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2012

Norovirus Outbreak Prevention Toolkit: A Guide for Preventing Norovirus Outbreaks in Skilled Nursing Facilities



TABLE OF CONTENTS

INTRODUCTION

Preventing Norovirus Outbreaks in Skilled Nursing Facilities.....3

OUTBREAK MATERIALS

List of Reportable Diseases.....5
Outbreak Management Checklist.....6
Norovirus / Viral Gastroenteritis Line List—Symptomatic RESIDENTS8
Norovirus / Viral Gastroenteritis Line List—Symptomatic STAFF.....9
Notification Alert 10

SNF TRAINING MATERIALS

Training Pre-Test..... 12
Training Post-Test 13
Training Slides and Speakers’ Notes 14
Reference: Training Slides and Speakers’ Notes29
Environmental Control Measures.....44
Patient Care Preventative Measures45
Frequently Asked Questions (FAQ).....46

Preventing Norovirus Outbreaks in Skilled Nursing Facilities

A Message from the Norovirus Outbreak Prevention Collaborative

Dear Reader,

Noroviruses (NV) are the most common cause of both individual cases and outbreaks of gastroenteritis worldwide. In the U.S., approximately 21 million illnesses are attributable to NV each year. NV poses great challenges in healthcare facilities, causing 1 in 5 healthcare facility outbreaks.

Within Los Angeles County, Skilled Nursing Facilities (SNFs) are the most frequently reported settings for NV outbreaks. In 2011, 34 gastroenteritis outbreaks were reported from SNFs. Unlike many healthcare associated outbreaks, these outbreaks affect both patients and SNF direct care staff (543 patients and 144 SNF staff were affected in 2011).

Most NV outbreaks are associated with person to person transmission and exposure to contaminated environments. These outbreaks result in:

- Increased staff work load due to acutely ill patients
- Intensive environmental cleaning requirements
- Absenteeism among direct care and other facility staff
- Facility closure to new admissions by the Public Health Department

The Norovirus Outbreak Prevention Toolkit was created by a collaborative of public health programs to strengthen outbreak prevention activities in SNFs. The toolkit includes training and outbreak management materials to help reach this goal. Materials are also available on the Acute Communicable Disease Control web site at <http://publichealth.lacounty.gov/acd/index.htm>.

Your cooperation is vital to prevent the spread of NV in SNFs! If you have any questions or feedback regarding this toolkit, please contact Rachel Civen, M.D., M.P.H., Medical Epidemiologist, by phone at 213-240-7941 or by e-mail at rciven@ph.lacounty.gov

Outbreak Materials

List of Reportable Diseases



County of Los Angeles • Department of Public Health



Please Post

REPORTABLE DISEASES AND CONDITIONS

Title 17, California Code of Regulations (CCR), § 2500

It is the duty of every health care provider, knowing of or in attendance on a case or suspected case of any diseases or conditions listed below, to report to the local health officer for the jurisdiction where the patient resides. "Health care provider" encompasses physicians (surgeons, osteopaths, oriental medicine practitioners), veterinarians, podiatrists, physician assistants, registered nurses (nurse practitioners, nurse midwives, school nurses), infection control professionals, medical examiners/coroners, dentists, and chiropractors, as well as any other person with knowledge of a case or suspected case.

Urgency Reporting Requirements

☎ = Report immediately by telephone ☒ = Report within 1 working day of identification ⌚ = Report within 7 calendar days from time of identification

REPORTABLE DISEASES

- | | | |
|--|--|--|
| <ul style="list-style-type: none"> ⌚ Acquired Immune Deficiency Syndrome (AIDS) ■ ☒ Amebiasis ⌚ Anaplasmosis/Ehrlichiosis ☒ Anthrax, human or animal + ☒ Babesiosis ☒ Botulism: infant, foodborne, or wound ⌚ Brucellosis, animal; except infection due to <i>Brucella canis</i> + ☒ Brucellosis, human + ☒ Campylobacteriosis ⌚ Chancroid ■ ☒ Chickenpox (Varicella), only hospitalized and fatal cases, do <u>not</u> report cases of herpes zoster or shingles ⌚ <i>Chlamydia trachomatis</i> infection, including lymphogranuloma venereum (LGV) ■ ☒ Cholera + ☒ Ciguatera Fish Poisoning ⌚ Coccidioidomycosis ⌚ Creutzfeldt-Jakob Disease (CJD) and other Transmissible Spongiform Encephalopathies (TSE) ☒ Cryptosporidiosis ⌚ Cyclosporiasis ⌚ Cysticercosis or Taeniasis ☒ Dengue ☒ Diphtheria + ☒ Domoic Acid (Amnesic Shellfish) Poisoning ⌚ Ehrlichiosis/Anaplasmosis ☒ Encephalitis, specify etiology: viral, bacterial, fungal or parasitic ☒ <i>Escherichia coli</i>, shiga toxin producing (STEC) including <i>E. coli</i> O157 + ☒ Foodborne Disease ☒ Foodborne Outbreak; 2 or more suspected cases from separate households with same assumed source ⌚ Giardiasis ⌚ Gonococcal Infection ■ ☒ <i>Haemophilus influenzae</i>, invasive disease only, less than 15 years of age ☒ Hantavirus Infection | <ul style="list-style-type: none"> ☒ Hemolytic Uremic Syndrome ☒ Hepatitis A, acute infection ⌚ Hepatitis B, specify acute or chronic ⌚ Hepatitis C, specify acute or chronic ⌚ Hepatitis D (Delta), specify acute or chronic ⌚ Hepatitis E, acute infection ⌚ Human Immunodeficiency Virus (HIV) ■ (§2641-2643) ⌚ Influenza deaths, laboratory confirmed cases only, all ages ★ ☒ Influenza, novel strains, human ⌚ Legionellosis ⌚ Leprosy (Hansen's Disease) ⌚ Leptospirosis ☒ Listeriosis + ⌚ Lyme Disease ☒ Malaria + ☒ Measles (Rubeola) ☒ Meningitis, specify etiology: viral, bacterial, fungal, or parasitic ☒ Meningococcal Infection ⌚ Mumps ☒ Paralytic Shellfish Poisoning ⌚ Pelvic Inflammatory Disease (PID) ■ ☒ Pertussis (Whooping Cough) ☒ Plague, human or animal + ☒ Poliovirus Infection ☒ Psittacosis ☒ Q Fever ☒ Rabies, human or animal ☒ Relapsing Fever ⌚ Rickettsial Diseases (non-Rocky Mountain Spotted Fever), including Typhus and Typhus-like Illnesses ⌚ Rocky Mountain Spotted Fever ⌚ Rubella (German Measles) ⌚ Rubella Syndrome, Congenital ☒ Salmonellosis, other than Typhoid Fever + ☒ SARS (Severe Acute Respiratory Syndrome) ☒ Scabies, atypical or crusted ★ ☒ Scombroid Fish Poisoning ☒ Shiga Toxin, detected in feces ☒ Shigellosis | <ul style="list-style-type: none"> ☒ Smallpox (Variola) ☒ <i>Staphylococcus aureus</i> infection; deaths only or admission to an intensive care unit of a person who: has not had surgery or dialysis or been hospitalized, or resided in a long-term care facility in the past year, and did not have an indwelling catheter or percutaneous medical device at the time of culture. ☒ Streptococcal Infection, outbreaks of any type ☒ Streptococcal Infection, individual case in a food handler or dairy worker ☒ Streptococcal Infection, Invasive Group A, including Streptococcal Toxic Shock Syndrome and Necrotizing Fasciitis; do <u>not</u> report individual cases of pharyngitis or scarlet fever. ★ ⌚ <i>Streptococcus pneumoniae</i>, Invasive ★ ☒ Syphilis ■ ⌚ Tetanus ⌚ Toxic Shock Syndrome ☒ Trichinosis ☒ Tuberculosis + ■ ⌚ Tularemia, animal ☒ Tularemia, human + ☒ Typhoid Fever, cases and carriers + ☒ <i>Vibrio</i> Infection + ☒ Viral Hemorrhagic Fevers, human or animal (e.g., Crimean-Congo, Ebola, Lassa and Marburg viruses) ☒ West Nile Virus (WNV) Infection ☒ Yellow Fever ☒ Yersiniosis |
|--|--|--|

Reportable Non-Communicable Diseases or Conditions

- | | | |
|---|---|--|
| <ul style="list-style-type: none"> ⌚ Alzheimer's Disease and Related Conditions (CCR § 2802, § 2806, § 2810) | <ul style="list-style-type: none"> ⌚ Disorders Characterized by Lapses of Consciousness (CCR § 2806, § 2810) | <ul style="list-style-type: none"> ☒ Pesticide-Related Illnesses (Health and Safety Code §105200) |
|---|---|--|

★ Reportable to the Los Angeles County Department of Public Health.
 + Bacterial isolates and malarial slides must be forwarded to Los Angeles County Public Health Laboratory for confirmation. Health care providers must still report all such cases separately. **Public Health Laboratory (562) 658-1300**
 ■ For questions regarding the reporting of HIV/AIDS, STDs or TB, contact the respective program:

HIV Epidemiology Program
 (213) 351-8516
www.publichealth.lacounty.gov/hiv/index.htm

STD Program
 (213) 744-3070
www.publichealth.lacounty.gov/std/index.htm

TB Control Program
 (213) 745-0800
www.publichealth.lacounty.gov/tb/index.htm

To report a case or outbreak of any disease, contact the Communicable Disease Reporting System
 Tel: (888) 397-3993 • Fax: (888) 397-3778

(Rev. 7/12)

Outbreak Management Checklist

Instructions:

Review the completed outbreak management checklist with the assigned outbreak investigator. Your facility should determine the procedure for completing this document.

Norovirus Outbreak Interventions:		N/A	Completed By	Date	Signature
1. Communication					
1.1. Facility administration notified		<input type="checkbox"/>		__/__/__	
1.2. Facility infection control team notified		<input type="checkbox"/>		__/__/__	
1.3. Outbreaks are reportable immediately by phone to: Morbidity Unit: (888) 397-3993 or Fax: (888) 397-3778. After business hours, outbreaks should be reported through the County of Los Angeles operator at (213) 974-1234. For a list of reportable conditions see: http://publichealth.lacounty.gov/acd/reports/DiseaseList2011.pdf		<input type="checkbox"/>		__/__/__	
1.4. Outbreaks are reportable to California Department of Public Health Licensing & Certification local office—County of Los Angeles Health Facilities Inspection Division		<input type="checkbox"/>		__/__/__	
1.5. Patients, relatives & visitors notified		<input type="checkbox"/>		__/__/__	
1.6. Date of last admission		<input type="checkbox"/>		__/__/__	
1.7. Health facility closed to new admissions		<input type="checkbox"/>		__/__/__	
1.8. Health facility reopened to new admissions		<input type="checkbox"/>		__/__/__	
2. Investigation and Monitoring		N/A	Completed By	Date	Signature
2.1. Symptomatic health care workers removed from work and/or referred to Employee Health and/or evaluated by a clinician		<input type="checkbox"/>		__/__/__	
2.2. Patients evaluated for norovirus and placed in contact isolation		<input type="checkbox"/>		__/__/__	
2.3. Employee line list completed		<input type="checkbox"/>		__/__/__	
2.4. Patient line list completed		<input type="checkbox"/>		__/__/__	
2.5. Map cases on facility floor plan		<input type="checkbox"/>		__/__/__	
2.6. Report all new cases to District PHN DAILY		<input type="checkbox"/>		__/__/__	

3. Specimen Collection	N/A	Completed By	Date	Signature
3.1. Stool specimens collected within 48-72 hours after onset and kept refrigerated at 39°F for lab confirmation.	<input type="checkbox"/>		__/__/__	
3.2. Vomitus specimen collected to supplement the diagnosis, if needed	<input type="checkbox"/>		__/__/__	
4. Infection Control	N/A	Completed By	Date	Signature
4.1. Enhanced environmental cleaning conducted throughout the outbreak period	<input type="checkbox"/>		__/__/__	
4.2. Contact isolation—Symptomatic residents confined to their rooms (cohort ill patients together if possible). Movement of all residents minimized	<input type="checkbox"/>		__/__/__	
4.3. Limit staff movement between units. If staff have been exposed to ill patients, consider maintaining work assignment to same unit	<input type="checkbox"/>		__/__/__	
4.4. Environmental cleaning—EPA approved disinfectant for norovirus or bleach/water preparation (1 part household bleach to 10 parts water solution) for environmental cleaning http://www.epa.gov/oppad001/chemregindex.htm	<input type="checkbox"/>		__/__/__	
5. Hand Hygiene	N/A	Completed By	Date	Signature
5.1. Antiseptic soap used as the preferred method (20 seconds or more)	<input type="checkbox"/>		__/__/__	
6. Education	N/A	Completed By	Date	Signature
6.1. Training provided to all staff on the signs and symptoms of norovirus	<input type="checkbox"/>		__/__/__	
6.2. Educational materials given to the staff	<input type="checkbox"/>		__/__/__	
6.3. Control measures discussed	<input type="checkbox"/>		__/__/__	

Norovirus / Viral Gastroenteritis Line List—Symptomatic RESIDENTS

The line list SNF staff should use to document symptomatic residents.

Patient Demographics				Location	Symptoms					Outcome		Diagnostics				Additional Information	
Name	DOB	Age	Sex (M/F)	Patients Only Unit /Room	Symptom Onset Date (mm/dd/yy)	Vomiting (Y/N/U)	Diarrhea (Y/N/U)	Bloody Stools (Y/N/U)	Abdominal Cramps (Y/N/U)	Fever (T max°/N/U)	First symptom-free date (mm/dd/yy)	Hospitalized? (Y/N/U)	Stool or vomitus Sample Collected? (Y/N/U)	Date of specimen collection (mm/dd/yy)	Labs sent to PHL or outside lab (PHL/other)?	Lab Results	Immunocompromise or conditions? Date of Death?
1.																	
2.																	
3.																	
4.																	
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7.																	
8.																	
9.																	
10.																	
11.																	
12.																	

Norovirus / Viral Gastroenteritis Line List—Symptomatic STAFF

The line list SNF staff should use to document symptomatic staff.

Staff Demographics					Location			Symptoms				Outcome	Diagnostics			Additional Information								
Name	Direct/Non-Direct Patient Contact	DOB	Age	Sex (M/F)	Department / Location	Work at Multiple Sites? (Y/N/U)	Last Date Worked	Date Returned to Work	Symptom Onset Date (mm/dd/yy)	Vomiting (Y/N/U)	Diarrhea (Y/N/U)	Bloody Stools (Y/N/U)	Abdominal Cramps (Y/N/U)	Fever (T max°/N/U)	First symptom-free date (mm/dd/yy)	Hospitalized? (Y/N/U)	Stool U. virus? (Y/N/U)	Sample Collected? (Y/N/U)	Date of specimen collection (mm/dd/yy)	Labs sent to PHL or outside lab (PHL/other)?	Lab Results	Residential Address Date of Death?		
1.																								
2.																								
3.																								
4.																								
5.																								
6.																								
7.																								
8.																								
9.																								
10.																								
11.																								
12.																								

County of Los Angeles Department of Public Health
Acute Communicable Disease Control Unit

Phone: (213) 240-7941 Fax: (213) 482-4856
<http://publichealth.lacounty.gov/acd>

Y= Yes, N=No, U= Unknown

Revised 8/14/12

Notification Alert

SNF administrative staff should use template to alert staff, patients and facility visitors of facility Norovirus Outbreak

[Insert Agency Letterhead]

DATE

Dear Patients, Families, and Visitors:

Our facility is currently working with the County of Los Angeles Department of Public Health (DPH) to investigate a number of patients and staff who became ill with a group of viruses that cause vomiting and diarrhea. These viruses are called noroviruses and are found in the stool or vomit of infected people. Outbreaks of norovirus within Los Angeles County hospitals, skilled nursing facilities and other community settings are frequently reported every year. We are notifying you in the interest of public awareness and safety.

People can become infected with the virus in several ways, including:

- Eating food or drinking liquids that are contaminated with norovirus
- Touching surfaces or objects contaminated with norovirus and then placing their hand in their mouth
- Having direct contact with another person who is infected and showing symptoms (for example, when caring for someone with illness, or sharing foods or eating with utensils from someone who is ill)

The symptoms of norovirus illness usually begin about 24 to 48 hours after exposure to the virus. If you are feeling sick tell the nurse or your doctor. The best way to prevent norovirus is to wash your hands.

Be sure to wash your hands before you leave this facility!

INSERT FACILITY NAME has already taken the appropriate steps to get this outbreak under control. Your physician and patient care staff is aware of the situation. Public Health is working closely with the staff of INSERT FACILITY NAME to investigate the cause of these infections to prevent new infections. INSERT FACILITY NAME has strengthened all infection control measures to control this problem. Staff education and strict hand washing for doctors and staff has been implemented. The strengthened infection control measures that INSERT FACILITY NAME already has in place can reduce the number of new infections.

For any questions regarding this notification alert, please contact: [Click here to enter text.](#)

Sincerely,

NAME, TITLE

SNF Training Materials

Training Pre-Test

INSTRUCTIONS: Please circle the best answer. There is only one answer for each question.

1. Symptoms of norovirus illness usually begin about 24 to 48 hours after direct contact with the virus, but can appear as early as 12 hours after exposure.
True False
2. People can still spread norovirus infection to others just before having symptoms and until after they feel well enough to return to work.
True False
3. How can you prevent norovirus illness?
 - a) Drink plenty of water
 - b) Wash your hands frequently with warm soapy water for at least 20 seconds
 - c) Brush your teeth after you eat a meal
 - d) Use hand sanitizers frequently and in between patients
4. Vomiting, diarrhea, and abdominal cramps are the three most common symptoms of norovirus illness.
True False
5. Appropriate hand washing is likely the single most important method to prevent norovirus infection and control transmission.
True False
6. People can become infected with norovirus by:
 - a) Touching contaminated surfaces
 - b) Direct contact with another person who is sick
 - c) Eating food or drinking liquids that are contaminated
 - d) All of the above

If you have any comments or suggestions, please write here:

THANK YOU FOR YOUR TIME

Training Post-Test

INSTRUCTIONS: Please circle the best answer. There is only one answer for each question.


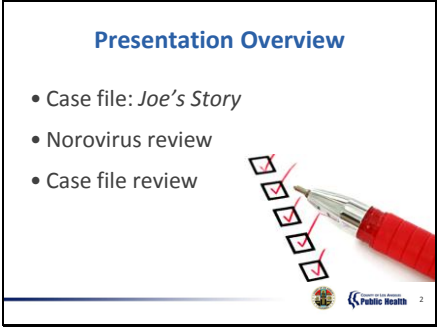
1. Symptoms of norovirus illness usually begin about 24 to 48 hours after direct contact with the virus, but can appear as early as 12 hours after exposure.
True False
2. People can still spread norovirus infection to others just before having symptoms and until after they feel well enough to return to work.
True False
3. How can you prevent norovirus illness?
 - a) Drink plenty of water
 - b) Wash your hands frequently with warm soapy water for at least 20 seconds
 - c) Brush your teeth after you eat a meal
 - d) Use hand sanitizers frequently and in between patients
4. Vomiting, diarrhea, and abdominal cramps are the three most common symptoms of norovirus illness.
True False
5. Appropriate hand washing is likely the single most important method to prevent norovirus infection and control transmission.
True False
6. People can become infected with norovirus by:
 - a) Touching contaminated surfaces
 - b) Direct contact with another person who is sick
 - c) Eating food or drinking liquids that are contaminated
 - d) All of the above

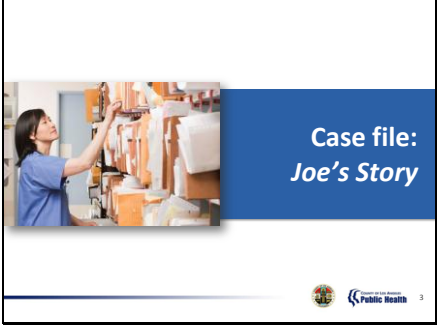
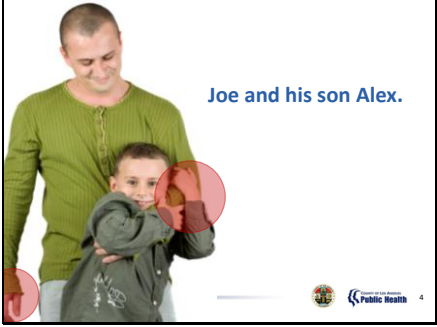


If you have any comments or suggestions, please write here:




THANK YOU FOR YOUR TIME

Training Slides and Speakers' Notes




Content SNF administrative staff should use to train their line staff

#	Slide Content	Speaker's Notes
Slide 1		<p><u>SAY:</u></p> <ul style="list-style-type: none"> •Hello, my name is _____. •Today I'm here to talk to you about how we can protect ourselves, our patients, and our co-workers against norovirus.
Slide 2		<p><u>SAY:</u></p> <ul style="list-style-type: none"> •Before we begin, let's go over what we'll talk about today. •First, I'll tell you a story about Joe and his job at a SNF (Skilled Nursing Facility). •Then, we'll use Joe's story to learn more about norovirus. •We'll talk about norovirus symptoms, how the virus spreads, and how to stop it from spreading. •We'll also talk about what to do if you think there's a norovirus outbreak at your SNF. •Finally, we'll use <i>Joe's Story</i> to apply what we learned about norovirus. Specifically, we'll look at what could have been done differently to stop the spread of norovirus at his SNF. <p><u>ASK:</u></p> <p>Any questions before we begin? (Allow time for audience to respond)</p> <p><u>SAY:</u></p> <p>Please raise your hand if you have any questions or comments throughout the presentation.</p>

#	Slide Content	Speaker's Notes
Slide 3		<p><u>SAY:</u></p> <ul style="list-style-type: none"> •Let's look at a case file called Joe's Story
Slide 4		<p><u>SAY:</u></p> <ul style="list-style-type: none"> •Meet Joe and his son Alex. They're happy and smiling today. •But just a few days ago, little Alex wasn't feeling too well. •He caught the "<u>stomach flu</u>" that was going around at school. •Joe took care of Alex while he was sick.
Slide 5		<p><u>SAY:</u></p> <ul style="list-style-type: none"> •Alex had such bad vomiting and diarrhea, that Joe <u>didn't always have the time to wash his hands as well as he should</u> after cleaning up each accident. •After <u>3 days</u> of constant vomiting and diarrhea, Joe was glad his son was feeling better.
Slide 6		<p><u>SAY:</u></p> <ul style="list-style-type: none"> •But Joe wasn't glad for long. •He wasn't feeling too well the next morning. •He felt nausea and stomach cramps, which led to...


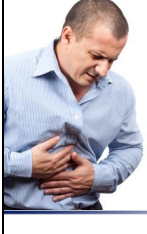
#	Slide Content	Speaker's Notes
Slide 7	 <p data-bbox="261 457 685 485">Joe had really bad diarrhea and vomiting. 7</p>	<p data-bbox="735 174 797 201"><u>SAY:</u></p> <ul data-bbox="735 247 1518 443" style="list-style-type: none"> <li data-bbox="735 247 1198 275">•...really bad diarrhea and vomiting. <li data-bbox="735 321 1518 443">•He spent a lot of time in the bathroom and cleaned up a lot of accidents throughout the day. <u>He didn't always wash his hands as well as he should.</u>
Slide 8	 <p data-bbox="261 806 685 833">Joe still went to work. He's a CNA at a SNF. 8</p>	<p data-bbox="735 520 797 548"><u>SAY:</u></p> <ul data-bbox="735 594 1518 1171" style="list-style-type: none"> <li data-bbox="735 594 1518 667">•Even though he really wasn't feeling well, Joe decided to go to work. <li data-bbox="735 714 1490 741">•Joe is a CNA (Certified Nursing Assistant) at the same SNF <li data-bbox="735 787 1479 814">•He had already missed some days to take care of his son. <li data-bbox="735 861 1518 934">•Joe spent a lot of time in the bathroom, even while at work. <u>He didn't wash his hands well.</u> <li data-bbox="735 980 1518 1054">•He constantly rushed to get out of the bathroom so that his supervisor didn't notice that he was feeling sick. <li data-bbox="735 1100 1518 1173">•He was afraid to be sent home. He couldn't afford any more days off.
Slide 9	 <p data-bbox="261 1520 685 1547">Rita helped Joe when he vomited at work. 9</p>	<p data-bbox="735 1234 797 1262"><u>SAY:</u></p> <ul data-bbox="735 1308 1518 1816" style="list-style-type: none"> <li data-bbox="735 1308 1377 1381">•Joe's supervisor didn't notice he was sick, but his co-worker Rita did. <li data-bbox="735 1428 1146 1455">•Rita was also a CNA at the SNF. <li data-bbox="735 1501 1518 1575">•Even though he made it to the bathroom, Joe's vomit didn't quite make it into the toilet. <li data-bbox="735 1621 1495 1694">•Rita knew Joe didn't want to be sent home, so <u>she helped him clean up the mess.</u> <li data-bbox="735 1740 1503 1814">•After helping Joe, <u>Rita quickly rinsed her hands</u> and ran to see her patient.



#	Slide Content	Speaker's Notes
Slide 10	 <p data-bbox="337 457 678 485">Then, Rita went to help Sue. ¹⁰</p>	<p data-bbox="735 174 797 201"><u>SAY:</u></p> <ul data-bbox="735 247 1549 394" style="list-style-type: none"> •Rita rushed to check on her patient Sue. •Rita <u>hadn't washed her hands well after helping Joe clean up vomit or before helping Sue.</u>
Slide 11	 <p data-bbox="277 804 678 831">12 hours later, Sue wasn't feeling so well. ¹¹</p>	<p data-bbox="735 520 797 548"><u>SAY:</u></p> <ul data-bbox="735 594 1549 1010" style="list-style-type: none"> •Sue wasn't feeling too well just 12 hours later. •Sue had really bad stomach cramping, diarrhea, and vomiting. •Sue tried to limit her accidents, but they were beyond her control. •<u>She really depended on CNA Rita to help her get to the bathroom and clean her hands properly.</u> •Sue's daughter, Linda, was worried about her mom.
Slide 12	 <p data-bbox="293 1335 678 1362">Martha cleaned up many accidents. ¹²</p>	<p data-bbox="735 1052 797 1079"><u>SAY:</u></p> <ul data-bbox="735 1125 1549 1362" style="list-style-type: none"> •Martha, from Housekeeping, made sure Sue's room was kept clean. •Martha always tried her best to clean things up quickly, but it was really hard to clean up such frequent accidents when <u>Sue and her two roommates</u> had the same problem.
Slide 13	 <p data-bbox="326 1682 678 1709">Betty took out the dirty linen. ¹³</p>	<p data-bbox="735 1398 797 1425"><u>SAY:</u></p> <ul data-bbox="735 1472 1549 1551" style="list-style-type: none"> •Betty, from Laundry Services, also made sure to take out the dirty linen.

#	Slide Content	Speaker's Notes
Slide 14	 <p>Linda spoke to her mom's doctor. 14</p>	<p>SAY:</p> <ul style="list-style-type: none"> •Dr. Smith came to see Sue. •Dr. Smith didn't spend a lot of time with Sue because she sees many patients at different facilities. •But, she promised that CNA Rita and the rest of the nursing staff would keep an eye on Sue. •Dr. Smith also assured Linda that they would give Sue lots of water and clear liquids so that she wouldn't get dehydrated. •Dr. Smith was in such a rush to get through her patients and get to her next facility, that she didn't wash her hands after her conversation with Linda and Sue.
Slide 15	 <p>Dr. Smith and Rita see another patient. 15</p>	<p>SAY:</p> <ul style="list-style-type: none"> •After the quick conversation with Linda and Sue, Dr. Smith and Rita, rushed to see their next patient. •They didn't wash their hands before they worked with this patient.
Slide 16	<p>Who got sick or could spread norovirus?</p> <ol style="list-style-type: none"> 1) Joe 2) Rita 3) Sue 4) Sue's 2 roommates 5) Linda 6) Dr. Smith 7) Martha 8) Betty  <p>16</p>	<p>SAY:</p> <ul style="list-style-type: none"> •We've now come to the end of <i>Joe's Story</i>. •Let's talk about it a little. <p>ASK:</p> <p>Q: How many people were sick or could spread norovirus throughout the SNF? (Allow time for audience to respond)</p> <p>A: A total of nine people were either having symptoms or could possibly spread norovirus at the SNF.</p> <p>Q: How did the outbreak spread? (Allow time for audience to respond)</p> <p>A:</p>




#	Slide Content	Speaker's Notes
		<p>CNA Joe: Caught the germ from his son after cleaning up his vomit and feces/stool and not washing his hands correctly.</p> <p>CNA Rita: Helped clean up Joe's vomit; only rinsed her hands before interacting with patient Sue; helped clean up Sue that had bad vomiting and diarrhea.</p> <p>Patient Sue: Was helped by CNA Rita who hadn't washed her hands properly after helping clean up Joe's contaminated vomit.</p> <p>Sue's two roommates: Patients with similar symptoms; Had been exposed to aerosolized vomit, may also have been helped by CNA Rita, CNA Joe, or Dr. Smith</p> <p>Patient's daughter, Linda: Interacted with the patient, came into contact with Sue's vomit and feces.</p> <p>Housekeeping staff member Martha: Came into contact with Sue's vomit and feces/stool; didn't wear gloves or other PPE when cleaning the toilet or floor.</p> <p>Laundry Services staff member Betty: Came into contact with Sue's vomit and feces; didn't wear gloves or other PPE when taking out the linen.</p> <p>Dr. Smith: Came into contact with Linda, who didn't wash her hands; interacted with Sue and other patients without washing her hands.</p> <p><u>SAY:</u></p> <ul style="list-style-type: none"> •It's easy to see that norovirus can spread very easily and can affect a large number of people in just a small period of time.




#	Slide Content	Speaker's Notes
Slide 17		<p>SAY:</p> <p>Now that we've heard Joe's story, let's look at the case in more detail. Looking at the details will help us learn more about what norovirus is, how it spreads, and how we can stop it from spreading. We'll also talk about what to do if you think there's norovirus at your SNF.</p>
Slide 18	<p>How does norovirus affect healthcare facilities?</p> <ul style="list-style-type: none"> • 1 in 5 outbreaks in healthcare facilities are caused by norovirus • Norovirus is the most common cause of outbreaks in SNFs • Half of all food borne illness is caused by norovirus  <p><small>Source: E. Rhinehart et al. (2012). Frequency of outbreak investigations in US hospitals: Results of a national survey of infection preventionists. American Journal of Infection Control, 40, 2-8.</small></p>	<p>ASK:</p> <p>Q: How did norovirus get to Joe's SNF (his workplace)? (Allow time for audience to respond)</p> <p>A: Joe had already missed some days of work to take care of his son. He couldn't afford to miss more days, so he went to work even though he wasn't feeling well. He was in a rush to get out of the bathroom to avoid having his supervisor notice he was sick. He didn't wash his hands as well as he should have.</p> <p>SAY:</p> <p>Norovirus is very contagious and common in places where people spend time close together like schools, cruise ships, prisons, and healthcare facilities, like SNFs (skilled nursing facilities).</p> <p>Recent research says that norovirus is the most common cause of outbreaks in healthcare facilities. About one in five outbreaks in healthcare facilities are caused by norovirus. We also know that norovirus is now the most common cause of outbreaks in skilled nursing facilities (SNFs).</p> <p>Further, half of all food borne illness is caused by norovirus. This reminds us again of the importance of washing our hands before handling food.</p> <p>Source: E. Rhinehart et al. (2012). <i>Frequency of outbreak investigations in US hospitals: Results of a national survey of infection preventionists</i>. American Journal of Infection Control, 40, 2-8.</p>




#	Slide Content	Speaker's Notes
Slide 19	<p>What is norovirus illness?</p>  <ul style="list-style-type: none"> • It's often <u>incorrectly</u> called the stomach flu • Norovirus causes <i>viral gastroenteritis</i> • <i>Gastroenteritis</i> means inflammation of the stomach and intestines <p><small>County of Los Angeles Public Health 19</small></p>	<p>ASK:</p> <p>Q: <i>What happened to Joe and Alex?</i> (Allow time for audience to respond)</p> <p>A: Alex caught norovirus illness at school. Joe took care of his son for about 3 days, before he got sick too.</p> <p>SAY:</p> <ul style="list-style-type: none"> •Norovirus is commonly <u>mistakenly</u> called the stomach flu. •Noroviruses are a group of viruses that cause <i>viral gastroenteritis</i>. •Since norovirus is caused by a virus, it <u>can't</u> be treated with antibiotics. •<i>Gastroenteritis</i> means inflammation of the stomach and intestines
Slide 20	<p>What are the symptoms of norovirus?</p>  <ul style="list-style-type: none"> • Symptoms include: <ul style="list-style-type: none"> –Nausea –Vomiting –Diarrhea –Stomach cramping <p><small>County of Los Angeles Public Health 20</small></p>	<p>ASK:</p> <p>Q: <i>What kind of symptoms were Joe and Alex having?</i> (Allow time for audience to respond)</p> <p>A: They were both feeling nausea, vomiting, stomach cramping, and diarrhea.</p> <p>SAY:</p> <ul style="list-style-type: none"> •Since norovirus affects the stomach and intestines, people infected by norovirus have symptoms like nausea, vomiting, stomach cramping, and diarrhea. •Some people may also have a low grade fever (99-100°F for average people; 96-97°F for many seniors). •Some people confuse the stomach flu with <i>influenza</i>, the flu, but they are very different. The biggest difference is that <i>influenza</i> causes respiratory symptoms like coughing and sneezing but norovirus does not. •People with norovirus illness are most contagious when they


#	Slide Content	Speaker's Notes
		<p>have symptoms and during the first three days after they recover (have no symptoms).</p> <ul style="list-style-type: none"> •This leads us to how norovirus spreads.
<p>Slide 21</p>	<div data-bbox="256 331 690 655" style="border: 1px solid black; padding: 5px;"> <p>How does norovirus spread?</p> <ul style="list-style-type: none"> • Norovirus is found in feces and vomit • It spreads by: <ul style="list-style-type: none"> – Eating contaminated food or water – Touching contaminated surfaces or objects • Norovirus can stay in the air for up to 2 hours after forceful vomiting   </div>	<p><u>ASK:</u></p> <p><i>Q: How did Joe get sick?</i> (Allow time for audience to respond)</p> <p>A: Joe got sick after cleaning up Alex's accidents and not washing his hands properly. He probably contaminated his own food and water with his son's feces or vomit, by not washing his hands; he may have also touched a contaminated surface in the bathroom, and then touched his eyes, nose, or mouth.</p> <p><u>SAY:</u></p> <p>Norovirus is highly contagious.</p> <p>Anyone can get norovirus.</p> <p>Norovirus is found in the stool (feces) or vomit of infected people.</p> <p>If we touch infected (feces) stool or vomit, and then don't wash our hands, we risk getting ourselves and others sick. This is one reason why hand washing is so important.</p> <p>Norovirus may also be found in food, liquids, surfaces, and objects contaminated with the stool (feces) or vomit of infected people.</p> <p>It's also important to know, that unlike the flu, norovirus is not airborne, however, it can become aerosolized. This means it can stay in the air for up to 2 hours after forceful vomiting.</p> <p>People typically become sick 24-48 hours after coming into contact with the virus, but they can get sick as early as 12 hours after exposure.</p> <p>Symptoms happen suddenly, and people are likely to have</p>

#	Slide Content	Speaker's Notes
		<p>vomiting and diarrhea for 24 to 72 hours.</p> <p>Symptoms might also last longer in seniors, and some patients may have the virus but not be sick at all (asymptomatic).</p> <p>Sick people may shed the virus from their bodies for 2 weeks or more even though they are now feeling well .</p>
<p>Slide 22</p>	<p>Who is affected by norovirus?</p> <ul style="list-style-type: none"> • Anyone can get sick with norovirus <ul style="list-style-type: none"> – Patients – Visitors – Staff • Dehydration is the main concern • Norovirus is serious, especially for seniors <p><i>(The slide includes three small images: a healthcare worker with a patient, a patient being attended to, and a healthcare worker with a patient.)</i></p>	<p>ASK:</p> <p>Q: Who was affected by norovirus at Joe's SNF, and why? (Allow time for audience to respond)</p> <p>A: Everyone was affected—patients, visitors, and staff.</p> <p>SAY:</p> <p>You need to know that anyone can get sick with norovirus, and norovirus is very serious, and can be life threatening for your elderly patients. In the case of a patient with norovirus, dehydration is one of the main concerns. It is extremely important that you keep your patients hydrated with fluids, water in particular, while they are sick.</p>
<p>Slide 23</p>	<p>How can norovirus be prevented?</p> <ul style="list-style-type: none"> • Stay home if sick • Wash hands correctly <ul style="list-style-type: none"> – Before and after seeing patients – After bathroom visits – After cleaning up feces or vomit – Before handling food <p><i>(The slide includes an image of a healthcare worker washing hands in a sink.)</i></p>	<p>SAY:</p> <p>Now that we know that anyone can be affected by norovirus, it's time to talk about the things we can do to protect our patients, our co-workers, and ourselves from norovirus illness.</p> <p>First, if you don't feel well, don't commit Joe's mistake and come to work. Stay home and prevent starting a norovirus outbreak at the SNF. If you get sick, stay home from work and don't return until at least two days after symptoms go away.</p> <p>Second, practice frequent and thorough hand washing. Wash your hands with soap and warm water for at least 20 seconds. Sing the "Happy Birthday" song two times as a reminder of how long 20 seconds is.</p> <p>You should also wash your hands before eating, preparing food, and serving food to your patients and after toilet visits, cleaning up vomit or diarrhea, handling soiled linens or clothes, and after contact with a person with signs of norovirus.</p>

#	Slide Content	Speaker's Notes
Slide 24	<p>How can norovirus be prevented?</p> <ul style="list-style-type: none"> • Wear personal protective equipment (PPE) when cleaning up feces or vomit <ul style="list-style-type: none"> – Gloves – Surgical mask – Gown • Clean surfaces more often <ul style="list-style-type: none"> – Bleach solution – EPA approved product 	<p>SAY:</p> <ul style="list-style-type: none"> • You should wear gloves, a gown, and a surgical mask when cleaning up stool (feces) or vomit, or when dealing with sick patients. Remember to wash your hands after clean up, and before you prepare food. • Also remember to clean and disinfect surfaces often with an Environmental Protection Agency (EPA) approved product for noroviruses, or a sodium hypochlorite (bleach) solution, and increase cleaning to two times your standard protocol if you suspect norovirus in your facility. You can make a bleach solution by adding one part household bleach to ten parts water and make it fresh every 24 hours.
Slide 25	<p>What should be done in case of a suspected outbreak?</p> <ul style="list-style-type: none"> • If you see a <u>sudden</u> increase in vomiting and diarrhea in your SNF <ul style="list-style-type: none"> – Tell your supervisor – Follow your SNFs policies and procedures 	<p>ASK:</p> <p>Q: What role did Rita play in the SNF outbreak? (Allow time for audience to respond)</p> <p>A: Rita could have told Joe's supervisor to have him go home. She could have mentioned Sue's symptoms to her supervisor. Joe's decision to come to work and Rita's decision not to mention anything had a huge impact on the SNF.</p> <p>SAY:</p> <p>In less than a 48 hour period, 9 people, ranging from SNF staff, patients, and visitors were affected. This highlights the need to report any <u>sudden</u> increase in vomiting and diarrhea in your facility. This will help keep everyone safe and may even prevent having to close the SNF while the outbreak is controlled.</p>
Slide 26	<p>What should be done in case of a suspected outbreak?</p> <ul style="list-style-type: none"> • Your supervisor will decide whether to: <ul style="list-style-type: none"> – Assign staff to sick or healthy patients – Call the Public Health Department 	<p>SAY:</p> <p>Once you report the possible outbreak to your supervisor, s/he, may decide to assign staff to sick or healthy patients. They should call the Public Health Department for consultation and reporting.</p>

#	Slide Content	Speaker's Notes
Slide 27		<p>SAY:</p> <p>Now that you know more about what norovirus is, how it spreads, and how we can stop it from spreading, let's revisit <i>Joe's Story</i>.</p> <p>Specifically, let's discuss <u>what should have been done differently</u> to stop the spread of norovirus at his SNF.</p>
Slide 28		<p>SAY:</p> <p>Now that you heard the case, and know a little more about norovirus, let's answer a few questions.</p> <p>ASK:</p> <p>Q: <i>How could this outbreak have been prevented?</i> (Allow time for audience to respond)</p> <p>A: Joe should have stayed home when he was sick; he should have washed his hands thoroughly after contact with his son's vomit and stool (feces).</p>
Slide 29		<p>SAY:</p> <p>Whether you're preparing food, providing direct patient care (like CNA Rita and Dr. Smith) or cleaning up an accident (like Martha or Betty), hand washing is the best way to prevent spreading norovirus and many other contagious diseases.</p> <p>ASK:</p> <p>Q: <i>For how long are you supposed to wash your hands?</i> (Allow time for audience to respond)</p> <p>A: 20 seconds. Sing "Happy Birthday" twice to make sure you've washed long enough.</p>


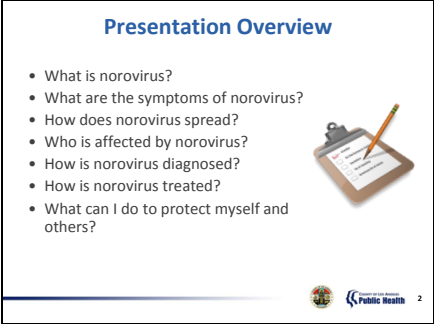

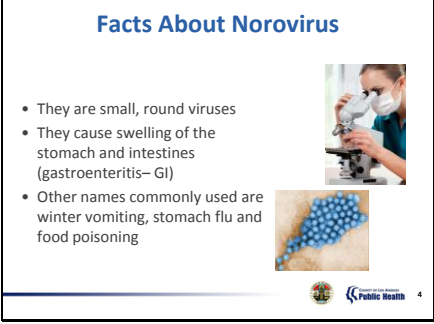
#	Slide Content	Speaker's Notes
Slide 30		<p><u>SAY:</u></p> <p>Whether we're providing direct patient care (like CNA Rita and Dr. Smith) or cleaning up an accident (like Martha or Betty), there are times when we have to come into contact with vomit or stool (feces). The best way to keep safe in these cases is to wear personal protective equipment (PPE).</p> <p><u>ASK:</u></p> <p><i>Q: What type of PPE should you wear to protect against norovirus?</i> (Allow time for audience to respond)</p> <p>A: Gowns, gloves, and surgical mask.</p>
Slide 31		<p><u>SAY:</u></p> <p>Clean bathrooms and common surfaces such as doorknobs, at least twice a day, and increase cleaning to three times a day if you suspect a norovirus outbreak in your facility.</p> <p><u>ASK:</u></p> <p><i>Q: What should you use to clean your SNF?</i></p> <p>A: An Environmental Protection Agency (EPA) approved product for noroviruses, or a sodium hypochlorite (bleach) solution. You can make a bleach solution by adding one part household bleach to ten parts water.</p>
Slide 32		<p><u>SAY:</u></p> <p>Keeping our eyes open to norovirus symptoms, especially any increase in your SNFs usual cases of vomiting and diarrhea, <u>within a 12-24 hour period</u>, will help us prevent or contain a norovirus outbreak.</p> <p><u>ASK:</u></p> <p><i>Q: What kind of symptoms are you looking for to identify norovirus illness?</i> (Allow time for audience to respond)</p> <p>A: Sudden onset:</p>





#	Slide Content	Speaker's Notes
		<ul style="list-style-type: none"> •Nausea •Vomiting •Diarrhea •Stomach cramps •Occasionally: chills, headache, body aches, fatigue, or low-grade fever (under 100°F) <p>Q: What should you do if you suspect a norovirus outbreak? (Allow time for audience to respond)</p> <p>A: Tell your supervisor immediately.</p> <p>Q: What will your supervisor do then? (Allow time for audience to respond)</p> <p>A: Report to public health; consider assigning staff to help only sick <u>or</u> healthy patients.</p>
Slide 33		<p>SAY:</p> <p>We appreciate the time and attention you've given us today.</p> <p>ASK:</p> <p>Does anyone have any other questions?</p>
Slide 34	<p>Where can I go for more information?</p> <ul style="list-style-type: none"> • Control of Viral Gastroenteritis Outbreaks in Long Term Care Facilities - California Department of Health Services (12/06) • Norovirus Control Measures - LA County Department of Public Health (Updated 12/1/06) • CDC-Norovirus in HC Facilities Fact Sheet www.cdc.gov/ncidod/dhqp/id_norovirusFS.html • Guidelines for Environmental Infection Control www.cdc.gov/ncidod/dhqp/gl_envirioninfection.html <p><small>34</small></p>	<p>SAY:</p> <p>If anyone has more questions that we can't answer for you today, we'll certainly find out for you. In the meantime, you can always refer to these resources if you have any questions.</p>



Educational Materials


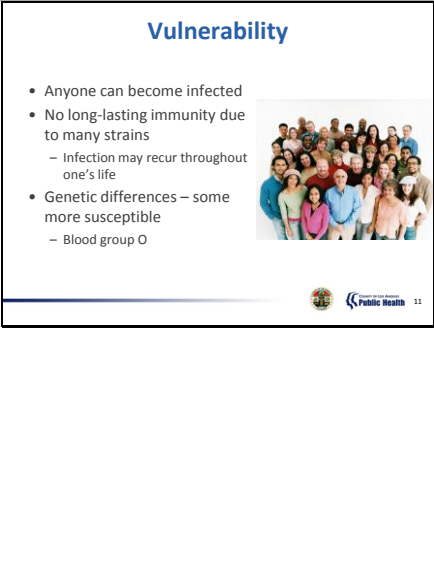
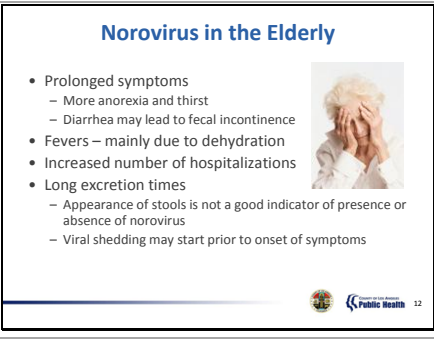
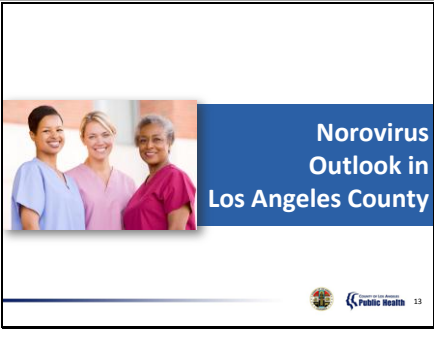
Reference: Training Slides and Speakers' Notes


Content PHNs should know before training SNF administrative staff

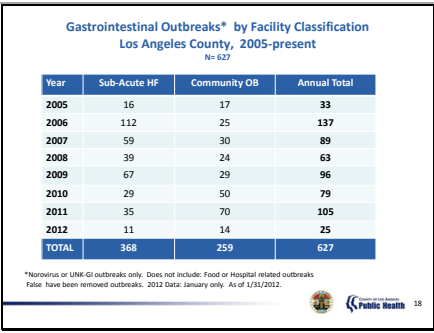
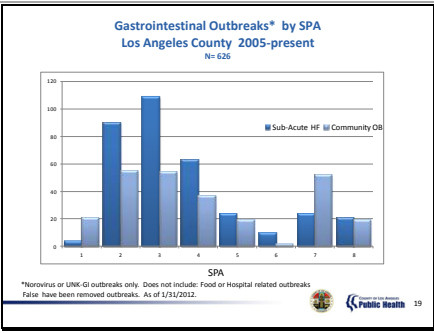

#	Slide	Speakers' Notes
Slide 1		
Slide 2		Read Slide
Slide 3		
Slide 4		<p>SAY:</p> <ul style="list-style-type: none"> Noroviruses are a group of viruses that cause gastroenteritis (GI) in people. They are caliciviruses and are small, round viruses, 27 to 35 nm in diameter. Other names for norovirus include winter vomiting, stomach flu, viral gastroenteritis, non-bacterial gastroenteritis, food poisoning and calicivirus infections






#	Slide	Speakers' Notes
Slide 5	<p style="text-align: center;">Background</p> <ul style="list-style-type: none"> • The #1 cause of acute GI cases in the U.S. <ul style="list-style-type: none"> – 23 million cases annually – 1 in 14 Americans get sick every year • Occurs year round with peak activity during winter months 	<p>SAY:</p> <ul style="list-style-type: none"> • It is estimated that norovirus may be the causative agent in over 23 million GI cases annually, representing about 60% of all acute GI cases in the U.S. • Norovirus is estimated to be the cause for over 91,000 emergency room visits and 23,000 hospitalizations for severe diarrhea among children age of 5 or under in the U.S. • Norovirus outbreaks peak during the winter months.
Slide 6	<p style="text-align: center;">Background</p> <ul style="list-style-type: none"> • Norovirus outbreaks have been linked to: <ul style="list-style-type: none"> – Healthcare settings: acute and subacute – Cruise ships – Casinos – Prisons – Any congregate living facility or group living environments such as camps, dorms, assisted care for the elderly 	<p>SAY:</p> <ul style="list-style-type: none"> • Institutional settings such as hospitals and long-term care facilities commonly report outbreaks of norovirus GI. However, cases and outbreaks are also reported in a wide breadth of community settings such as cruise ships, schools, day-care centers, casinos, prisons and food services such as hotels and restaurants.
Slide 7	<p style="text-align: center;">Norovirus in Healthcare Facilities</p> <ul style="list-style-type: none"> • Most common reported settings of GI outbreaks in the U.S • Outbreaks pose risk to patients, healthcare personnel, and the efficient delivery of healthcare services • Illness from norovirus infection can be severe in the elderly and lead to hospitalization  	<p>SAY:</p> <ul style="list-style-type: none"> • Norovirus GI outbreaks in hospitals and long-term care facilities make up for 50% of reported outbreaks in the U.S. • Norovirus may be introduced into a facility through ill patients, visitors or staff. Healthcare facilities managing norovirus outbreaks may experience significant costs relating to isolation precautions, personnel protective equipment, ward closures, supplemental environmental cleaning, staff cohorting or replacement and sick time. • Severe outcomes and longer durations of illness are more commonly reported among the elderly. It can directly result in a prolonged hospital stay, additional medical complications and rarely death in those persons whose immune systems are already weak or have other illnesses.


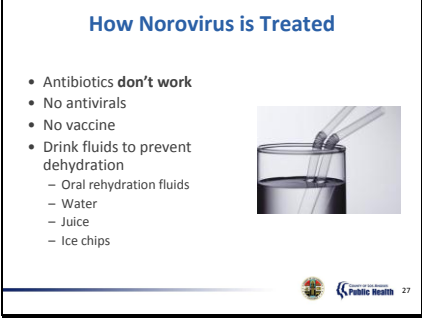
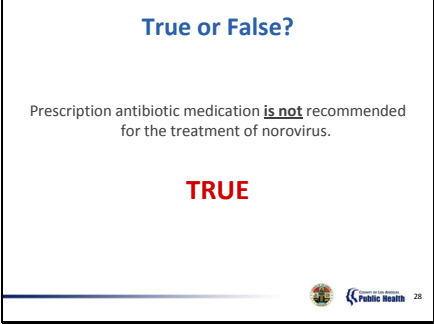

#	Slide	Speakers' Notes		
Slide 8	<div data-bbox="280 142 711 470"> <p style="text-align: center;">The Symptoms of Norovirus</p> <table border="0"> <tr> <td style="vertical-align: top;"> <p>In adults, children and babies:</p> <ul style="list-style-type: none"> - Nausea - Vomiting - Diarrhea - Stomach cramping </td> <td style="vertical-align: top; padding-left: 20px;"> <p>Additional symptoms may include:</p> <ul style="list-style-type: none"> - Low-grade fever - Chills - Headache - Muscle aches - Tiredness </td> </tr> </table>  </div>	<p>In adults, children and babies:</p> <ul style="list-style-type: none"> - Nausea - Vomiting - Diarrhea - Stomach cramping 	<p>Additional symptoms may include:</p> <ul style="list-style-type: none"> - Low-grade fever - Chills - Headache - Muscle aches - Tiredness 	<p>SAY:</p> <ul style="list-style-type: none"> At least 50% of ill individuals experience vomiting (most common in children) Diarrhea is watery and NON bloody and may be accompanied by stomach cramping A fever under 102°F would be considered low grade. Fever should be assessed in relation to dehydration. Some people experience other symptoms such as: chills, headache, muscle aches, tiredness (but are less common) <p>CLARIFY:</p> <ul style="list-style-type: none"> The phrase “Flu-like symptoms” is often misused by the media. Flu symptoms include: a high fever, body aches and respiratory symptoms and very rarely vomiting
<p>In adults, children and babies:</p> <ul style="list-style-type: none"> - Nausea - Vomiting - Diarrhea - Stomach cramping 	<p>Additional symptoms may include:</p> <ul style="list-style-type: none"> - Low-grade fever - Chills - Headache - Muscle aches - Tiredness 			
Slide 9	<div data-bbox="280 856 711 1184"> <p style="text-align: center;">Characteristics of Infection</p> <ul style="list-style-type: none"> Symptoms occur 12 to 48 hours after exposure Sudden onset of symptoms <ul style="list-style-type: none"> - More vomiting in children - Most people experience both diarrhea and vomiting Duration of major symptoms is 1 to 3 days Infection may occur with no symptoms Viral shedding can last longer – up to 3 weeks Complete recovery – no long term effects  </div>	<p>SAY:</p> <ul style="list-style-type: none"> Symptoms of norovirus illness usually begin about 24 to 48 hours after ingestion of the virus, but they can appear as early as 12 hours after exposure. Symptoms appear suddenly, with children experiencing more vomiting. The sudden onset may contribute to “accidents” in vomiting or stool, which in turn contributes to the ongoing transmission of the virus. The illness is usually brief, with symptoms lasting on average 1 to 3 days but can go as long as 5 days. People may be infected with norovirus but have no symptoms. During this asymptomatic period they can infect others. The infection is usually not serious and does not pose long-term health effects related to the illness. However, sometimes people are unable to drink enough liquids to replace the liquids they lost because of vomiting and diarrhea. These persons can become dehydrated and may need special medical attention (dehydration commonly occurs in children under 5 years old) 		





#	Slide	Speakers' Notes
Slide 10	 <p>Who is affected?</p>	
Slide 11	 <p>Vulnerability</p> <ul style="list-style-type: none"> • Anyone can become infected • No long-lasting immunity due to many strains <ul style="list-style-type: none"> – Infection may recur throughout one's life • Genetic differences – some more susceptible <ul style="list-style-type: none"> – Blood group O 	<p>SAY:</p> <ul style="list-style-type: none"> • Norovirus infections are seen in all age groups and does not provide long-term immunity. People can be infected with norovirus several times during their lifetime. • New research suggests that there is a connection between Norovirus infection and a person's blood type. In this study, individuals with type O phenotype were found to be most susceptible to Norovirus infection. (source: http://wwwnc.cdc.gov/eid/article/16/1/09-0633_article.htm)
Slide 12	 <p>Norovirus in the Elderly</p> <ul style="list-style-type: none"> • Prolonged symptoms <ul style="list-style-type: none"> – More anorexia and thirst – Diarrhea may lead to fecal incontinence • Fevers – mainly due to dehydration • Increased number of hospitalizations • Long excretion times <ul style="list-style-type: none"> – Appearance of stools is not a good indicator of presence or absence of norovirus – Viral shedding may start prior to onset of symptoms 	<p>SAY:</p> <ul style="list-style-type: none"> • The elderly are a fragile population and often experience more prolonged symptoms due to norovirus illness. During and after onset of symptoms they should be closely monitored. <p>READ SLIDE</p>
Slide 13	 <p>Norovirus Outlook in Los Angeles County</p>	

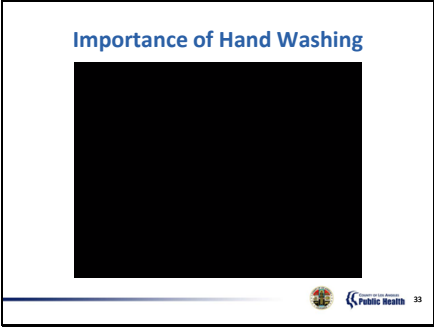
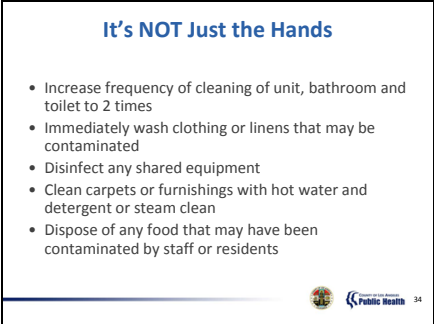
#	Slide	Speakers' Notes
Slide 14	<div data-bbox="280 142 711 472"> <p style="text-align: center;">Norovirus in Los Angeles County</p> <ul style="list-style-type: none"> • Most outbreaks in LAC have occurred at Skilled Nursing Facilities (SNFs) • Service Planning Area (SPA) 3 has had the most GI outbreaks in recent years <ul style="list-style-type: none"> – Outbreaks at Sub-Acute Health Facilities between 2005-2008 • Many cases go unreported  </div>	



#	Slide	Speakers' Notes																																								
<p>Slide 18</p>	 <table border="1"> <caption>Gastrointestinal Outbreaks* by Facility Classification Los Angeles County, 2005-present N=627</caption> <thead> <tr> <th>Year</th> <th>Sub-Acute HF</th> <th>Community OB</th> <th>Annual Total</th> </tr> </thead> <tbody> <tr><td>2005</td><td>16</td><td>17</td><td>33</td></tr> <tr><td>2006</td><td>112</td><td>25</td><td>137</td></tr> <tr><td>2007</td><td>59</td><td>30</td><td>89</td></tr> <tr><td>2008</td><td>39</td><td>24</td><td>63</td></tr> <tr><td>2009</td><td>67</td><td>29</td><td>96</td></tr> <tr><td>2010</td><td>29</td><td>50</td><td>79</td></tr> <tr><td>2011</td><td>35</td><td>70</td><td>105</td></tr> <tr><td>2012</td><td>11</td><td>14</td><td>25</td></tr> <tr><td>TOTAL</td><td>368</td><td>259</td><td>627</td></tr> </tbody> </table> <p><small>*Norovirus or UNIK-GI outbreaks only. Does not include: Food or Hospital related outbreaks. False have been removed outbreaks. 2012 Data: January only. As of 1/31/2012.</small></p>	Year	Sub-Acute HF	Community OB	Annual Total	2005	16	17	33	2006	112	25	137	2007	59	30	89	2008	39	24	63	2009	67	29	96	2010	29	50	79	2011	35	70	105	2012	11	14	25	TOTAL	368	259	627	<p>SAY:</p> <ul style="list-style-type: none"> This table shows GI outbreak data at sub-acute health facilities compared to community facilities and which was reported in Los Angeles County between 2005-2010. <p>READ SLIDE</p> <p>NOTE:</p> <ul style="list-style-type: none"> Annual totals are the same as previous slide. You can again point out the peak years; 2006 and 2011 and stress that most cases outbreaks occurred during the fall and winter months of all years.
Year	Sub-Acute HF	Community OB	Annual Total																																							
2005	16	17	33																																							
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<p>Slide 19</p>	 <p><small>*Norovirus or UNIK-GI outbreaks only. Does not include: Food or Hospital related outbreaks. False have been removed outbreaks. As of 1/31/2012.</small></p>	<p>SAY:</p> <ul style="list-style-type: none"> This chart demonstrates GI outbreak data reported in Los Angeles County between 2005 to the present. Most cases occurred in sub-acute health facilities located within SPA 3. 																																								
<p>Slide 20</p>																																										
<p>Slide 21</p>	<p>How Norovirus is Diagnosed</p> <ul style="list-style-type: none"> In Los Angeles County, norovirus is detected in stool using reverse transcription polymerase chain reaction (RT PCR) Requires fresh (unfrozen) stool Stool should be obtained from ill individuals <ul style="list-style-type: none"> Ideally within 48-72 hrs. post onset Must be kept refrigerated Kaplan criteria is used as means for diagnosis 	<p>READ SLIDE</p>																																								






#	Slide	Speakers' Notes
Slide 22	<p style="text-align: center;">Diagnosis</p> <ul style="list-style-type: none"> • Test is used for confirmation of outbreak only <ul style="list-style-type: none"> – Individual results will NOT be released • Testing requires at least 3 specimens per outbreak <ul style="list-style-type: none"> – The H-3021 lab request form – Must be coordinated through Public Health  <p style="text-align: right;"> 22</p>	<p>SAY:</p> <ul style="list-style-type: none"> • During peak season, NOT all outbreaks will involve collection of stool. • Once LAC reaches peak season, outbreaks that fit the main clinical profile of norovirus, can and should be managed and reported as norovirus outbreaks without testing. Acute Communicable Disease Control (ACDC) will send out bulletins to update district staff on current testing requirements and activity.
Slide 23	<p style="text-align: center;">Clinical Criteria</p> <ul style="list-style-type: none"> • Kaplan's Criteria- developed in 1982 when norovirus testing was not as accessible as now • Criteria used to classify gastroenteritis outbreaks (OB) due to norovirus (NV) <ul style="list-style-type: none"> – Vomiting in more than half of affected persons – Mean (or median) incubation period of 24-48 hours – Mean (or median) duration of illness of 12-60 hours – No bacterial pathogen in stool culture • Sensitivity of correctly identifying a NV OB: 68% • Specificity 99% correctly saying OB not due to NV <p style="text-align: right;"> 23</p> <p style="font-size: small;"><small>Taricco et al. CID 2006;42:964-9</small></p>	
Slide 24	<p style="text-align: center;">Current Public Health Activities in Norovirus Outbreak Management</p> <ul style="list-style-type: none"> • Countywide surveillance for outbreaks • Polymerase chain reaction (PCR) based testing at Public Health Laboratory <ul style="list-style-type: none"> – Noro specimens provided to California Department of Public Health to calicinet <p style="text-align: right;"> 24</p>	READ SLIDE
Slide 25	<p style="text-align: center;">Current Public Health Activities in Norovirus Outbreak Management</p> <ul style="list-style-type: none"> • Outbreak investigation and control measures <ul style="list-style-type: none"> – Community Health Services – Public Health nurse is the main contact – ACDC can collaborate with the investigation but all communication goes through the nurse – Ensure norovirus prevention guidelines are followed – Assess need for facility closure to new admissions • Web-based educational materials available at Acute Communicable Disease Control (ACDC) web site • Collaboration with ACDC Foodborne Team & Food and Milk when norovirus is implicated in food handlers <p style="text-align: right;"> 25</p>	READ SLIDE








#	Slide	Speakers' Notes
Slide 26		
Slide 27	 <p>How Norovirus is Treated</p> <ul style="list-style-type: none"> • Antibiotics don't work • No antivirals • No vaccine • Drink fluids to prevent dehydration <ul style="list-style-type: none"> – Oral rehydration fluids – Water – Juice – Ice chips 	<p>SAY:</p> <ul style="list-style-type: none"> • Antibiotics do not work and should not be used to treat norovirus infection. • Currently there is no antiviral medication to treat norovirus infection or vaccine to prevent it. • Clear-fluids should be started at the onset of any symptoms and continued throughout the course of the illness. • Frequent vomiting and diarrhea can cause dehydration. Dehydration can lead to fevers and possible hospitalization. Small sips of fluids (oral rehydration, water or juice) or ice chips are good methods to prevent dehydration.
Slide 28	 <p>True or False?</p> <p>Prescription antibiotic medication is not recommended for the treatment of norovirus.</p> <p>TRUE</p>	<p>ASK:</p> <p>True or false? Prescription antibiotic medication is not recommended for the treatment of norovirus.</p> <p>DO:</p> <p>Wait for an audience member to offer an answer. Then, click anywhere on the slide or press the “enter” key to reveal the answer. Read the answer.</p>
Slide 29		

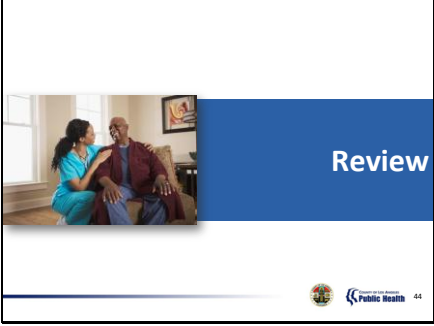
#	Slide	Speakers' Notes
Slide 30	<div data-bbox="280 142 711 470"> <p style="text-align: center;">How Norovirus Spreads</p> <ul style="list-style-type: none"> • Highly contagious • Person-to-person <ul style="list-style-type: none"> – Found in the stool (feces) or vomit of infected people – Transferred to food, water or surfaces by the hands of infected people – People are contagious when they have symptoms and up to 3 days after recovery  </div>	<p>SAY:</p> <ul style="list-style-type: none"> • Norovirus is highly contagious and spreads easily from person-to-person. • The virus is found in the stool and vomit of infected people. • Any food or water connection is usually related to sick foodhandlers who do not properly disinfect their hands. Fewer than 100 viral particles are needed to infect a person and these particles can survive some heat and cold as well as drying. • Some people may be contagious before they show any symptoms.
Slide 31	<div data-bbox="280 680 711 1008"> <p style="text-align: center;">Airborne vs. Aerosolized</p> <ul style="list-style-type: none"> • Norovirus is not airborne – it cannot be spread through coughing or sneezing like the flu • Can become aerosolized through forceful vomiting • Infectious particles can stay in the air for as long as 120 minutes after vomiting  </div>	<p>SAY:</p> <ul style="list-style-type: none"> • Norovirus does not spread through coughing or sneezing like the flu. • Large particles can travel as far as six feet with forceful vomiting, but are NOT known to “float” in the air. • Transmission actually occurs through the swallowing of large aerosolized droplets- NOT inhalation. However, the viral particles can stay in the air for as long as 120 minutes after forceful vomiting. • Minimize any activity that may increase aerosolization of virus, so be careful about using fans or opening windows to “air” a room. • Handling soiled linen has been a source of infection for health care facility employees.
Slide 32	<div data-bbox="280 1352 711 1680"> <p style="text-align: center;">How You Can Prevent the Spread of Norovirus</p> <ul style="list-style-type: none"> • Wash your hands frequently with warm, soapy water for 20 seconds • Wash your hands after using the bathroom, changing diapers and before preparing foods • Do not rely on hand sanitizers alone to prevent norovirus infection   </div>	<p>SAY:</p> <ul style="list-style-type: none"> • Washing your hands for at least 20 minutes with warm, soapy water is an effective way to prevent a norovirus infection. • It is especially important to wash your hands after using the restroom, changing diapers and before preparing foods. For those who work at SNFs, washing your hands before and after having contact with patients (with or without symptoms) is also important in preventing the illness from spreading. • Alcohol and non-alcohol hand sanitizers have not been proven an effective method for preventing






#	Slide	Speakers' Notes
		<p>norovirus infection. Consider ethanol-based hand sanitizers as a preferred sanitizer if water and soap is not readily available.</p>
<p>Slide 33</p>		<p>SAY:</p> <ul style="list-style-type: none"> • We will now watch a short video about the importance of hand washing in preventing the spread of norovirus.
<p>Slide 34</p>		<p>SAY:</p> <ul style="list-style-type: none"> • Consider performing routine cleaning and disinfection of frequently touched environmental surfaces and equipment in isolated and cohorted areas as well as high-traffic clinic areas. Norovirus can remain on certain surfaces for up to 3 days! • Handle soiled linens carefully to avoid dispersal of virus. Visibly soiled items should be laundered. Change privacy curtains when they are visibly soiled. • Equipment such as physical therapy (PT) walking belts should be sprayed or wiped with disinfectants between residents. • Steam clean soiled carpets and furnishings immediately. Suggested steam cleaning temperatures are 158 degrees for five minutes or 212 degrees for one minute. Color fastness should be tested, but if possible, chemical disinfection should be done prior to steam cleaning. • Dispose of any food that may have been

#	Slide	Speakers' Notes
		contaminated by staff or residents.
Slide 35	<div data-bbox="279 655 711 982" style="border: 1px solid black; padding: 5px;"> <p style="text-align: center;">Environmental Cleaning</p> <ul style="list-style-type: none"> • Clean up vomit and fecal spillages promptly <ul style="list-style-type: none"> – Wear a gown, mask, and gloves during outbreak season • Flush any vomit and/or stool in the toilet and disinfect the area • Double-clean using EPA approved disinfectants or a fresh solution of sodium hypochlorite <ul style="list-style-type: none"> – Chlorine bleach to water ratio should be 1:50-1:10 (use within 24 hrs) at minimum – "Quats" and other common cleaners not effective <div style="text-align: right;">  </div> <div style="text-align: right; font-size: small;">  </div> </div>	<p>SAY:</p> <ul style="list-style-type: none"> • Clean up vomit and fecal spillages promptly. Use gloves and gowns during outbreak season and especially when performing clean up tasks and handling soiled clothing and linens (to avoid cross-contamination). • Vomit and feces must be flushed away immediately. Dried vomit or feces have been known to be a source of viable particles. A room may be used after cleaning and disinfecting, however, dust producing activities, such as floor buffing should be postponed until the outbreak is over. Use HEPA equipped vacuum cleaners to avoid dried norovirus particles from becoming aerolized. • Clean and disinfect shared equipment between patients using EPA-registered products with label claims for use in healthcare. The EPA lists products with activity against norovirus on their website: http://www.epa.gov/oppad001/chemregindex.htm • A fresh solution of sodium hypochlorite can be used to disinfect as well. To prepare this solution use one part household bleach and 10 parts water. • "Quats" (quaternary ammonium compounds) are commonly used by food establishments and hospitals for cleaning but are not effective in

#	Slide	Speakers' Notes
		eliminating norovirus from the environment.
Slide 36	<div data-bbox="280 590 711 911"> <p style="text-align: center;">Wear Protective Gear</p> <ul style="list-style-type: none"> • Gloves required for all patient/environmental contact • Long sleeved gown required for all patient/environmental contact • Hand washing after all patient/environmental contact and glove removal  <p style="text-align: right;"> Public Health 36</p> </div>	<p>SAY:</p> <ul style="list-style-type: none"> • If norovirus infection is suspected, adherence to personal protective equipment (PPE) is recommended for individuals entering the patient care area. • Use a surgical or procedure mask and eye protection or full face shield if there is an anticipated risk of splashes in the face during care of patients. • Hand washing should be a standard practice even after using PPE.
Slide 37	<div data-bbox="280 1083 711 1404"> <p style="text-align: center;">More on Prevention</p> <ul style="list-style-type: none"> • Staff should know about patient's norovirus infection and use appropriate precautions • Gowns and gloves should be used when in contact with an infected patient or contaminated environment • Nonessential staff should not enter affected areas  <p style="text-align: right;"> Public Health 37</p> </div>	READ SLIDE
Slide 38	<div data-bbox="280 1421 711 1743"> <p style="text-align: center;">Roles for Public Health Department</p> <ul style="list-style-type: none"> • Perform a site visit • Review the facility's policies and procedures • Ensure that the facility is following the appropriate infection control guidelines • Determine the source of the outbreak <p style="text-align: right;"> Public Health 38</p> </div>	READ SLIDE

#	Slide	Speakers' Notes
Slide 39	<p>Roles for Skilled Nursing Facility Direct Patient-care Staff</p> <ul style="list-style-type: none"> • Key infection control activities <ul style="list-style-type: none"> – Rapid identification and isolation of suspected cases – Staff cohorting – Consider if your staff works at other locations or handles food – Communicate the presence of suspected cases to management and DPH – Promote increased adherence to hand hygiene – Enhance environmental cleaning and disinfection • Promptly initiate investigations <ul style="list-style-type: none"> – Collection of clinical and epidemiological information with line lists – Obtain clinical samples 	READ SLIDE
Slide 40	<p>Surveillance</p> <ul style="list-style-type: none"> • Use a “line list” to track symptomatic staff and patients • Suggested line list items: <ul style="list-style-type: none"> – Case (staff/patient) identifier – Case location – Symptoms – Outcome / Date of Resolution – Diagnostics submitted  	READ SLIDE
Slide 41	<p>A Proactive Approach!</p> <ul style="list-style-type: none"> • <i>Hypothesis:</i> A proactive approach to facility control measures will decrease cases in outbreaks and decrease the spread of norovirus within facilities <ul style="list-style-type: none"> – Reduction of transmission within assisted living facilities will reduce cases in the community  	READ SLIDE
Slide 42	<p>A Collaborative Project</p> <ul style="list-style-type: none"> • LAC Community Health Services <ul style="list-style-type: none"> – “boots on the ground” • LAC - DPH Acute Communicable Disease Control <ul style="list-style-type: none"> – Epidemiologic Support and Surveillance 	READ SLIDE
Slide 43	<p>A Collaborative Project</p> <ul style="list-style-type: none"> • LAC - DPH Laboratory <ul style="list-style-type: none"> – diagnostic testing • LAC – DPH Health Education <ul style="list-style-type: none"> – Norovirus education “tool kit” • Health Facilities Inspection Division 	READ SLIDE

#	Slide	Speakers' Notes
Slide 44		
Slide 45	<p data-bbox="326 506 667 562">Gastroenteritis Outbreak Scenario What would your actions be?</p> <ul data-bbox="306 573 672 743" style="list-style-type: none"> • It is Thursday morning, 2 residents in adjoining rooms become abruptly ill with vomiting and loose stools, without fever • 3 additional residents, in the same wing but several doors down, started to vomit between 3PM-4PM • By Friday at 4 PM, one nurses aid must leave work due to vomiting • What are your next actions? 	
Slide 46	<p data-bbox="399 856 594 879">Actions to Consider</p> <ul data-bbox="306 905 683 1098" style="list-style-type: none"> • Summarize the situation • Consider: what is the incubation period between cases? • Where are the cases located? • What should you tell you direct patient care staff? • What infection control procedures would you carry out? • What cleaning recommendations would you recommend to your cleaning staff? • Who would you call to report? • What other actions would you consider? 	
Slide 47	<p data-bbox="367 1192 626 1215">It's a Norovirus Outbreak!</p> <ul data-bbox="306 1220 686 1440" style="list-style-type: none"> • The Situation: 5 residents w/ abrupt onset of n/v and one direct patient care staff w/ n/v on one wing • Incubation period between cases: Approximately 36 hours • Suspect: Norovirus Outbreak! • Direct care staff: Go home and don't come back to work until symptom free for least 48 hours <ul data-bbox="326 1362 686 1440" style="list-style-type: none"> – Alert direct patient care and cleaning staff that has contact with patient's rooms, bathroom facilities, high touch surfaces that they may come down w/ NV infection – Collect specimens for laboratory confirmation 	
Slide 48	<p data-bbox="367 1528 626 1551">It's a Norovirus Outbreak!</p> <ul data-bbox="306 1562 675 1766" style="list-style-type: none"> • Institute contact precautions • Call the LAC Public Health Department to report this outbreak as well as the Health Facilities Inspection Division • Start line list for patients and staff with symptom onset, symptoms, facility location • Advise cleaning staff to enhance cleaning of all surfaces <ul data-bbox="326 1703 656 1766" style="list-style-type: none"> – Bleach for cleaning – Emphasize high touch surfaces – Cleaning staff should wear mask and gown and gloves 	

#	Slide	Speakers' Notes
Slide 49	<p style="text-align: center;">Review of Recommended Steps for Prevention</p> <ul style="list-style-type: none"> • Wash your hands frequently with warm, soapy water for at least 20 seconds • Immediately clean vomit and fecal spillages with EPA approved disinfectants or a fresh solution of sodium hypochlorite • Immediately report norovirus cases at your facility to DPH • Practice good hygiene habits: <ul style="list-style-type: none"> – Keep your hands clean – Wear protective gear when in contact with patients (long sleeved gowns and gloves) – Keep all surfaces clean – Wash all linens and curtains 	READ SLIDE
Slide 50	<p style="text-align: center;">For More Information</p> <ul style="list-style-type: none"> • Control of Viral Gastroenteritis Outbreaks in Long Term Care Facilities - California Department of Health Services (12/06) • Norovirus Control Measures - LA County Department of Public Health (Updated 12/1/06) • CDC-Norovirus in HC Facilities http://www.cdc.gov/HAI/organisms/norovirus.html • Guidelines for Environmental Infection Control in Health Care Facilities www.cdc.gov/ncidod/dhqp/gl_environinfection.html 	<p>SAY:</p> <ul style="list-style-type: none"> • These first two documents are linked to our website under latest news and updates. • When you review those documents you can find the links to the other listed documents.
Slide 51	<p style="text-align: center;">Questions</p>  	
Slide 52	<p style="text-align: center;">Thank you!</p> 	

Environmental Control Measures

Tips SNF staff should use to control the spread of Norovirus

Environmental Cleaning

When diarrhea and vomiting occurs at your facility, make sure to:

- Immediately clean up vomit and feces with absorbent material and secure in a plastic bag for disposal. Wear gloves, gown, and surgical mask during cleaning. Avoid sponges or reusable clothes.
- Disinfect surrounding hard surfaces using an Environmental Protection Agency (EPA) approved disinfectant for norovirus or a freshly prepared sodium hypochlorite solution (1 part household bleach to 10 parts water solution) http://www.epa.gov/oppad001/list_g_norovirus.pdf
- Immediately wash soiled clothing, linens, and privacy curtains with hot water and detergent, using the maximum cycle length with water temperatures greater than 170° F; machine dry. Separate clean and soiled fabrics.
- Clean carpets and soft furnishings with hot water and detergent. Dry vacuuming is not recommended since the virus may become airborne.
- Double the frequency of routine unit, bathroom, and toilet cleaning. Give special attention to frequently touched objects such as doorknobs, faucets, telephone, bedside tables, toilet, bed and bath rails.
- Throw away foods that may have been infected by a sick kitchen employee.



Preparation of Chlorine Solutions

Preparation of Bleach Solutions (5.25% – 6.15%) for Disinfection			
Approximate Chlorine Concentration (ppm)	Bleach to Water Ratio	Approximate Dilution	Application
1000 (0.1%)	1/3 cup to 1 gallon cool water	1:50	Use for norovirus outbreaks in patient care facilities; Use for non-porous surfaces (tiles, sinks, counter-tops)
5000 (0.05%)	1.5 cups to 1 gallon cool water	1:10	Use for norovirus or <i>Clostridium difficile</i> outbreaks in patient care facilities; Use for body fluid and blood spills and for porous surfaces (wooden surfaces or furniture)

Note: Prepare only in well ventilated areas. Open bottles of concentrated chlorine bleach will lose effectiveness so prepare a dilution of fresh bleach every day for use and discard unused portions. “Ultra” concentrations of bleach contain 6-7 .35% hypochlorite and are not recommended to avoid producing higher than intended concentrations of chlorine.

Patient Care Preventative Measures

Tips SNF staff should use to control the spread of Norovirus among patients

To prevent the spread of norovirus at your facility, make sure to:

- Educate staff, residents and visitors about methods of transmission.
- Identify differences in symptoms patterns outside of normal (e.g. frequency and intensity of vomiting and diarrhea)
- Wear gloves, gown, and surgical mask when caring for ill patients.
- Remove protective equipment and wash hands with soap and water for at least 20 seconds, especially before and after patient care.
- Limit staff and residents from moving between affected and unaffected units.
- Keep symptomatic residents in their rooms.
- Require all symptomatic staff (including kitchen staff), visitors and volunteers to stay home for a minimum of 48 hours after recovery.
- Maintain the same staff-to-resident assignments.
- Cancel group activities and limit new admissions until the facility is symptom-free for at least 48 hours.
- Discontinue self-service in the cafeteria to minimize food handling by patients.
- Consider use of antiemetics for patients with vomiting.
- Be aware of the mental and emotional impact the outbreak and its management can have on patients.



Frequently Asked Questions (FAQ)

A list of FAQs about Norovirus

1. What is norovirus illness?

Norovirus illness is a very contagious infection that causes inflammation of the stomach and intestines (acute gastroenteritis). It happens year round with peak activity during winter months. Norovirus illness is also known as viral gastroenteritis, non-bacterial gastroenteritis. Norovirus is commonly mis-labeled as food poisoning or the stomach flu.

2. What are the symptoms of norovirus illness?

The symptoms of norovirus illness include:

- Diarrhea
- Vomiting
- Nausea
- Stomach cramping

Some patients may also experience a low-grade fever, chills, headache, muscle aches, and tiredness. Symptoms usually start 12 to 48 hours after a person has come into contact with the virus, and usually lasts about one to two days.

3. How is the norovirus illness spread?

Noroviruses can be found in the stool (feces) or vomit of infected people. To get this virus, it has to be swallowed. People can become infected by:

- Eating food or drinking liquids that are contaminated with the virus
- Touching surfaces, objects, or fabrics contaminated with the virus, and then putting their hand or fingers in their mouth
- Having direct contact with another person who is infected with the virus (for example, when caring for someone with illness or sharing foods or eating utensils with them)

Staff working in skilled nursing facilities should pay special attention to residents who have norovirus symptoms, especially diarrhea and vomiting. This virus is very contagious and without precautions can spread rapidly throughout the facility.

4. Is the norovirus illness serious?

Among adults, norovirus illness is usually not serious, and most people get better within a few days. However, norovirus illness can be very serious in young children, the elderly, and people with other health conditions. If not cared for properly, norovirus illness can lead to severe dehydration, hospitalization and even death. Dehydration is usually seen among the very young, the elderly, and those with weakened immune systems.

5. Is the norovirus illness contagious?

Yes, the norovirus illness is very contagious and can spread easily from person to person. Infected people can spread the virus from the moment they begin to feel ill to about 2 days after they have fully recovered. It is during the symptomatic phase when an ill person can contaminate their surrounding environment. Some people may be contagious up to three weeks after recovery. Both stool (feces) and vomit are infectious, so it's very important for skilled nursing facility staff to wash their hands with soap and water after coming in contact with ill patients.

6. Who can get the norovirus illness?

Anyone can get the norovirus illness. There are many different strains of norovirus, which make it difficult for a person's body to develop long-lasting immunity. Therefore, norovirus illness can recur throughout a person's lifetime. In addition, because of differences in genetic factors, some people are more likely to become infected and develop more severe illness than others.

7. How is the norovirus illness diagnosed?

A special test of stool (feces) samples will be required to diagnose the virus, and is available at Los Angeles County Public Health Laboratory, the State health department, and Centers for Disease Control and Prevention, as well as local laboratories.

8. How is the norovirus illness treated?

Currently, there are no medications that can treat the norovirus illness. Antibiotics will not help treat norovirus, because antibiotics fight against bacteria, not viruses. It's very important to prevent dehydration by drinking liquids such as water, juice, or ice chips. Oral rehydration fluids (ORF) are the most helpful for severe dehydration.

9. Can norovirus infections be prevented?

Yes, you can decrease your chances of coming into contact with norovirus by:

- Washing your hands with soap and water for at least 20 seconds, especially before and after patient care, after using the restroom, changing diapers, and before preparing or eating food
- Immediately washing contaminated clothing or linens
- Flushing or getting rid of any vomit and/or stool in the toilet and making sure that the surrounding area is kept clean
- Disinfecting the contaminated areas using an Environmental Protection Agency (EPA) approved disinfectant or a freshly prepared sodium hypochlorite solution
- Throwing away foods that may have been contaminated by sick kitchen employees, or leftover food from an ill patient
- Double the frequency of routine unit, bathroom and toilet cleaning

Note: Hand sanitizers alone do not prevent norovirus infection from spreading. The best prevention method is to regularly wash your hands with soap and water.

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Control

Community Health Services

Environmental Health

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COUNTY OF LOS ANGELES

Public Health

Acute Communicable Disease Control