Have employer look for obvious signs of employee illness such as increase of restroom use. Send ill employees home as per the recommendations in Section 7.		
5.2	Monitor employee illness logs and interview employees to find potential cases of illness. Refer to Appendix C for an employee health log to track employee illness.		
5.3	Use a standardized illness questionnaire to collect information on guest and employee illness symptoms.		
5.4	Review room service orders to find potentially ill guests. Provide an illness questionnaire to any guests ordering items indicative of stomach upset such as ginger ale, dry toast, chicken broth, etc.		
5.5	Review gift shop sales to find potentially ill guests. Provide an illness questionnaire to any guests purchasing medications for gastroenteritis (e.g., anti-diarrheal, antacids, upset stomach relief) at gift shops.		
Section	on 6: Working with Guests During Outbreaks	SOP	Starting Date
			•
6.1	Provide information to guests upon check in, in guest rooms, and through signs on: • Symptoms and transmission of norovirus • Prevention of norovirus, including handwashing • The procedure of reporting illness to hotel and or health district • How to obtain medical help, if necessary		
	 Symptoms and transmission of norovirus Prevention of norovirus, including handwashing The procedure of reporting illness to hotel and or health district 		

6.3	When needed, and if space allows, move non-ill guests sharing a room with ill guests to a different room.		
Section	on 7: Communicating with Employees During Outbreaks	SOP	Starting Date
7.1	 During an outbreak, give regular updates to employees, to include: The status of the outbreak Talking points to be used in dealing with guests Reminders on proper handwashing Procedures for reporting illness 		
7.2	Require all employees who report having experienced vomiting, diarrhea, or "stomach flu" symptoms to stay off duty for 72 hours after their symptoms end without the aid of medications. This applies to all staff regardless of their job duty.		
7.3	Evaluate policies for the compensation and medical evaluation of ill employees.		
7.4	Remove obstacles to calling out sick. For example, if points are usually applied to an employee's record for calling out, suspend that practice until the end of the outbreak.		
7.5	When reviewing employee illness numbers, have directors of all departments share and discuss their information. An outbreak can be spread across the entire property's staff and it might not be evident until all the numbers are reviewed together.		
7.6	Prohibit employee potlucks, and do not allow employees to bring in food (either prepared at home or commercially) to share with others for the duration of the outbreak. Temporarily remove candy dishes and fruit baskets at individual desks or common areas.		
Section	on 8: Biohazard Events: Removal, Clean-up, and Disinfection	SOP	Starting Date
8.1	Treat all vomiting and diarrhea events as if they are contaminated with a highly infectious organism.		
8.2	Always consider having a specially trained cleaning team available.		
8.3	Make sure that all biohazard events are only remediated by staff that is trained and properly protected for such clean-up activities.		

8.4	Have staff report all biohazard events to management. Document all biohazard	
	events in a log including date, time, location, persons affected (if known), the names	
	of responders, the names of persons reporting the incident, the name of responders	
	and a short description of the response of the incident.	
8.5	In an event of a vomiting or diarrhea events, the area must be cleaned as a matter of	
	emergency. Because of the potential for the aerosolization of the virus, the area must	
	be closed or cordoned off in a 25-foot radius from the site of the incident. Guests and	
	non-essential staff should be excluded from these areas for the duration of clean-up.	
8.6	Individuals who clean-up vomit and diarrhea should use the following procedures:	
	 Wear proper Personal Protective Equipment (PPE) including a disposable 	
	mask, gloves, eye shield, disposable shoe covers and disposable plastic apron.	
	 Use disposable cleaning cloths or proper towels to soak up the excess liquid. 	
	Transfer these and any solid matter directly into a biohazard waste bag.	
	 To remove gross debris, clean the soiled area with detergent and hot water, using a disposable cloth. 	
	Disinfect the contaminated area.	
	Dispose the mop heads, cleaning cloths, other materials used in clean-up and	
	the PPE in a biohazard waste bag.	
	Wash hands thoroughly, after completing the clean-up procedures and again	
	after completing the disposal procedure.	

NOTE: A sample response plan can be found in the Southern Nevada Health District regulations entitled "Regulations Governing the Sanitation and Safety of Public Accommodations Facilities 2006 Appendix I: Biohazard Event Response Plan for Public Areas."

Secti	on 9: Treatment of Contaminated Materials	SOP	Starting Date
9.1	Contaminated linen and other fabric materials should be placed carefully into laundry bags separate from other non-contaminated linens. They should be washed separately in hot wash and dried separately at 170 °F. If an outside laundry is used, they should be informed that the laundry is potentially infectious.		
9.2	Soft furnishings should be removed for proper disinfection.		
9.3	Soiled mattresses should be wrapped in heavy gauge plastic and discarded via		

9.4	Contaminated carpets should be cleaned in a three-step process. First, carpets should be cleaned with carpet detergent and hot water. Second, carpets must be disinfected by applying the correct disinfectant. Third, carpets should be steam cleaned (158 °F for 5 minutes or 212 °F for 1 minute is needed for complete inactivation).		
9.5	Contaminated hard surfaces should be washed with detergent with hot water, using a disposable cloth, and then disinfected. Cleaning cloths should be disposed of as biohazardous waste. Mop heads should be discarded after use.		
Section	on 10: Responding to Vomiting Events in Food Preparation Areas	SOP	Starting Date
10.1	Stop all food preparation and service until clean-up is completed.		
10.2	Follow the procedures outlined in Section 8.6 for cleaning.		
10.3	Discard all exposed foods, food that may have been contaminated, and food that has been handled by the ill employee.		

Several commercially available products have been approved by the Environmental Protection Agency (EPA) for use against norovirus. Because norovirus is difficult to grow in laboratory conditions, these products have been tested against Feline Calicivirus (FCV), a surrogate for norovirus.

This list is provided solely as a courtesy. The Health District does not recommend any product or manufacturer. This list is based on products known to the Health District at the time this document was created and should not be assumed to be comprehensive. If you have questions or concerns about a product, please contact the manufacturer or the assigned inspector for your facility. The EPA has produced a list of recommended disinfectants that can be found at the following link: www.epa.gov/sites/production/files/2020-03/documents/list_g_disinfectant_list_003.pdf

Method/Chemical	Product	Manufacturer
Bleach (Sodium hypochlorite)*	Generic – 1000ppm	
Ethanol	Generic – 75% Ethanol	
Heat	> 170°F	
Hydrogen peroxide	Peroxide Multi Surface Cleaner Disinfectant	Ecolab
Hypochlorous acid	Envirocleanse A	Envirocleanse LLC
Potassium peroxomonosulphate	Virkon®	Laxness Corporation
Quaternary Ammonia (hospital grade)	MIKRO-QUAT	Ecolab

^{*} More information on bleach provided in Appendix B.

^{**} Note: regular quaternary ammonia is not effective against norovirus.

The main ingredient in bleach is chlorine in the form of sodium hypochlorite. Chlorine percentages in commercially available bleaches may range from 3.5% to 12.5%. Always check the labels.

- Chlorine bleach concentrations in this Appendix are based on a 5.25% sodium hypochlorite concentrated chlorine bleach and may not be appropriate for other concentrations.
- Obtain new, unopened bottles of concentrated chlorine bleach every 30 days. Open bottles of concentrated chlorine bleach lose strength after opening.
- Ventilate areas during mixing and application.
- Ensure clean up and disinfection of biohazard incidents are conducted by trained staff.
- Wear non-latex disposable gloves and any other necessary personal protective equipment.
- Prepare dilutions daily and discard unused portions of diluted bleach.
- Leave bleach on surfaces for 5 minutes.
- Food contact surfaces that may have been contaminated can be disinfected using the concentration listed below for hard surfaces followed by a clear water rinse or a pass through the ware wash machine to remove residual chemical.
- Change in-use bleach solution every 30 minutes and always use a new clean wiping cloth.
- Avoid spray bottle application to reduce inhalation and respiratory irritation.
- Other disinfectants approved by the Environmental Protection Agency (EPA) to be effective against norovirus can be found at www.epa.gov in List G.

Table 1. Recommended Ble	ach Solutions for Norovirus
Food contact surfaces, stainless steel, food/mouth contact items NOT contaminated by vomit or diarrhea that have been cleaned with hot water and detergent	200 ppm or 1 Tbsp bleach/gallon water (1:250 dilution). Ensure the surface stays wet for a full 5-minute contact time. Air dry.
Food contact surfaces, stainless steel, food/mouth contact items contaminated by vomit or diarrhea that have been cleaned with hot water and detergent	1,000 ppm or 1/3 cup bleach/gallon water (1:50 dilution). Ensure the surface stays wet for a full 5-minute contact time. Air dry. Follow with a clear water rinse or a cycle through a ware washing machine before use.
Hard surfaces, non-porous surfaces, tile floor, counter- tops, sinks, toilets and other areas contaminated by vomit or diarrhea that have been cleaned with hot water and detergent	1,000 ppm or 1/3 cup bleach/gallon water (1:50 dilution). Ensure the surface stays wet for a full 5-minute contact time. Air dry.
Porous surfaces, wooden floors, contaminated by vomit or diarrhea that have been cleaned with hot water and detergent	5,000 ppm or 1 2/3 cups bleach/gallon water (1:10 dilution). Ensure the surface stays wet for a full 5-minute contact time. Air dry.

Instructions: Use this log to monitor employee absences due to illness. Tracking absences will enable your establishment to better control the spread of foodborne illnesses. Please review and refer to your establishment's Employee Health Policy. If undiagnosed, refer to the Foodborne Illness Restriction and Exclusion Guidelines.

		Symptoms Reported to Manager by Employee	ger by Employee			Manager/Emp	Manager/Employee Response		
Date Reported	Employee Name	Symptoms* Vomiting (V), Diarrhea, (D), Jaundice (J), Sore Throat with Fever (ST), Infected Wounds (IW)	Other Symptoms	Date Excluded or Restricted from Work*	Date Returned to Normal Work Duties	Consulted with Doctor?	Diagnosed? ** If yes, name the illness.	Contacted the Health District?	Restricted Duties
		WI				YES / NO	YES / NO	YES / NO	
		WI				YES / NO	YES / NO	YES / NO	
		WI				YES / NO	YES / NO	YES / NO	
		WI				YES / NO	YES / NO	YES / NO	
		WI				YES / NO	YES / NO	YES / NO	
		WI				YES / NO	YES / NO	YES / NO	
		WI				YES / NO	YES / NO	YES / NO	
		WI				YES / NO	YES / NO	YES / NO	
		WI				YES / NO	YES / NO	YES / NO	
		WI				YES / NO	YES / NO	YES / NO	
		WI				YES / NO	YES / NO	YES / NO	
		WI				YES / NO	YES / NO	YES / NO	

* If symptoms of vomiting and diarrhea, exclude food employee from work until 24 hours after symptoms end.
** If a food employee is diagnosed with Norovirus, E. coli 0157:H7, Shigella spp., Hepatitis A, Salmonella Typhi, AND/OR if jaundiced, then exclude and contact the Health District at (702) 759-1300.













Foodborne Illness Restriction and Exclusion Guidelines without an Illness Diagnosis

Symptom	Restrict/ Exclude Not a HSP facility	Restrict/ Exclude Facility Serves HSP	Lifting Restriction or Exclusion status				
Vomiting	Exclude	Exclude	When the food employee has been symptom free for at least 24 hours without the aid of medication or provides a written medical release/fitness for duty.				
Diarrhea	Exclude	Exclude	When the food employee has been symptom free for at least 24 hours without the aid of medication or provides a written medical release/fitness for duty.				
Jaundice	Exclude	Exclude	When the food employee has been jaundiced for more than 7 calendar days or provides a written medical release/ fitness for duty.				
Sore throat with fever	Restrict	Exclude	When the food employee provides a written medical release/ fitness for duty.				
Exposed infected wounds or boils	Restrict	Restrict	When the infected wound or boil is properly covered.				

HSP – Highly Susceptible Population – Those who are immunocompromised, preschool-age children, older adults, and individuals who obtain food at a facility that provides services such as custodial care, health care, or assisted living, or in a child or adult day care center, kidney dialysis center, hospital, nursing home, or nutritional or senior center.

Exclusion – a food employee is not permitted to work in or enter a food establishment as a food employee. This requirement applies to areas where food is received, prepared, stored, packaged, served, vended, transported, or purchased.

Restriction – a food employee's activities are limited to prevent the risk of transmitting disease that is transmissible through food. A restricted employee cannot work with exposed food, clean equipment, utensils, linens, or unwrapped single-service or single-use articles.



	Name			List all hotels and restaurants visited in the 72 hours before the illness started		
rmation	Address		-			
Demographic Information	City		State ZIP			
emogra	Date of Birth/Age		Gender □ Female □ Male			
	Home Phone		Occupation			
	Arrival Date		Departure Date			
		□ Plane □ Car □ Bus	Travel Method			
Travel Information	If Plane, Airline Name		If Plane, Airline Name			
	Flight/Bus Number		Flight/Bus Number			
Trave	Hotel Name		Room Number			
	Events Attended (with Dat Conferences, Meetings, Weddin		Hotels and Restaurants Visited			
	Did you seek medical care	e for your illness				
	If yes, when and where wa	as care sought?				
ry	Do you have any underlyin	ng medical condi				
Medical History	If yes, please list.					
	Did any of your travel com	npanions have a				
	If yes, provide names and	phone numbers				

Illness Information												
Have you recently had any of the following symptoms?				If yes, when did they begin?			If yes, how long did they last?					
	Yes	No	Don't Know	Before Arrival	In Las Vegas	After Departing	Date	< 1 Day	1 Day	2 Days	3 or More Days	Ongoing
General Fever Chills Body Ache Fatigue Joint Pain Chest Pain Back Pain Anxiousness												
Gastrointestinal Nausea Vomiting Diarrhea Bloody Diarrhea Abdominal Cramps Abdominal Pain Yellow Skin or Eyes												
Dermatologic Rash Itchy Rash Itchy Skin Hives												
Neurologic Headache Confusion Paralysis Loss of Consciousness Vision Problems Weakness Numbness Dizziness Memory Loss												
Respiratory Shortness of Breath Difficulty Breathing Cough Sore Throat Congestion Runny Nose Sneezing Itchy/Watery Eyes												