

Outbreak Prevention and Response Plan (ORPR)

This Local Working Instruction is to be read in conjunction with the Safety Management System as it makes a number of references to it.

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1. PUBLIC HEALTH MONITORING & REPORTING OF PASSENGERS AND CREW HEALTH

1.1. International and Local Public Health Requirements

1.1.1. Compliance with all port and public health requirements for reporting on passenger and crew health

The Captain is to ensure that the ship complies with all port and public health requirements for reporting on passenger and crew health:

- 1.1.1.1. Unless local regulations require otherwise, before arrival at a Port State the Master shall ascertain the state of health on board, and will complete and deliver, on arrival or before that if so required, to the competent authority for that port a Maritime Declaration of Health which shall be countersigned by the ship's doctor
- 1.1.1.2. Deaths and illnesses will be reported in an Attached Schedule to the Maritime Declaration of Health detailing personal details, nature of the illness, date of onset and treatment as applicable

1.1.2. Public Health surveillance and reporting

- 1.1.2.1. The ship's Senior Medical Officer is to appraise the Captain of the number of diarrhea and vomiting illness cases (Acute Gastro-Enteritis (AGE)) that occur and advise him accordingly.
- 1.1.2.2. The form MEDLOG 3 "Public Health (AGE) Reports on Passengers and Crew Health (AGE Surveillance Log)" is to be completed every cruise on daily basis for all diarrhea and vomiting illness cases amongst passengers and crew of which the medical department are aware.
 - .1. "Reportable" cases of diarrhea and/or vomiting illness are to be indicated on MEDLOG3.
 - .2. A reportable case of AGE (Acute Gastro-Enteritis) illness shall be defined as:-
 - .1. Diarrhea (three or more loose stools within a 24 hour period or what is above normal for the individual; or
 - .2. Vomiting and one additional symptom including one or more episodes of loose stools in a 24 hour period, or abdominal cramps, or headache or muscle aches or fever (temperature of $\geq 38^{\circ}\text{C}$ (100.4°F); **and**
Reported by a passenger or crewmember to the Master or medical staff

- .3. The reportable cases must include crew members with a symptom onset time of up to 3 days before boarding the vessel. This is to be assessed and documented by form Med 21 “Health Declaration for Joining Crew Members” which should be completed by all new joining crew and handed to the Ship’s Doctor as soon as completed, and maintained on file for a minimum of 12 months
- 1.1.2.3. Questionnaires (form MED 12 “Medical History Questionnaire” detailing activities and meal locations for the 72 hours before illness onset must be distributed to all passengers and crew members who are AGE cases and attached and maintained with the AGE surveillance log (form MEDLOG 3 “Public Health Reports on Passengers and Crew Health”)
 - 1.1.2.4. The following must also be documented and available for 12 months for review during inspections and outbreak investigations
 - .1. interviews with cabin mates and immediate contacts of crew members with AGE (initial, 24-, and 48-hour)
 - .2. documentation of the date and time of last symptom and clearance to return to work for food and non-food employees (ie via Medlog 2 “Medical Consultation Records - Crew”)
 - .3. documentation of the date and time of verbal interviews with asymptomatic cabin mates and immediate contacts of symptomatic crew (ie via Medlog 2 “Medical Consultation Records - Crew”)

1.2. For vessels trading to the USA

1.2.1. Foreign Quarantine Regulations Reporting Procedure (for Illnesses other than GI Illness and for Death reporting)

- 1.2.1.1. U.S. regulations (42 CFR 71.21) require the master of a ship destined for a U.S. port of entry to immediately report any death or illness among the ship’s passengers or crew that occurred within 15 days prior to arrival, including persons who have disembarked or have been removed from the ship due to illness or death.. . For ships that have left the United States and will be returning to a U.S. port during the same voyage, this includes all deaths or illnesses that occurred within 15 days of departure.
- 1.2.1.2. All deaths and ill persons displaying any of the following signs and symptoms must be reported to CDC:
 - .1. Fever $\geq 38^{\circ}\text{C}$ [100.4°F] or greater; or feels warm to the touch; or gives a history of feeling feverish) accompanied by one or more of the following:
 - skin rash,
 - difficulty breathing or suspected or confirmed pneumonia,
 - persistent cough or cough with bloody sputum,
 - decreased consciousness or confusion of recent onset,
 - new unexplained bruising or bleeding (without previous injury),

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- persistent vomiting (other than sea sickness)
- headache with stiff neck

OR

- .2. Fever that has persisted for more than 48 hours

OR

- .3. Acute gastroenteritis, which means either:

- diarrhea, defined as three or more episodes of loose stools in a 24-hour period or what is above normal for the individual, or
- vomiting accompanied by one or more of the following: one or more episodes of loose stools in a 24-hour period, abdominal cramps, headache, muscle aches, or fever (temperature of 100.4 °F [38 °C] or greater)

OR

- .4. Symptoms or other indications of communicable disease, as the Director may announce through posting of a notice in the Federal Register (CDC will notify partners in applicable industries as well as posting on the CDC website)

Note: Cruise ships carrying 13 or more passengers shall report cases of acute gastroenteritis or diarrhea to [CDC VSP](#) as per section 1.2.2. below.

- 1.2.1.3. Definitions of signs, symptoms and conditions of ill travelers are available [Here](#)

- 1.2.1.4. Acronyms:

MIDRS = Maritime Illness and Death Reporting System

DGMQ = Division of Global Migration Quarantine

- 1.2.1.5. Reports must immediately be made to the CDC Quarantine Station at or nearest the U.S. port of arrival:

- [List of Quarantine Stations, Contact Information, and Areas of Jurisdiction](#)
- The preferred method of reporting illnesses and deaths to DGMQ is electronically via the Maritime Illness and Death Reporting PDF Form. If there are issues with the PDF form, ships can email, call, or fax the report to the CDC QUARANTINE Station with jurisdiction over the ship's next U.S. port of entry. If you cannot reach the CDC Quarantine Station with jurisdiction over the next U.S. seaport of arrival (or in case of significant events, or emergencies), please call the CDC Emergency Operations Center (EOC): 770-488-7100. The EOC will notify the appropriate CDC Quarantine Station.

1.2.1.6. [Guidance for Cruise Ships: How to Report Onboard Death or Illness to CDC](#)

1.2.1.7. General inquiries and information about QUARANTINE regulations:

Centers for Disease Control and Prevention

Division of Global Migration and QUARANTINE

Roybal Campus

1600 Clifton Road - MS E28

Atlanta, GA 30329-4027

Website: www.cdc.gov/quarantine/maritime/index.html

Email: MaritimeAdmin@cdc.gov (Monday–Friday 08:00–16:00 Eastern)

1.2.2. CDC VSP requirements (for GI illness reporting)

1.2.2.1. Centers for Disease Control and Prevention (CD) Vessel Sanitation Program(VSP) requirements for passenger vessels

- .1. the Master of a ship with a foreign itinerary and which carries thirteen or more passengers to submit in addition to other Federal reports at least one **standardized Acute Gastro-Enteritis (AGE) report** based upon the number of “reportable” diarrhea illness cases (including zero) among passengers or crew during the current cruise (or last 15 days).
- .2. This must be done at least twenty four hours prior to arrival at the first U.S. port but not more than 36 hours before the expected arrival time. If the number of cases changes after the submission of the initial report, an updated report shall be submitted not less than 4 hours before arrival. The 4-hour update report shall be a cumulative total count of the reported crew and passengers during the entire cruise, including the additional cases.
- .3. If there is an update to the AGE surveillance log after the 4-hour report is submitted, an additional 4-hour report must be submitted only if the vessel is still more than 4 hours from arrival in the U.S. port
- .4. Submit routine 24-hour and 4-hour update reports electronically. In lieu of electronic notification, the reports may be submitted by telephone or fax.
- .5. Proof that routine 24 hour and 4 hour update reports have been received by the U.S. Public Health Service (VSP) must be maintained on file.

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- 1.2.2.2. The AGE report shall cover the cruise before entering a US port (unless longer than 15 days in which case it may cover only those 15 days before arrival in US port) and shall contain:
- .1. the name of the vessel;
 - .2. the ports of embarkation and disembarkation;
 - .3. the dates of embarkation and disembarkation;
 - .4. the total number of reportable cases of AGE among the passengers and crew, including those who have been disembarked because of illness, even if the number is zero; and
 - .5. the total number of passengers and crew members on the cruise.
- 1.2.2.3. The master of a vessel with an international itinerary destined for a U.S. port must submit **a special report** at any time during a cruise, including between two U.S. ports,
- When the cumulative percentage of REPORTABLECASES for the entire voyage entered in the AGE surveillance log reaches 2% among passengers or 2% among crew AND
 - The vessel is within 15 days of expected arrival at a U.S. port.
- 1.2.2.4. For segmented voyages where those segments are 8 days or less, a special AGE report must be made to VSP
- When a cumulative percentage of REPORTABLE CASES of either 2% or 3% is reached among passengers or crew within one segment or two consecutive segments AND
 - The vessel is within 15 days of expected arrival at a U.S. port
- 1.2.2.5. The AGE surveillance log must include all segments from the start of the voyage, unless 67% (two-thirds) or more of the passengers are disembarked in any one segment.
- 1.2.2.6. For cruises lasting longer than 15 days before entering a U.S. port, the 2% or 3% special AGE report must include all cases for the entire voyage.
- 1.2.2.7. A telephone notification to VSP at the telephone numbers listed below must accompany the special 2% report
- 1.2.2.8. A second special report must be submitted when the cumulative percentage of reportable cases entered in the AGE surveillance log reaches 3% among passengers or 3% among crew and the vessel is within 15 days of expected arrival at a U.S. port.
- 1.2.2.9. Daily updates of illness status must be submitted as requested by VSP after the initial submission of a special report.
- 1.2.2.10. Routine AGE surveillance reports may be submitted as follows:
- Telephone: 800-323-2132 or 954-356-6650,
 - Fax: 954-356-6671,
 - Email: vsp-report@cdc.gov, or

- Website (user ID and password required):
<https://wwwn.cdc.gov/midrs/giloin.aspx>

- 1.2.2.11. The 24-hour, 4-hour, and special reports must be maintained on the vessel for 12 months and available for review by VSP during inspections and outbreak investigations.

1.2.3. General requirements for all reporting

- 1.2.3.1. All ships under the jurisdiction of the Vessel Sanitation Program (ie carry more than 13 passengers and have an international itinerary and call on US ports) are required to maintain all of the following:
- .1. a copy of the MIDRS User Manual at their reporting desk
 - .2. reporting requirements for gastrointestinal illnesses (GI)
 - .3. a User ID and password

1.3. For vessels trading to Canada

1.3.1. Health Canada and US CDC VSP

- 1.3.1.1. The application of inspection criteria in Canada will be in accordance with Canadian regulatory requirements. References to US legislation and US administrative references are not applicable in Canada. However the Health Canada Cruise Ship Inspection Program (CSIP) is harmonized, to a large extent with the USA CDC Vessel Sanitation Program (VSP). The US CDC VSP Operations Manual (2018) will be used as a tool to help with assessing compliance with Canadian legislation
- 1.3.1.2. There is a voluntary compliance fee-for-service inspection program with unannounced inspections (at least once per year) whereas 85 points or lower (of max 100) are not satisfactory

1.3.2. Illness Reporting (GI Reports and ILI reports)

- 1.3.2.1. Gastro-Intestinal Illness (GI Reports) are equivalents to Acute Gastro Enteritis (AGE) Reports
- .1. A Routine report is to be submitted as detailed below no less than 24 hours, but no more than 36 hours before the ship's arrival at a Canadian port:
 - .1. the report shall contain the name of the vessel, ports and dates of embarkation and disembarkation, the total number of ill passengers and crew and the total number of passengers and crew.
 - .2. when a cruise does not originate in Canada, routine reporting is required prior to arrival at the first Canadian port of call.

- .3. when a cruise originates in Canada, routine reporting is required prior to arrival at the last port of call in Canada.
 - .4. reporting can be done via:
 - the web at <http://www.healthspace.ca/hcsc>
the following credentials may be used:
username: leisure
password: winnipeg7
OR a sign on as a guest user is also possible
 - PHAC Notification Line: +1 833 615 2384
 - E-mail: phac.cns-snc.aspc@canada.ca
 - for any questions: phac.tpp-ppv.aspc@canada.ca
- .2. Likewise the USA requirements in the section above the following reports are also to be made:
 - .1. A Four (4) hour report is also to be done per the contact details for Canada above if the numbers of cases change after the initial report
 - .2. Special (Immediate) Report to the telephone contact only above if the AGE level reaches 2% among passengers OR crew and the vessel is within 15 days of expected arrival at a Canadian port
 - .3. A telephone notification shall accompany a special 2% report
 - .4. A second special report must be submitted when reportable cases reach 3% among passengers or 3% among crew and the vessel is within 15 days of expected arrival at a Canadian port

1.3.2.2. Influenza like Illness (ILI) Outbreak Reporting

- .1. PHAC requests that medical staff on board cruise ships report passenger and crew total influenza/Influenza-Like Illness (ILI) cases for each voyage (if there are no cases on board, there is no need for this report)
- .2. reporting form is to be submitted 24-48 hours prior to arrival into Canada:
 - .1. by email to: phac.cns-snc.aspc@canada.ca
 - .2. complicated cases requiring hospitalisation or any case resulting in death related to influenza as soon as possible to the PHAC Quarantine Officer on-duty at 1-833-615-2384
 - .3. for any questions: phac.tpp-ppv.aspc@canada.ca

1.3.3. Corrective Action Statements (CAS)

- 1.3.3.1. Corrective Action Statements (CAS) are required to be submitted for the violations noted within 10 business days of an inspection by Health Canada to the following contacts

Region	Fax Number	Email Address
Eastern (NS, NB, NFLD, PEI, NU)	(506) 855-6568	phac.tpp.eastern.aspc@canada.ca
Central (ON, QC, MB, NT)	(514) 283-4317	phac.tpp.central.aspc@canada.ca
Western (BC, AB, SK, YT)	(604) 666-7487	phac.tpp.western.aspc@canada.ca

- 1.3.3.2. (see also the guidelines in the VMS: [Health > 1.0 Hygiene & Sanitation > 1.11 Public Health Shipboard Inspections](#) for the follow up on such inspections)

2. IDENTIFYING THE EXISTENCE OF A (POTENTIAL) OUTBREAK (TRIGGER LEVELS)

2.1.Trigger levels

2.1.1. Criteria

- 2.1.1.1. Meeting the criteria defined below as cumulative % and/or daily rate of Acute Gastro Enteritis (AGE) cases among passengers or crew triggers the appropriate responses both on board the vessel and from the support management ashore
- 2.1.1.2. Norovirus cases will be confirmed onboard by the Doctor by the case definition of AGE.
- 2.1.1.3. If the vessel is equipped with rapid norovirus testing methods, then these will be used to confirm the case.
- 2.1.1.4. When it is not possible to get laboratory confirmation of norovirus, health departments can use Kaplan Criteria to determine if the outbreak was likely caused by norovirus:
 - A mean (or median) illness duration of 12 to 60 hours,
 - A mean (or median) incubation period of 24 to 48 hours,
 - More than 50% of people with vomiting, and
 - No bacterial agent found.

When all four criteria are present, it is very likely that the outbreak was caused by norovirus. However, about 30% of norovirus outbreaks do not meet these criteria. If the criteria are not met, it does not mean that outbreak was not caused by norovirus.

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Level	Acute Gastro Enteritis (AGE) cases	Sanitation operations	Triggers					Returning to level Green
			Number of cumulative AGE cases (within crew OR pax)	OR	Daily rate (in 24 hrs) number of combined AGE cases (both pax AND crew)	OR	Number of confirmed Norovirus cases	Hours after AGE cases fall to Baseline levels
Green Level	Baseline	Normal	Isolated AGE cases < 0.5%	OR	≤0.45%	OR	0	n/a
Yellow Level	Elevated	Enhanced	Sudden increase of AGE cases 0.5% -2.0 %	OR	≥0.45%	OR	1	72
Red Level	Outbreak	Epidemic control	Significant increase of AGE cases > 2.0 % within pax or crew	OR	≥0.55%	OR	3	72

2.1.2. If in doubt

2.1.2.1. If in doubt, it is better to over react in terms of implementing these procedures, alerting the Company and mobilising resources.

2.2. Main Steps

2.2.1. Case Identification, Control and Prevention

2.2.1.1. For effective identification of AGE and prevention of its spread, whenever possible verify the following:

- .1. Case identification
 - .1. evaluate the measures being undertaken to identify cases not reporting to the medics
 - .2. are onset times properly logged so the right picture is built of the outbreak and identity of recent cases
- .2. Case control
 - .1. are appropriate measures undertaken to “quarantine” cases and THOROUGHLY disinfect cabins

.3. Case prevention

- .1. are all onboard being made aware of the need for preventive measures and reporting of illness

2.2.2. Other controls

.1. Environment control

- .1. is hand washing and sanitising thorough enough and regularly carried out
- .2. is hand contact potential reduced to minimum as practicable

2.3. Gastrointestinal Illness Logs

2.3.1. Retention

In all cases of gastrointestinal illness the following forms must be completed and copies retained onboard for at least 12 months

2.3.2. List of Logs

2.3.2.1. MEDLOG 1 “Medical Consultation Records - Passengers” or MEDLOG 2 “Medical Consultation Records - Crew” as appropriate

2.3.2.2. MEDLOG 3 “Public health reports on passenger and crew health”

2.3.2.3. MED 12 “Gastrointestinal Illness Surveillance System Questionnaire” (2 pages)

2.3.2.4. Med 21 “Health Declaration for Joining Crew Members”

2.3.2.5. Log 40 “Cleaning and sanitizing infected stateroom-cabin”

2.3.2.6. Log 41 “OPP linen drop off log”

3. MANAGEMENT OF A (POTENTIAL) OUTBREAK (LEVELS YELLOW AND RED)

3.1. Initial Actions and Aims

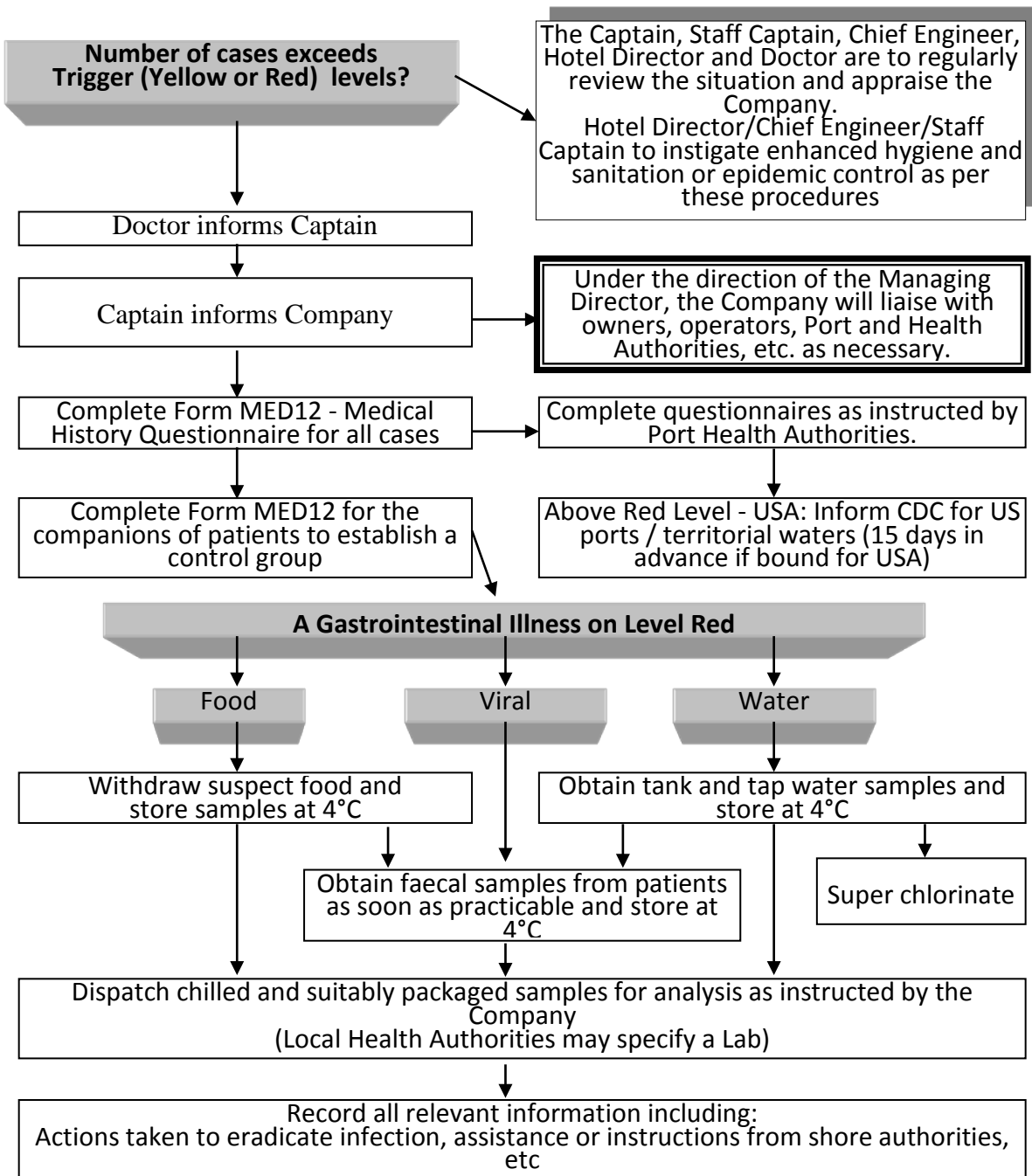
3.1.1. Identification of a trigger level of AGE cases ie Yellow or Red Levels

- 3.1.1.1. In the event that the Yellow or Red Levels as described above of Diarrhea & Vomiting (ie Gastro-intestinal GI / Acute Gastro Enteritis (AGE)) or other epidemic illness is identified the following actions should be implemented
- 3.1.1.2. The Doctor will inform the Master immediately
- 3.1.1.3. The Captain is to co-ordinate and monitor the activities of the senior officers including the Doctor, Staff Captain, Chief Engineer and Hotel Director and in particular reporting and enhanced hygiene and sanitation in accordance with these procedures

3.1.2. Aims

- 3.1.2.1. Establish the facts and extent of the elevated AGE cases / outbreak
- 3.1.2.2. Ascertain the cause of the elevated AGE cases / outbreak
- 3.1.2.3. Identify and implement the actions necessary to prevent the AGE cases / outbreak spreading further (ie above Level Red)

3.2. Process Flow



3.3. Reporting Yellow and Red Levels

3.3.1. Immediate Notifications

Immediately when the Doctor identifies an Yellow (or Red) Level he/she is to inform the Captain who in turn advises the Company's Marine and Technical Departments and the party ashore in charge of hotel operations management without delay. The Company's Marine and Technical in turn will appraise the Managing Director and they will liaise with the party in charge of hotel operations.

3.3.2. Information required

3.3.2.1. This information should include the following :

- .1. Vessel, date and time
- .2. Date and time of origin
- .3. Nature of the epidemic
- .4. Persons affected (number pax and crew, names, date started)
- .5. Whether laboratory tests have been forwarded
- .6. Action taken to prevent infection
- .7. Authorities informed

3.3.2.2. Update reports should be sent to the Company on a daily basis until the outbreak has been eradicated.

3.3.2.3. The Captain should inform port states as required or necessary. (See details of reporting to US Centre for Disease Control and Canada in section 1.2 and 1.3)

3.4. Response to Passenger Enquiries

At an early stage, the Captain should co-ordinate the approach to passenger enquiries, reviewing and revising this approach as necessary.

Note: See the sample Notifications/ Letters provided in section 19. Annex

4. IDENTIFYING THE SOURCE OF A (POTENTIAL) OUTBREAK (LEVELS YELLOW AND RED)

5.1.General

5.1.1. Medical Personnel knowledge

- 5.1.1.1. Medical personnel should be familiar with monitoring and enhanced sanitation and outbreak procedures and lessons learned from previous outbreaks.

5.1.2. General causes

- 5.1.2.1. Outbreaks of illness may be caused by both bacteria and viruses, whether from food or water sources or simply spread from one person to another. The following section gives some background information which may be helpful during the initial investigation into the likely causes of outbreaks of gastrointestinal illnesses on board.

5.1.3. Food Safety

- 5.1.3.1. This section should be read also in conjunction with the VMS (ie Operations > Ship Operations > Ship Hygiene and Sanitation > Food Safety)

5.2.Possible causes

5.2.1. Main groups of Illnesses

- 5.2.1.1. Food and waterborne diseases are caused by eating affected food or drinking water, and can be classified in three main groups as follows:
- Intoxications caused by eating foods containing toxins produced by micro-organisms in the food (usually bacteria or moulds), e.g., Staphylococcus food intoxication.
 - Infections caused when the micro-organisms (bacteria and viruses), actually invade and multiply in the intestine or other tissues, e.g., Shigella and Salmonella (both bacteria) and Norwalk virus.
 - Chemical poisoning caused by contamination of food or water by accident or deliberate adulteration, e.g. chlorine from sanitising products entering bunkered water or ready to eat food.
- 5.2.1.2. The resulting illness may cause mild discomfort or severe reactions that can even result in death. Food and waterborne diseases normally result in 'gastrointestinal' type of illness with the typical food poisoning type symptoms such as diarrhea, vomiting, nausea, abdominal pain, fever, headache and lethargy.

5.2.2. Possible sources

5.2.2.1. The illnesses caused by intoxication, infection and chemical contamination of food or water, usually come from the following sources and spread in the ways discussed below:

- Viral disease (respirable or gastrointestinal) brought onto the ship by passengers or crew and then spread from person to person. These illnesses may be passed by contact with saliva, faces or vomit from an infected person and can spread very quickly since only small numbers of organisms are needed to cause illness.
- Transmission of viral or bacterial disease from a crew member to a passenger or to other crew. This may be through food handling direct, e.g. viruses transferred in the air onto food near to a vomiting incident or handling food after contact with face), or indirect transmission, e.g. cross contamination of bacteria from raw to cooked foods, via work surfaces or equipment.
- Food contaminated with bacteria or viruses and eaten on the ship. This contamination may have been already in the food supplied to the ship or introduced into the food from dirty work surfaces or equipment, by contact with pests or by the food handlers themselves.
- Spas or pools containing water contaminated by chemicals, viruses or bacteria.
- Bunkering or production and consumption of water contaminated with chemicals, parasites, bacteria or viruses.

5.2.2.2. At the onset of an outbreak the source is probably unknown and it is vital that those dealing with it do not make early assumptions about the type of illness and its causes. The investigations should encompass all areas of the ship's operation.

5.3. Investigating elevated cases of AGE / Outbreak (Levels Yellow and Red)

5.3.1. Response

5.3.1.1. Conducting an outbreak investigation onboard a vessel demands a rapid (because of the turnover of passengers and sometimes crew), organized, and comprehensive response.

5.3.2. Objectives

- 5.3.2.1. The objectives of an investigation are to:
- .1. Determine the extent of the AGE among passengers and crew.
 - .2. Identify the agent causing the illness.
 - .3. Identify risk factors associated with the illness.
 - .4. Formulate control measures to prevent the spread of the illness.

5.3.3. Analysis

- 5.3.3.1. The analysis of medical questionnaires (MED 12) is all-important and should be completed for all cases.
 - .1. Despite possible PR problems it is essential that input from patients be obtained wherever possible.
 - .2. The medical department is to obtain accurate food histories using form MED 12 “Medical History Questionnaire” and recent menus to establish details when interviewing patients.
 - .3. Medical confidences must be respected however, the assistance of those outside the Medical Department may be of help when compiling and analysing questionnaires.
- 5.3.3.2. Questionnaires should also be completed for the travelling companions of D&V patients (whether or not they are affected) to provide a control group in the epidemiological investigation.
- 5.3.3.3. Interviews with cabin mates and immediate contacts of crew members with Acute Gastro-enteritis AGE (initial, 24-, and 48-hour) as per section 1.1 are to be made and documented

5.4. Sampling Regime

5.4.1. Materials Supply

- 5.4.1.1. The medical staff will be responsible for maintaining a supply of at least 10 clinical specimen collection containers for both viral and bacterial agents (10 for each), as well as:
 - appropriate refrigerant materials to keep clinical specimens cool
 - a shipping container that meets the latest shipping requirements of the International Air Transport Association (IATA) [and for ships trading to USA: U.S. Department of Transportation for Biological Substances, Category B designated shipments (or higher)]
 - appropriate labels and markings

5.4.2. Collection

- 5.4.2.1. With the Master’s authorisation and not later than when a vessel reaches 2% reportable (Acute Gastro-Enteritis) AGE in either passengers or crew members, the medical staff will begin collecting clinical specimens (stool or vomitus specimens) for bacterial and viral analysis. If the etiologic agent is suspected to be parasitic, the medical staff should consult with VSP epidemiology staff for clinical specimen collection requirements
- 5.4.2.2. Specimens should be requested before issuing antibiotic medications, but this patient treatment should not be contingent on specimen collection.
- 5.4.2.3. Specimens collected after administration of antibiotic medications must not be submitted for CDC analysis unless directed by VSP.

5.4.3. Packing

- 5.4.3.1. Before the specimens are packaged and shipped for laboratory testing, VSP will give instructions to vessel/cruise line medical staff about the specific container (i.e., bacterial or viral) for transport to a laboratory. The specimen packaging must include the proper documentation as required by the receiving laboratory
- 5.4.3.2. Each specimen must be properly labeled with the following:
 - Date of collection.
 - Unique identifying number. (A separate log containing unique identifying number linked to case name must be kept on the ship.)
 - Notation on use of antidiarrheal or antibiotic medication.
- 5.4.3.3. Transport of specimens will be arranged in collaboration with VSP

5.4.4. Requirements

- 5.4.4.1. Stool / Faecal samples for viral diagnosis
 - .1. Faecal specimens for viral diagnosis should be collected within the first 48 hours. Specimen collection should not await the results of epidemiologic and other investigations because delay will almost certainly preclude a viral diagnosis. It is recommended to collect specimens from 10 ill persons if possible to maximise the chance that a diagnosis can be made. Bulk specimens, enough to fill a large stool cup, are preferred. Serial specimens from persons with acute, frequent, high-volume diarrhea are particularly useful.
 - .2. Specimens should be stored at 4°C. Freezing may destroy the characteristics that permit a diagnosis.
 - .3. Special care must be taken to prevent cross-contamination of specimens during collection and transport.
- 5.4.4.2. Food and Water samples
 - .1. Samples must be collected with washed and gloved hands, using sterile sampling utensils and containers to protect the integrity of the sample during collection.
 - .2. Water taps used for collection should be sterilised and the water allowed to flow for one minute before collecting the sample.

- .3. Approximately 200 grams or 200 ml of sample should be collected, and should be clearly identified with the date, time, location of collection, product information etc
- .4. Sample should be held below 5°C (41°F) but not frozen.
- .5. The vessel will maintain a food and water sampling kit for the collection and shipping ashore of samples.

5.4.4.3. Other specimens for viral diagnosis

- .1. Viruses causing AGE are not routinely detected in water or FOOD, but may be detectable on surfaces with environmental swabbing. Swabbing may be completed under the guidance of VSP staff or the CDC National Calicivirus Laboratory.
- .2. Viruses can be successfully detected in vomitus specimens as well. These should be collected and sent using the same methodology as for stool specimens.

LOCAL WORKING INSTRUCTION (LWI) # 52
OUTBREAK PREVENTION AND RESPONSE PLAN (OPRP)

5.4.5. Instructions for Collecting Stool Specimens¹

Instructions	Bacterial	Parasitic ²	Viral ³	Chemical
When to collect	During period of active diarrhea (preferably as soon as possible after onset of illness).	Anytime after onset of illness (preferably as soon as possible).	Within 48-72 hours after onset of illness.	Soon after onset of illness (preferably within 48 hours of exposure to contaminant).
How much to collect	A fresh stool sample from 10 ill persons; samples from 10 controls also can be submitted. Two rectal swabs or swabs of fresh stool from 10 ill persons	A fresh stool sample from 10 ill persons; samples from 10 controls also can be submitted. To enhance detection, 3 stool specimens per patient can be collected >48 hours apart.	As much stool sample as possible from 10 ill persons (a minimum of 10 mL of stool from each); samples also can be obtained from 10 controls.	A fresh urine sample (50 mL) from 10 ill persons; samples from 10 controls also can be submitted. Collect vomitus, if vomiting occurs within 12 hours of exposure. Collect 5-10 mL whole blood if a toxin/poison is suspected that is not excreted in urine.
Method for collection	For rectal swabs, moisten 2 swabs in an appropriate transport medium (e.g., Cary-Blair, Stuart, Amies; buffered glycerol-saline is suitable for <i>E. coli</i> , <i>Salmonella</i> , <i>Shigella</i> , and <i>Y. enterocolitica</i> but not for <i>Campylobacter</i> and <i>Vibrio</i>). Insert swab 1-1.5 inches into rectum and gently rotate. Place both swabs into the same tube deep enough that medium covers the cotton tips. Break off top portion of sticks and discard. Alternatively, swab whole stools and put them into Cary-Blair medium.	Collect bulk stool specimen, unmixed with urine, in a clean container. Place a portion of each stool sample into 10% formalin and polyvinyl alcohol preservative (PVA) at a ratio of one part stool to three parts preservative. Mix well. Important: Also save portion of the unpreserved stool placed into a leakproof container without fixative for antigen or PCR testing.	Place fresh stool specimens (liquid preferable), unmixed with urine, in clean, dry containers, e.g., urine specimen cups.	Collect urine, blood, or vomitus in prescreened containers *. If prescreened containers are not available, submit field blanks with samples [†] . Most analyses from blood require separation of serum from red cells. Cyanide, lead and mercury analyses require whole blood collected in prescreened EDTA tubes. Volatile organic compounds require whole blood collected in a specially prepared gray-top tube.
Storage of specimens after collection	Refrigerate swabs in transport media at 4°C. When possible, test within 48 hours after collection; otherwise, freeze samples at -70°C. Refrigerate whole stool,	Store specimen in fixative at room temperature, or refrigerate unpreserved specimen at 4°C. The unpreserved stool	Immediately refrigerate at 4°C. Store portion of each stool specimen frozen at less than -15°C for antigen or	Immediately refrigerate at 4°C and if possible freeze urine, serum, and vomitus specimens at less than -15°C. Refrigerate whole blood for volatile

LOCAL WORKING INSTRUCTION (LWI) # 52
OUTBREAK PREVENTION AND RESPONSE PLAN (OPRP)

Instructions	Bacterial	Parasitic ²	Viral ³	Chemical
	process it within 2 hours after collection. Store portion of each stool specimen frozen at less than -15°C for antigen or PCR testing.	specimen may be frozen at less than -15°C for antigen or PCR testing.	PCR testing.	organic compounds and metals at 4°C.
Transportation	For refrigeration: Follow instructions for viral samples. For frozen samples: Place bagged and sealed samples on dry ice. Mail in insulated box by overnight mail.	For refrigeration: Follow instructions for viral samples. For room-temperature samples: Mail in waterproof container.	Keep refrigerated. Place bagged and sealed specimens on ice or with frozen refrigerant packs in an insulated box. Send by overnight mail. Send frozen specimens on dry ice for antigen or PCR testing.	Immediately refrigerate at 4°C and if possible freeze urine, serum, and vomitus specimens at less than -15°C. Refrigerate whole blood for volatile organic compounds and metals at 4°C. Place double bagged and sealed urine, serum, and vomitus specimens on dry ice. Mail in an insulated box by overnight mail. Ship whole blood in an insulated container with pre-frozen ice packs. Avoid placing specimens directly on ice packs.

¹ Label each specimen in a waterproof manner, and put the samples in sealed, waterproof containers (i.e., plastic bags). Batch the collection and send in overnight mail to arrive at the testing laboratory on a weekday during business hours unless other arrangements have been made in advance with the testing laboratory. Contact the testing laboratory before shipping, and give the testing laboratory as much advance notice as possible so that testing can begin as soon as samples arrive. When etiology is unclear and syndrome is nonspecific, all 4 types of specimens may be appropriate to collect.

² [Detailed instructions on how to collect specimens for specific parasites.](#)

³ [Detailed instructions on how to collect specimens for viral testing](#)

*The containers have been tested for the presence of the chemical of interest prior to use.

[†] Unused specimen collection containers that have been brought in to the field and subjected to the same field conditions as the used containers. These containers are then tested for trace amounts of the chemical of interest.

5. CARE OF PASSENGERS AND CREW

5.5. Medications and Advice

5.5.1. Medications

- 5.5.1.1. Antidiarrhoeal medications shall not be sold or dispensed to passengers or crew except by designated medical staff

5.5.2. Medical Advice

- 5.5.2.1. During his consultation with any suspect cases, the Doctor is to warn the patient re the possibility of secondary infection.

5.6. Demonstration of Medical Knowledge

5.6.1. Person in Charge

- 5.6.1.1. The person(s) onboard (for large cruise ships as assigned per VMS: Operations > Ship Operations > Ship Medical Operations > Medical Department Duties and Responsibilities) and in charge of medical operations related to Acute Gastro-Enteritis (AGE):
 - .1. shall be able to demonstrate during inspections and on request knowledge of the guidelines for medical operations related to AGE during inspections and upon request
 - .2. must ensure that employees are properly trained to comply with such guidelines as they relate to their assigned duties

5.7. Crew

5.7.1. Inspections

- 5.7.1.1. The Doctor should conduct personal hygiene inspections of food handling staff and any potentially infectious conditions screened out.

5.7.2. Offence

- 5.7.2.1. It should be impressed on all crewmembers that it is an offence to conceal any gastro-intestinal illness.

5.7.3. New Joiners

- 5.7.3.1. The health of new crew is to be screened upon joining the ship and up to 3 days prior to embarkation via form MED 21 "Health Declaration for Joining Crewmembers"

5.7.4. Food Handlers

- 5.7.4.1. Food handlers or beverage service staff assigned to the Sanitation Squad must be excluded from normal duties.

5.7.5. Symptomatic Crew

- 5.7.5.1. Symptomatic crew and crew meeting the (Acute Gastro-Enteritis) AGE criteria (per section 1.1):
- .1. Food handlers and beverage service staff should be withdrawn from the workplace and isolated in cabin or designated restricted area for a further 48 hours after symptoms have stopped. (a 72 hrs period in level red, see section 15.1)
 - .2. Other crew should be withdrawn from the workplace and isolated in cabin or designated restricted area for 24 hours after symptoms have stopped. (a 48 hrs period during outbreaks /level red)
 - .3. Isolation should ideally be in a facility with internal toilet and they must disinfect the toilet seat and bathroom after every use. Gloves must be worn when cleaning and regularly changed to avoid cross contamination (see section 15.1)
 - .4. All meals to be served in the cabin by a designated steward using disposable paper plates and plastic eating utensils. Dirty items should be disposed of and incinerated when possible.
 - .5. Medical personnel shall follow-up and grant approval before crew is returning to work
 - .6. The work restriction and the release from restriction of the crew member including time of last symptom and clearance to return to work will be documented and maintained for minimum of 12 months.
 - .7. Symptomatic crew are to be advised of hygiene and hand-washing facts and provided with written hand-washing and hygiene fact sheets (see Annexes Section 19)
 - .8. When possible, a review of any AGE cases among passengers or crew reported after the ill food employee's symptom onset shall be made for epidemiologic link/connection

- .9. The food employee's supervisor must:
 - conduct an assessment of food prepared or served by the food employee while symptomatic
 - take appropriate corrective actions and document them. Records must be maintained for 1 year and available for review during inspections

Note: Appropriate corrective actions could include discarding ready-to-eat food, thoroughly cooking raw food, and disinfecting the food area and equipment

5.7.6. Crew Cabin Mates (Food and non-Food)

5.7.6.1. Cabin mates and contacts of symptomatic crew and crew with AGE:

- .1. their exposure to symptomatic crew members is to be restricted
- .2. If the asymptomatic IMMEDIATE CONTACT or cabin mate is at work, he or she must be contacted by medical or supervisory staff as soon as possible

Note: An IMMEDIATE CONTACT is someone sharing a cabin either full-time or part-time or sharing a cabin's bathroom facilities. This includes boyfriends, girlfriends, spouses, and significant others

- .3. medical or supervisory staff are to verbally interview them and confirm their condition within 8 hrs from the time their ill crew cabin mate or contact reported and thereafter continue to interview them daily till 48hrs after their ill crew member's cabin mate or contact symptoms began
- .4. are to be provided facts and written fact sheets about hygiene and hand-washing and instructed to report immediately upon any illness symptoms (see Annexes Section 19)
- .5. the date and times of the verbal interviews above are to be documented (ie on MEDLOG 2 – "Medical Consultation Records – Crew")
- .6. If the symptomatic crew member has no cabin mate or other IMMEDIATE CONTACT, this must be documented (ie on MEDLOG 2 – "Medical Consultation Records – Crew")

5.8.Symptomatic Passengers

5.8.1. Restrictions

- 5.8.1.1. Where possible the movement of affected persons should be restricted and individuals isolated until they are no longer considered infectious.
- 5.8.1.2. During consultation, the Doctor is to advise the symptomatic patient to remain in their cabin for a minimum of twenty four hours after symptom resolution, explaining the suspected cause of illness and its mode of transmission. All patients with diarrhoea and vomiting should, if possible, be examined and treated in their own cabin.

5.8.2. Advice

- 5.8.2.1. Symptomatic passengers are to be advised of hygiene and handwashing facts and provided with written handwashing and hygiene fact sheets. (see Annexes Section 19)

6. TECHNICAL OPERATIONS- POTABLE WATER

6.1. Green Level

- 6.1.1.1. The normal procedures covered in the VMS (Operations > Ship Operations > Ship Hygiene and Sanitation > Water) are to be followed
- 6.1.1.2. Ppm solution levels in this section are to be determined by using calibrated halogen analyzers (where these are required ie at a distant point in the potable water distribution system or at each multiple distribution loop) or by test kits (within expiration date), also in case of the above equipment failure (within 10 days)

6.2. Yellow Level

6.2.1. Potable Water Treatment

- 6.2.1.1. Until water as an infected source has been excluded, chlorination levels to be increased to 4 ppm
- 6.2.1.2. A residual of 3 ppm chlorine level to be available at taps
- 6.2.1.3. Chlorine dosing charts at far point analyser to be examined closely by the responsible officer to ensure correct levels of chlorine maintained in system
- 6.2.1.4. Increase hot water temperature to +75°C

6.3. Red Level

6.3.1. Potable Water Sampling

- 6.3.1.1. Daily Millipore water testing to be undertaken to monitor effectiveness of cleaning procedures (e.g. in small plastic samples bags containing Sodium Thiosulphate).
- 6.3.1.2. Distribution samples taken from five locations e.g. :
 - .1 Galley wash hand basin
 - .2 Galley juice machine
 - .3 Upper deck juice machine
 - .4 Pax cabin wash hand basin
 - .5 Crew toilet wash hand basin
- 6.3.1.3. Samples of new potable water to be taken from a number of sample cocks during bunkering.

6.3.2. Investigating Potable Water Contamination

- 6.3.2.1. Confirm that water chlorination records for the previous week establish that treatment is to the required standard.

6.3.2.2. Checks should include the following:

- .1 The bunkering rate has allowed chlorination to 2 ppm.
- .2 FW supply was not drawn from tanks being bunkered, as chlorine requires contact time to act upon the bacteria.
- .3 Where this was unavoidable was the tank batch chlorinated as bunkering took place and chlorine levels checked at the far distribution point?
- .4 Correct rotation of the potable water tanks. Chlorine allowed to stand in water will decay with time and become susceptible to bacteria growth.
- .5 If a tank had been out of use for some time was it batch chlorinated at least 2 days before coming into use and chlorine levels checked.
- .6 Sodium hypochlorite solution stock has been:
 - .1 Well stored.
 - .2 Adequately rotated.
 - .3 Tested with the kit provided as new drums were opened

6.3.2.3. Sodium hypochlorite solution quality reduces with time and hot storage.

6.3.2.4. Examine in detail the distribution system from storage tanks to distribution points for sources of contamination.

6.3.3. Additional checks

6.3.3.1. Suction lines and glands beneath plates are leaking when pump is stopped but allow suction when the pump is running.

6.3.3.2. Contamination from sewage to fresh water systems due to:

- .1. History of sewage overflow into the bilges
- .2. Spray from leaking sewage gland onto adjacent FW pump.
- .3. There are no guards between the systems and the area is not clean.
- .4. Fresh water line contaminated when used to prime bilge pump suction and vacuum breakers are inoperative or missing (after repairs).

6.3.3.3. Increased tank chlorination should be reflected in the distribution system chlorine level. If not, contaminated water maybe degrading chlorine between storage tanks and the distribution system.

6.3.3.4. Potable water tank lid gasket leaking when submerged by bilge water.

7. TECHNICAL OPERATIONS – RECREATIONAL WATER FACILITIES (RWF) SANITATION

7.1. Green Level

- 7.1.1.1. The normal procedures covered in the VMS (Operations > Ship Operations > Ship Hygiene and Sanitation > Recreational Water Facilities (RWF) Operation and Maintenance) are to be followed
- 7.1.1.2. Ppm solution levels in this section are to be determined using calibrated analyzers for each individual RWF), or by manual test kit (within expiration date) in case of above equipment failure (within 30 days)

7.2. Yellow Level

7.2.1. Increased halogenation

- 7.2.1.1. Increase chlorine concentration levels to maintain an approx. residual 5 ppm

7.2.2. Increased frequency of testing

- 7.2.2.1. Test every four hours

7.2.3. Past RWF water chlorination records examined

- 7.2.3.1. Examine RWF water chlorination records from the last 7-10 days preceding the date of the suspected outbreak to ensure that no failure of chlorination or RWF operation has occurred

7.3. Red Level

Conduct a Risk Assessment jointly with shoreside management if RWFs are to be closed.

Note: For Fecal and Vomit Accident Response for RWFs – see VMS Operations > Ship Operations > Ship Hygiene and Sanitation > Recreational Water Facilities (RWF) Operation and Maintenance

8. TECHNICAL OPERATIONS – AIR CONDITIONING

8.1. Green Level

- 8.1.1.1. The normal procedures covered in the VMS (Operations > Ship Operations > Ship Hygiene and Sanitation > Maintenance of Air Conditioning Systems and Operations > Ship Operations > Ship Hygiene and Sanitation > Legionnaire's Disease (Legionella)) are to be followed
- 8.1.1.2. Ppm solution levels in this section are to be determined using test kit (within expiration dates)

8.2. Yellow Level

8.2.1. Inspection and disinfection requirements

- 8.2.1.1. An inspection of air conditioning systems should be made to check that no faults or failures in the system might be contributing to an outbreak of gastro-intestinal illness.
- 8.2.1.2. Air Inlet and Recirculation Filters
 - .1. As applicable, to be renewed or sanitised (in a 50 ppm sodium hypochlorite solution for 10 mins) and thereafter every two days
 - .2. Any damaged or worn filters should be replaced and supplementary cleaning and disinfection carried out
- 8.2.1.3. Cooler drain Sumps
 - .1. To be sanitised (in a 50 ppm sodium hypochlorite solution for 10 mins) and thereafter once a week
- 8.2.1.4. Humidifier sumps and drains
 - .1. To be sanitised (in a 50 ppm sodium hypochlorite solution for 10 mins) and thereafter once a week
- 8.2.1.5. Air Handling Units Internal Surfaces
 - .1. The air-side of cooler tubes are to be washed and sanitised (in a 50 ppm sodium hypochlorite solution for 10 mins) and thereafter once a week

8.2.2. Safety Precautions and Air Management

- 8.2.2.1. Safety precautions (shutting down of the AC system) must be taken to ensure the sanitizer does not enter cabins or occupied public rooms when the system is being sanitized as above

- 8.2.2.2. After sanitation is completed, ventilation including AC system should be set at the maximum level for the introduction of outside air and the minimum level of re-circulation
- 8.2.2.3. Many cabins are fitted with ventilation gaps in doors or bulkheads. These gaps allow air to circulate into adjacent corridors. Whenever possible these gaps should be fitted with closers to allow this infiltration to be stopped during outbreaks, if possible
- 8.2.2.4. If the balanced system and pressure differentials do not allow these to be fully closed off then this circulation of air into corridors should be minimised as far as possible.

8.3.Red Level

- 8.3.1.1. If practicable, minimise the risk of airborne spread virus particles by the use of specialist contractors to constantly sanitise air conditioning systems

9. TECHNICAL OPERATIONS - TENDERING

9.1.Green Level

9.1.1. Sanitation

- 9.1.1.1. Ppm solutions in this section are to be determined by using either specialized test kits (within their expiration dates), 1:xx dilution ratios by dispensing equipment where available, or by mixing proportions as follows: 1 ounce per US gallon of water (3.78 L) = 1:128; 2 ounces per gallon = 1:64; 4 ounces per gallon= 1:32; 8 ounces per gallon = 1:16
- 9.1.1.2. The day before each tender port and also after a tender port (following the end of tender service) all hand touch surfaces inside each tender should be cleaned and sanitized with 200 ppm chlorine solution for 30 sec or with an alternative effective virucide as AHP Accel-Virox/Oxivir RTU/wipes for 30 sec or AHP diluted concentrate 1:16 for 30 sec (see section 16 for recommended disinfectants). Concentrate on all hand and bottom touch surfaces, all handles including window handles, seats and benches, poles and railings
- 9.1.1.3. Gangway railings must be sanitized with the chemicals , concentrations and contact times as above during and after embarkation / disembarkation
- 9.1.1.4. Hand contact surfaces in gun port areas must be sanitized at the end of each day when used with 200 ppm chlorine solution for 30 sec or with an alternative effective virucide as AHP Accel-Virox/Oxivir RTU/wipes for 30 sec or AHP diluted concentrate 1:16 for 30 sec (see section 16 for recommended disinfectants).

9.1.2. Contingency Kit

- 9.1.2.1. A contingency kit should be on each tender including following:
 - .1. Vomit bags
 - .2. Paper towels
 - .3. Disposable scoop
 - .4. Disposable rubber gloves
 - .5. Plastic bags
- 9.1.2.2. Disinfectant/sanitizer sprays or 1000 ppm chlorine solution must be also available on board the tender

9.2.Yellow Level

- 9.2.1.1. As often as possible (ie when min exposure to crew and passengers) , disinfect hand touch surfaces and areas which may be sat on inside boats during use with 1000 ppm chlorine solution for 10 mins or with an alternative effective virucide as AHP Accel-Virox/Oxivir RTU/wipes for 1 min or AHP diluted concentrate 1:64 for 5 mins (see section 16 for recommended disinfectants). This can be achieved in between loadings and during slow intervals throughout the day.
- 9.2.1.2. Gangway railings must be disinfected with chemicals, concentrations and contact times as above every two hours and after times of high passenger use
- 9.2.1.3. Hand contact surfaces in gun ports must be disinfected with chemicals, concentrations and contact times as above twice during the operating hours.
- 9.2.1.4. Where the gun port deck is not carpeted it is to be sprayed with chemicals, concentrations and contact times as above at the end of the operating day.
- 9.2.1.5. Any dockside water/juice dispensers, taps and counters must be wiped down with a 200 ppm chlorine solution with 5 mins contact time in between the arrival and departure of the tenders.
- 9.2.1.6. Provide hand sanitising gels for the gangway operation. These should be dispensed into passengers' hands or passengers should be asked to use them.

9.3.Red Level

- 9.3.1.1. Disinfect hand touch surfaces inside tenders continuously by using with 1000 ppm chlorine solution for 10 mins or with an alternative effective virucide as AHP Accel-Virox/Oxivir RTU/wipes for 5 mins or AHP diluted concentrate 1:16 for 5 mins (see section 16 for recommended disinfectants). This can be achieved in between loadings and during slow intervals throughout the day.
- 9.3.1.2. Gangway railings, hand surfaces in gun ports must be continuously disinfected with chemicals, concentrations and contact times as above.
- 9.3.1.3. For areas where 1000 ppm chlorine solution is used – see section 17. “Procedures to protect Passengers and crew from exposure to disinfectants”. In the case of tenders periods, between embarkation periods when no passengers onboard and air management will be used to reduce exposure to passengers and crew to 1000 ppm chlorine.

10. TECHNICAL OPERATIONS - SECURITY

10.1. Green Level

- 10.1.1.1. Ppm solutions in this section are to be determined by using either specialized test kits (within their expiration dates), 1:xx dilution ratios by dispensing equipment where available, or by mixing proportions as follows: 1 ounce per US gallon of water (3.78 L) = 1:128; 2 ounces per gallon = 1:64; 4 ounces per gallon = 1:32; 8 ounces per gallon = 1:16
- 10.1.1.2. Sanitize daily equipment, surfaces and gangway railings with 200 ppm chlorine solution for 30 sec or with an alternative effective virucide as AHP Accel-Virox/Oxivir RTU/wipes for 30 sec or AHP diluted concentrate 1:16 for 30 sec (see section 16 for recommended disinfectants).

10.2. Yellow Level

- 10.2.1.1. Security staff who are handling passenger and crew items for inspection or X-ray should be wearing vinyl gloves.
- 10.2.1.2. Sanitary wipes as AHP (see section 16 for recommended disinfectants) are to be provided at all embarkation gangways for security staff to use when necessary.
- 10.2.1.3. The gangway rails and all contact surfaces (including hand rails and lift buttons) must be frequently disinfected with 1000 ppm chlorine solution for 10 mins or with an alternative effective virucide as AHP Accel-Virox/Oxivir RTU/wipes for 1 min or AHP diluted concentrate 1:64 for 5 mins (see section 16 for recommended disinfectants)

10.3. Red Level

- 10.3.1.1. Stop assisting passengers with their ID cards.
- 10.3.1.2. Continuously disinfect when in use the above surfaces with 1000 ppm chlorine solution for 10 mins or with an alternative effective virucide as AHP Accel-Virox/Oxivir RTU/wipes for 5 mins or AHP diluted concentrate 1:16 for 5 mins (see section 16 for recommended disinfectants)
- 10.3.1.3. For areas where 1000 ppm chlorine solution is used – see section 17. “Procedures to protect Passengers and crew from exposure to disinfectants”. In this case disinfection with 1000 ppm chlorine will be done when no passengers or crew are passing the gangway

11. TECHNICAL OPERATIONS - WASTE PROCESSING (GARBAGE) ROOM

11.1. Green level

- 11.1.1.1. Ppm solutions in this section are to be determined by using either specialized test kits (within their expiration dates), 1:xx dilution ratios by dispensing equipment where available, or by mixing proportions as follows: 1 ounce per US gallon of water (3.78 L) = 1:128; 2 ounces per gallon = 1:64; 4 ounces per gallon = 1:32; 8 ounces per gallon = 1:16
- 11.1.1.2. Maintain the highest levels of cleanliness at all times, using detergents to wash surfaces, rinse with clear water, then sanitize with 200 ppm chlorine solution for 30 sec or with an alternative effective virucide as AHP Accel-Virox/Oxivir RTU/wipes for 30 sec or AHP diluted concentrate 1:16 for 30 sec (see section 16 for recommended disinfectants) at least daily.
- 11.1.1.3. Any persons sorting or handling garbage in the garbage room must be properly protected by wearing durable vinyl gloves, aprons, and safety glasses/goggles.
- 11.1.1.4. Staff to remove overalls and gloves when work is completed (and before moving to any clean area), placing them in a sealed bag for either disposal or laundering. They should also change into fresh overalls before visiting the mess or any other area where food is being handled (provisions, galley)

11.2. Yellow Level

- 11.2.1.1. Twice daily deep clean hand touch surfaces and equipment used and handled.
- 11.2.1.2. Use detergents to wash surfaces, rinse with clear warm water, and then disinfect with 1000 ppm chlorine solution for 10 mins or with an alternative effective virucide as AHP Accel-Virox/Oxivir RTU/wipes for 1 min or AHP diluted concentrate 1:64 for 5 mins (see section 16 for recommended disinfectants)

11.3. Red Level

- 11.3.1.1. Continuously disinfect with 1000 ppm chlorine solution for 10 mins or with an alternative effective virucide as AHP Accel-Virox/Oxivir RTU/wipes for 5 mins or AHP diluted concentrate 1:16 for 5 mins (see section 16 for recommended disinfectants) all areas and equipment in the garbage room and/or incinerator.
- 11.3.1.2. For areas where 1000 ppm chlorine solution is used – see section 17. “Procedures to protect Passengers and crew from exposure to disinfectants”. In this case 1000ppm chlorine disinfection is to be done when no crew is disposing of waste in the garbage room.
- 11.3.1.3. At the turnaround following an outbreak an additional deep clean and disinfection of surfaces and equipment with chemicals, concentrations and contact times as above in these areas is to be carried out

12. CREW HYGIENE & SANITATION RESPONSIBILITIES (ALL LEVELS - GREEN, YELLOW, RED)

12.1. General

12.1.1. Discipline

- 12.1.1.1. Staff must rigidly conform to the following instructions and guidance if the risk of epidemic illnesses is to be reduced

12.1.2. Supervision

- 12.1.2.1. All hygiene standards and cleaning routines are to be enhanced wherever possible and adequately supervised to control an outbreak

12.2. Personal Hygiene and Individual Responsibilities

12.2.1. Crew reporting their GI condition

- 12.2.1.1. Staff who continue to work when sick, through a misguided sense of loyalty to the Company, put the health of passengers and crew at serious risk

12.2.1.2. All crew:

- .1. Are to receive instruction re the transfer of viruses and the importance of maintaining higher levels of hygiene throughout the vessel for the duration of the problem
- .2. Must notify their supervisor of any condition such as diarrhoea, vomiting or infected skin surfaces. This is especially important for food handlers and beverage service staff
- .3. Failure to report such a condition is a breach of the Code of Conduct
- .4. Must report any soiled areas they find immediately

12.2.2. Notice to Ship's Company

- 12.2.2.1. The notice similar to the one below must be displayed on staff notice boards

NOTICE TO SHIP'S COMPANY

**Action to be taken by all crew and officers suffering symptoms of
diarrhoea or vomiting**

All staff must report to their supervisor of any skin complaint, eye or ear discharge or stomach disorders (diarrhoea or vomiting) immediately.

Supervisors will arrange for an individual to visit the doctor at the first opportunity.

Staff who handle food must alert the doctor of this when seeking advice as to when they may return to work.

The staff member must advise the supervisor of the diagnosis and anticipated date of return to work.

A food handler suffering from diarrhoea, vomiting or chronic stomach disorder must not handle food under any circumstances.

**ANY FOOD HANDLER WHO FAILS TO NOTIFY THEIR SUPERVISOR OF
SUCH CONDITIONS IS LIABLE TO DISCIPLINARY PROCEDURES.**

13. HOTEL OPERATIONS - HYGIENE AND SANITATION

13.1. References

- 13.1.1.1. **Section 15 gives detailed instruction and advice regarding the measures to be instigated at all levels in the hotel department**
- 13.1.1.2. Heads of Hotel Departments and Hotel Supervisors must consult the above section 15 and verify that the required procedures are in place.
- 13.1.1.3. **Section 18 lists the recommended kit for control of an outbreak for a vessel of approximately 600 passengers.**

13.2. Criticality of Food & Beverage Areas

- 13.2.1.1. The hygienic and sanitary operation of these areas (including galleys, bars and other production / preparation areas) is critical
- 13.2.1.2. The shipboard management is to be appraised of any F&B staff taken ill and their symptoms
- 13.2.1.3. Food/beverage handlers are to wash and then dry hands thoroughly before commencing duty. Adequate facilities to be provided. They should also protect food effectively
- 13.2.1.4. Supervisors are to carry out stringent checks to ensure that all hygiene practices are correct
- 13.2.1.5. Managers must confirm that practices are correct
- 13.2.1.6. Areas of particular concern during levels yellow and red include:
 - .1. Correct food preparation, storage and service including cold buffets
 - .2. All food must be protected to prevent any risk of contamination
 - .3. Cutlery, crockery and glassware correctly washed, stored and utilised
 - .4. Correct use of towels, plastic gloves, etc.
 - .5. Correct temperatures (refrigeration, dishwasher glasswasher, etc)
 - .6. Separation of clean and dirt tableware
 - .7. Changing tongs and utensils regularly
- 13.2.1.7. for more details, please see sections 15.16 and 15.17

13.3. Sanitizing Uncontaminated Cabins:

- 13.3.1.1. Uncontaminated cabins should be carefully cleaned and sanitized, since not all passengers/crew report gastrointestinal illness. This will help to avoid cross-contamination.

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- 13.3.1.2. See the recommended sequence in Section 15.2
- 13.3.1.3. If there are any signs of the passenger/crew being ill, the stateroom steward should contact immediately their supervisor and NOT clean the cabin. The Sanitation Squad will then disinfect the cabin (see section 14.3)

14. HOTEL OPERATIONS - SANITATION FOLLOWING PVIs (Public Vomiting Incidents) OR PDIs (Public Diarrhoea Incidents)

14.1. Cleaning, Disinfection and Disposal of Vomit and Diarrhoea

14.1.1. General

- 14.1.1.1. Viruses deposited on surfaces by vomit or diarrhoea (as with gastroenteritis caused by the Norwalk SRSV virus) are highly contagious and particular attention must be directed to vomit and diarrhoea disposal.
- 14.1.1.2. The procedures herewith reference recommendations from the UK HPA publication "Guidance for the Management of Norovirus Infection in Cruise Ships" should be used for further details
- 14.1.1.3. Ppm solutions in this section are to be determined by using either specialized test kits (within their expiration dates), 1:xx dilution ratios by dispensing equipment where available, or by mixing proportions as follows: 1 ounce per US gallon of water (3.78 L) = 1:128; 2 ounces per gallon = 1:64; 4 ounces per gallon = 1:32; 8 ounces per gallon = 1:16

14.1.2. Vomiting / Diarrhoeal Incidents (PVI s and PDIs)

- 14.1.2.1. Immediately when vomit (or faeces) is discovered the (public) area must be cordoned / roped off or closed if possible and the Sanitation ("Hit") Squad activated (see section 14.2)
- 14.1.2.2. Cordon off and clean and disinfect within 8 meters / 25 feet radius of the soiled public area if possible with chemicals, concentrations and contact times as below
- 14.1.2.3. The following types of disinfectants are to be used in the actions further below:
 - .1. For hard surfaces disinfect with either 1000 ppm chlorine solution for 10 mins or with an alternative effective virucide as AHP Accel-Virox/Oxivir RTU/wipes for 5 mins or AHP diluted concentrate 1:16 for 5 mins (see section 16 for recommended disinfectants) including any surrounding surfaces (deck, bulkhead, deckhead); air dry
 - .2. In case of food areas where PVI/DVI took place, then after application of 1000 ppm chlorine for 10 mins - wash, rinse and sanitize with 50-200ppm chlorine; air dry
 - .3. For areas where 1000 ppm chlorine solution is used – see section 17. "Procedures to protect Passengers and crew from exposure to disinfectants"

- .4. Soft surfaces (furnishings): spray with suitable effective virucide as AHP Accel-Virox/Oxivir RTU for 5 mins or AHP diluted concentrate 1:16 for 5 mins (see section 16 for recommended disinfectants) to wet thoroughly; lightly soiled cover items to be put in sealed soluble laundry bags (to be washed at min 70C for min 5 mins); heavily soiled items in biohazard bag for incineration
- 14.1.2.4. Spray disinfectant directly onto gross contaminants (vomit or stool) and cover them with disinfectant (with chemicals, concentrations and contact times as above) soaked paper towels or rags for the appropriate contact time or cover them with absorbent gel powder (designed for bodily fluids, allow 5 mins to absorb)
- 14.1.2.5. Clean surface of residuals with dustpan and spatula
- 14.1.2.6. Apply disinfectant with chemicals, concentrations and contact times as above to the soiled surface for the appropriate contact time or let air dry
- 14.1.2.7. Dispose ALL (vomit or stool, absorbent, gel, waste cloth, paper towels, the disposable PPE) carefully in (biohazard) bags which are to be immediately sealed and preferably incinerated or carefully disposed of to avoid any contamination elsewhere
- 14.1.2.8. Other measures:
 - .1. Any food items in the area must be discarded
 - .2. Any utensils from the area affected must be disinfected with 1000ppm chlorine solution for 10 minutes before going through the dish/glass ware washers
 - .3. place any linen from the affected area into a sealed dissolvable Laundry bag if lightly soiled (to be washed at min 70C for min 5 mins) or sealed in a biohazard bag if heavily soiled for incineration
- 14.1.2.9. Wash hands with soap and water and dry with hand sanitizer
- 14.1.2.10. If possible open doors or windows to direct the airflow outside of the vessel
- 14.1.2.11. The area should remain closed for as long as practical thereafter (ideally overnight), but for at least a minimum of 2 hours after the incident

14.1.3. Cleaning Equipment (see also section 18)

- 14.1.3.1. Separate cleaning equipment should be used for toilets, hand wash areas and non-toilet areas. A colour coding system for equipment should be used to achieve this
- 14.1.3.2. All mop heads should be detachable and washable. They should be laundered at 70°C and the mop should then be inverted to dry thoroughly. Mops should not be left in buckets of water

- 14.1.3.3. Mop buckets must be cleaned, disinfected and dried between uses. Water should not be left in buckets as this can quickly become contaminated and if used later, can spread the infection within the environment
- 14.1.3.4. Storage areas should be kept clean and tidy so there is no risk of cross contamination from used 'dirty' equipment to clean equipment
- 14.1.3.5. All equipment used for cleaning incidents should be disinfected before being returned to storage areas
- 14.1.3.6. Disposable cloths must be used and disposed of immediately after use. Used cloths should be placed in bags and sealed
- 14.1.3.7. All other equipment such as vacuum cleaners, steam cleaners etc. (including detachable tools) must be cleaned and wiped with a disinfectant after use. Change the air filter regularly on vacuums according to manufacturer's instructions

14.1.4. Detergents

- 14.1.4.1. Cleaning using detergent and hot water removes accumulated deposits and reduces the number of micro-organisms from a surface.
- 14.1.4.2. The detergent selected must be compatible with the subsequent disinfection process because some products can interfere with chemical disinfection.
- 14.1.4.3. Thorough rinsing is necessary to remove all soil and cleaning agent from surfaces
- 14.1.4.4. **Cleaning with detergent before applying disinfectant has been demonstrated to be the most effective method of eliminating contamination.**

14.1.5. Disinfectants (see also section 16 on recommended disinfectants)

- 14.1.5.1. Sanitizers reduce the number of bacterial contaminants to safe levels in one test. Disinfectants perform a higher level of germ killing (destruct pathogenic and other microorganisms in multiple tests). All disinfectants sanitize but not all sanitizers disinfect.
- 14.1.5.2. Required concentrations of chlorine solutions in ppm (mg/l) must be accurately determined by using a test strip kit (range 0-1000ppm)
- 14.1.5.3. Disinfectants requiring dilution will be used by dispensing device equipment where available, by specialized test kit or by mixing proportions. As guidance the mixing ratios are as follows: 1 ounce per US gallon of water (3.78 L) = 1:128; 2 ounces per gallon = 1:64; 4 ounces per gallon = 1:32; 8 ounces per gallon = 1:16

- 14.1.5.4. The recommended disinfectant [for Norovirus] for non-food contact services is hypochlorite solution at 1000 parts per million (ppm) – 0.1% of available chlorine (for a minimum of 10 mins contact time) or an effective virucide as AHP Accel-Virox/Oxivir RTU/wipes for 5 mins or AHP diluted concentrate 1:16 for 5 mins (see section 16 for recommended disinfectants)
- 14.1.5.5. 1000 ppm chlorine can be used in food areas only if there has been a vomit or diarrhea incident, otherwise the max chlorine concentration on food contact surfaces is 200 ppm. If 1000 ppm chlorine has been used on food contact surfaces in cases like the above incidents, after its contact time of 10 mins, the surfaces are to be washed, rinsed and sanitized with 50-200 ppm chlorine.
- 14.1.5.6. For areas where 1000 ppm chlorine solution is used – see section 17. “Procedures to protect Passengers and crew from exposure to disinfectants”
- 14.1.5.7. Hypochlorite is not recommended for disinfecting carpets and soft furnishings as it is damaging to many textiles. Instead spray with an alternative effective virucide as AHP Accel-Virox/Oxivir RTU for 5 mins or AHP diluted concentrate 1:16 for 5 mins (see section 16 for recommended disinfectants)

14.1.6. Cleaning Method

- 14.1.6.1. All cleaning activities must be undertaken in a methodical manner following hygienic principles so as not to re-contaminate decontaminated areas.
- 14.1.6.2. All cleaning activities must be adequately supervised ‘in house’ with regular inspections to ensure correct procedures are being adhered to and that there is no risk of cross-contamination from ‘dirty’ to ‘clean areas.’
- 14.1.6.3. Thorough and continuous cleaning and disinfection must be carried out. Cleaners must target general hand contact surfaces such as hand rails, door handles, toilet flush handles, tap handles, etc. and also where passengers sit or lie down.

14.2. Sanitation (“Hit”) Squad

14.2.1. Purpose

- 14.2.1.1. A dedicated Sanitation (“Hit”) Squad is to be organised and trained to provide:
 - .1. The principal response for the thorough cleaning, sanitising and disinfecting areas where staff or customers have been sick.
 - .2. Fogging with disinfectants (see section 14.7)
 - .3. Support to other groups implementing enhanced sanitation routines.

14.2.2. Equipment and decontamination

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OUTBREAK PREVENTION AND RESPONSE PLAN (OPRP)

- 14.2.2.1. Disposable Personal Protective Equipment is to be worn by the squad: full long arm disposable plastic gloves, disposable boiler suits, aprons, safety glasses. A particulate respirator mask (N95) is to be worn if aerosols are likely to be present (ie within an hour of the incident occurring).
- 14.2.2.2. The PPE is to be changed after each task or cabin. Hands must be thoroughly washed for min 20 secs and dried before entering the next cabin / commencing the next task
- 14.2.2.3. PPE used must be discarded and is to be sealed in disposable plastic bags, prior to transportation and ultimate disposal or incineration
- 14.2.2.4. Operatives must scrub, wash and dry hands at completion of each task
- 14.2.2.5. The cleaning/decon equipment of the Sanitation “Hit” Squad includes: covered 10-20 litres bucket, disinfectants (see section 16) in spray bottle, absorbent powder or gel, scraper, dust pan, paper towels / disposable rags, alcohol based hand sanitizer, plastic biohazard bags, (and fogging disinfectant with equipment when fogging is to be performed -see section 14.7). For list of recommended disinfectants see section 16, for lists of recommended equipment see section 18.

14.2.3. General Requirements

- 14.2.3.1. The “Hit” Squad is to be available 24 hrs a day during all sanitation / trigger levels (green/yellow/red) for PVIs and/or PDIs
- 14.2.3.2. Sufficient Hit Squad staff (typically of Housekeeping Utilities) headed by an Assistant Housekeeper or other Hotel Supervisor are to be organized in 8 hrs shifts to cover 24 hrs period
- 14.2.3.3. Generally a squad of 3 people can respond to most incidents or cleaning of individual cabins
- 14.2.3.4. The Hit Squad personnel can be assigned other duties (unless Food and Beverage handlers) but must be available as an emergency response team for PVIs/PDIs
- 14.2.3.5. Squad members should shower and change only in their own cabins if possible
- 14.2.3.6. Squad members should normally share accommodation with other members of the Squad and not share with any other crew
- 14.2.3.7. A log of all D&V responses made must be kept by the Hit Squad Supervisor for one year

14.2.4. Reducing F&B risk

- 14.2.4.1. Food and beverage handlers, if any, assigned to the Sanitation “Hit” Squad must be removed from their normal duties.

14.3. Sanitising Contaminated Cabins

14.3.1. General

- 14.3.1.1. Contaminated passengers and crew cabins must be identified and attended by the Sanitation “Hit” Squad as soon as possible

14.3.2. Sanitising Contaminated Solid / Hard Surfaces (cabins)

- 14.3.2.1. All hard surfaces, i.e. door knobs, chair and table legs, window frames, dressing table, bedside tables, TVs and units, wardrobes, handles, inside drawers and wardrobes, headboards, all bathroom fittings, towel rails, waste bins, etc. must be cleaned and disinfected as per below
- 14.3.2.2. Vomit on solid surfaces to be covered with sanitiser, scooped into plastic bags and the area sanitized. The shovel and scoop to be washed in a strong sanitising solution. Plastic bags to be sealed prior to transportation and disposal
- 14.3.2.3. Spray disinfectant directly onto gross contaminants (vomit or stool) and cover them with disinfectant (1000 ppm chlorine solution for 10 mins or with an alternative effective virucide as AHP Accel-Virox/Oxivir RTU/wipes for 5 mins or AHP diluted concentrate 1:16 for 5 mins (see section 16 for recommended disinfectants)) soaked paper towels or rags for the appropriate contact time or cover them with absorbent gel powder (designed for bodily fluids, allow 5 mins to absorb)
- 14.3.2.4. Clean surface of residuals with dustpan and spatula
- 14.3.2.5. Dispose ALL (vomit or stool, absorbent, gel, waste cloth, paper towels, the disposable PPE) carefully in (biohazard) bags which are to be immediately sealed and preferably incinerated or carefully disposed of to avoid any contamination elsewhere
- 14.3.2.6. See also section 14.1.2 for similar measures as above for PVI and PDI (Public Vomit/Diarrhea Incident)
- 14.3.2.7. All hard surfaces should be cleaned using a suitable detergent or multipurpose cleaner and then disinfected with 1000 ppm chlorine solution for 10 mins or with an alternative effective virucide and cleaner as AHP Accel-Virox/Oxivir RTU/wipes for 5 mins or AHP diluted concentrate 1:16 for 5 mins (see section 16 for recommended disinfectants)
- 14.3.2.8. For areas where 1000 ppm chlorine solution is used – see section 17. “Procedures to protect Passengers and crew from exposure to disinfectants”
- 14.3.2.9. Separate disposable cloths must be used for ‘dirty’ areas such as toilets. After cleaning bathrooms cloths must be placed in sealed bags and disposed of. Staff must not use the same cloths to clean the rest of the accommodation

14.3.2.10. Damp rather than dry dusting or sweeping should be performed

14.3.2.11. During wet cleaning, cleaning solutions and equipment soon become contaminated. Cleaning solutions and cloths/mops should be changed frequently and disposed of

14.3.3. Linen

14.3.3.1. Bed linen and towels to be changed. Beds should be stripped and whilst in the cabin all linen, pillowcases and towels should be placed in the laundry bags. If the linen is heavily contaminated, the use of dissolvable bags is advised

14.3.3.2. Soiled linens should be handled as little as possible and with minimal agitation

14.3.3.3. Damaged linen is to be discarded in biohazard waste bags. The linen bags should be removed to laundry ensuring there is no risk of cross contamination en route. The linen and towels are to be then washed at minimum 70°C (for min 5 mins at that temperature)

14.3.3.4. Clean linen should not be taken into an affected room before it has been decontaminated.

14.3.3.5. Soiled bed spreads and similar materials to be bagged, sealed and stored separately prior to appropriate cleansing

14.3.4. Avoiding cross contamination

14.3.4.1. Any vomit to be double bagged and sealed in disposable plastic bags and transported for disposal. Sealable, disposable, plastic coated vomit bags to be supplied

14.3.4.2. No used linen of any sort to be left in corridors, near to food areas or air conditioning fan rooms

14.3.4.3. All cloths, gloves and sponges used to clean affected areas must be discarded and never re-used in other cabins

14.3.4.4. Any beverage sachets such as coffee, tea, sugar, biscuits etc. should be disposed of. All cutlery, crockery, glasses, tongs, ice buckets should be placed in a lidded container to be sanitized first with 1000ppm chlorine solution for 10 mins before passing through a dish/glassware washer.

14.3.4.5. All toilet rolls and other toiletries should be replaced and the partly used materials disposed of. The holders should be cleaned and disinfected as per the Hard Surfaces procedure

14.4. Sanitising Contaminated Carpets (cabins and/or public areas)

14.4.1. Methods

- 14.4.1.1. Vomit on carpeted surfaces to be covered with sanitiser powder and then cleaned using steam cleanser or similar.
- 14.4.1.2. Machine to be cleaned with sanitising solution after use.
- 14.4.1.3. Carpets should be steam cleaned (or steam vacuumed) using a steam cleaner which reaches a minimum of 70°C (contact time min 5 mins), unless the floor covering is heat sensitive and/or fabric is bonded to the backing material with glue. If this is the case then make wet with an effective virucide as AHP Accel-Virox/Oxivir RTU for 5 mins or AHP diluted concentrate 1:16 for 5 mins (see section 16 for recommended disinfectants)

14.4.2. Precautions

- 14.4.2.1. Carpets should be allowed to dry before any crew or passenger is allowed back into the area
- 14.4.2.2. Vacuum cleaning carpets and buffing floors have the potential to re-circulate viruses (Norovirus) and are therefore not recommended. (If vacuum cleaners are used this should only be in decontaminated areas, closed overnight and when not in passenger use.
- 14.4.2.3. The vacuum cleaners should contain high efficiency particulate air (HEPA) filters which are regularly cleaned and disinfected)

14.5. Sanitising Soft Furnishings (cabins and/or public areas)

- 14.5.1.1. If Soft Furnishings (i.e. chairs, stools, beds, upholstery, headboards etc) items are heat tolerant, after initial cleaning with hot water and detergent, they should be steam cleaned with a temperature of minimum 70°C for min 5 mins
- 14.5.1.2. If this is not possible, they should be disinfected by making them wet by an effective virucide as AHP Accel-Virox/Oxivir RTU for 5 mins or AHP diluted concentrate 1:16 for 5 mins (see section 16 for recommended disinfectants)
- 14.5.1.3. If covers are removable they should be laundered at 70°C for min 5 mins at that temperature

14.6. Sanitising Contaminated Solid / Hard Surfaces (public areas)

- 14.6.1.1. Follow the procedure for solid / hard surfaces in cabins above

14.7. Fogging

14.7.1. General

- 14.7.1.1. Fogging is the application of small droplets of disinfectants to the air and environmental surfaces
- 14.7.1.2. Optimal particle size is 10-20 microns in diameter which will settle in 45-60 mins in non-ventilated room
- 14.7.1.3. Fogging should be carried out as an addition to thorough surface cleaning and disinfection (and in case of cabins - after occupants have recovered)
- 14.7.1.4. Fogging is to be performed with an effective virucide as AHP Accel-Virox/Oxivir RTU or AHP diluted concentrate 1:16 (see section 16 for recommended disinfectants) (general recommendation is 1 liter/100m3)
- 14.7.1.5. Fogging can only be carried out in enclosed areas (such as cabins, toilets, bathrooms) and public areas that can be completely closed off to other rooms.
- 14.7.1.6. For areas that cannot be closed, instead of using of fogging generator devices a wide area spreader can be used on surfaces.
- 14.7.1.7. Exposure to fogging of crew (not with PPE) and passengers shall be minimized and whenever possible the areas to be fogged will be restricted in access and/or out of service hours.
- 14.7.1.8. Fogging on its own with disinfectants is not an alternative to effective conventional cleaning and disinfection
- 14.7.1.9. Appropriate PPE, including vinyl gloves, face masks, respirators and disposable (tyvek) suits are to be used by the Sanitation "Hit" Squad when fogging even if some of the chemicals for fogging do not require PPE at use dilution due to the increased exposure when fogging

14.7.2. Fogging procedure:

- 14.7.2.1. it should be done after the cabin (or space) has been thoroughly cleaned and disinfected as above
- 14.7.2.2. it must take place before changing linen (prior to clean linen being taken into the room) and before crockery and beverages are replaced, ie before that cabin has been "made up"
- 14.7.2.3. any open-able windows they must be closed during fogging operations and the AC unit should be disabled.
- 14.7.2.4. wardrobe doors and all drawers should be opened including the door to the bathroom

- 14.7.2.5. Electrical equipment must be protected and fire alarms and smoke/heat detectors covered.

14.7.3. Fogging techniques:

- 14.7.3.1. set fogger for a particle size 10-20 microns and appropriate rate
- 14.7.3.2. have an adequate volume of disinfectant in the fogger reservoir
- 14.7.3.3. fog the entire volume of disinfectants
- 14.7.3.4. the fogging generator device should be methodically worked backwards from the furthest point from the door, aiming it upwards ensuring all surfaces are covered with a light vapour from high to low levels.
- 14.7.3.5. the fogging generator should be aimed into any cupboards, the bathroom and under beds.
- 14.7.3.6. best fogger nozzle location in cabin/room:
- 1-2 meters above floor
 - Higher location improves dispersal of disinfectant
 - Less coverage at higher areas of room
 - Less coverage at areas posterior to nozzle
 - Avoid wall and ceiling contact with nozzle plume
 - Disinfectant will concentrate on these surfaces
- 14.7.3.7. the cabin/room door should be closed and left usually for 45- 60 minutes.
- 14.7.3.8. the room should then be re-entered and all hard surfaces wiped with a multipurpose cleaner
- 14.7.3.9. fire alarms and smoke/heat detectors should be uncovered then
- 14.7.3.10. the Air Conditioning (AC) can be restarted
- 14.7.3.11. wipe off any residual disinfectant from sensitive surfaces

15. HOTEL OPERATIONS - SANITATION REQUIREMENTS AT ALL LEVELS (GREEN, YELLOW AND RED)

As a rule of thumb the following chemicals, concentrations and contact times are to be used (see also section 16 for recommended disinfectants):

- For hard non-porous surfaces:
 - Green level: **sanitize with 200 ppm chlorine solution for 30 sec or with an alternative effective virucide as AHP Accel-Virox/Oxivir RTU/wipes for 30 sec or AHP diluted concentrate 1:16 for 30 sec**
 - Yellow level: **disinfect with 1000 ppm chlorine solution for 10 mins or with an alternative effective virucide as AHP Accel-Virox/Oxivir RTU/wipes for 1 min or AHP diluted concentrate 1:64 for 5 mins**
 - Red level: **disinfect with 1000 ppm chlorine solution for 10 mins or with an alternative effective virucide as AHP Accel-Virox/Oxivir RTU/wipes for 5 mins or AHP diluted concentrate 1:16 for 5 mins**
- For food contact surfaces/areas
 - Wash rinse and sanitize with 50-200ppm chlorine solution
 - 1000 ppm chlorine can be used in food areas only if there has been a vomit or diarrhoea incident
 - If 1000 ppm chlorine has been used on food contact surfaces in cases like the above incidents, after its contact time of 10 mins, the surfaces are to washed, rinsed and sanitized with 50-200 ppm chlorine
- For areas where high concentrations ie 1000 ppm chlorine solution is used – see section 17. “Procedures to protect Passengers and crew from exposure to disinfectants”
- For soft furnishings (and carpets):
 - the recommended disinfectant is AHP Accel-Virox/Oxivir RTU for 5 mins or AHP diluted concentrate 1:16 for 5 mins
 - where steam cleaning or washing can be done – at min 70°C for min 5 mins

Concentrations for PPM solutions in this section are to be determined by using either specialized test kits (within their expiration dates), 1:xx dilution ratios by dispensing equipment where available, or by mixing proportions as follows: 1 ounce per US gallon of water (3.78 L) = 1:128; 2 ounces per gallon = 1:64; 4 ounces per gallon= 1:32; 8 ounces per gallon = 1:16

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OUTBREAK PREVENTION AND RESPONSE PLAN (OPRP)

GREEN	YELLOW	RED
	In addition to the level Green procedures as appropriate	In addition to level Yellow procedures as appropriate
15.1. GENERAL REQUIREMENTS		
The hit squad procedures for a vomiting / diarrhoeal accident are the same as per Section 14 for all three levels Green, Yellow, Red		

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GREEN	YELLOW	RED
	In addition to the level Green procedures as appropriate	In addition to level Yellow procedures as appropriate
<p>The Standard Hotel Operations Procedures on sanitation are to be applied per the Hygiene and Sanitation procedures of the VMS (ie Operations > Ship Operations > Ship Hygiene and Sanitation This generally includes daily sanitation with 200 ppm chlorine solution for 30 sec or with an alternative effective virucide as AHP Accel-Virox/Oxivir RTU/wipes for 30 sec or AHP diluted concentrate 1:16 for 30 sec (see section 16 for recommended disinfectants).</p> <p>See precautions for symptomatic crew per Section 5.7</p> <p>See precautions for symptomatic passengers per section 5.8</p>	<p>The sanitation frequency must be increased to twice or three times a day with 1000 ppm chlorine solution for 10 mins or with an alternative effective virucide as AHP Accel-Virox/Oxivir RTU/wipes for 1 min or AHP diluted concentrate 1:64 for 5 mins (see section 16 for recommended disinfectants) for non-food areas. For food areas continue to wash rinse and sanitize with 200ppm chlorine 2-3 times a day.</p> <p>1000 ppm chlorine can be used in food areas only if there has been a vomit or diarrhea incident, otherwise the max chlorine concentration is 200 ppm. If 1000 ppm chlorine has been used on food contact surfaces in cases like the above incidents, after its contact time of 10 mins, the surfaces are to be washed, rinsed and sanitized with 50-200 ppm chlorine</p> <p>For areas where 1000 ppm chlorine solution is used – see section 17. “Procedures to protect Passengers and crew from exposure to disinfectants”</p> <p>Hand Washing campaign to be reinforced.</p> <p>Hand gel sanitiser’s use must be encouraged by stationing a crew member next to it to invite passengers and crew to use it</p> <p>Any dishes from affected cabins to be washed in a designated service pantry with ware-washing machines (the temperature to be monitored frequently -min wash temperature 70°C/160°F, min rinse temperature</p>	<p>Disinfect non-food contact hard surfaces continuously with 1000 ppm chlorine solution for 10 mins or with an alternative effective virucide as AHP Accel-Virox/Oxivir RTU/wipes for 5 mins or AHP diluted concentrate 1:16 for 5 mins (see section 16 for recommended disinfectants)</p> <p>Food contact areas must be washed, rinsed and sanitized with 200 ppm chlorine solution</p> <p>1000 ppm chlorine can be used in food areas only if there has been a vomit or diarrhea incident, otherwise the max chlorine concentration is 200 ppm. If 1000 ppm chlorine has been used on food contact surfaces in cases like the above incidents, after its contact time of 10 mins, the surfaces are to be washed, rinsed and sanitized with 50-200 ppm chlorine</p> <p>For areas where 1000 ppm chlorine solution is used – see section 17. “Procedures to protect Passengers and crew from exposure to disinfectants”</p> <p>For disinfecting soft furnishings use effective virucide as AHP Accel-Virox/Oxivir RTU for 5 mins or AHP diluted concentrate 1:16 for 5 mins (see section 16 for recommended disinfectants). Soft furnishings can be also steam cleaned with min temperature of 70°C and min contact time of 5 mins</p> <p>Company Office is to be updated on continuous basis.</p> <p>Crew and passengers to be informed of the outbreak (daily during its duration) including those embarking after an outbreak voyage or segment. The above notifications will take place by means of letters in cabins for passengers and</p>

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GREEN	YELLOW	RED
	In addition to the level Green procedures as appropriate	In addition to level Yellow procedures as appropriate
	<p>82°C/180°F)</p> <p>Advise persons to close toilet lid before flushing if they have either Vomit or Diarrhoea Accident into it.</p> <p>The Doctor notifies Captain who notifies also the Office</p>	<p>announcements including during safety inductions for crew and the safety muster for passengers. They must also be advised to reduce hand contact potential (ie avoiding loaning of items (books, magazines, computer disks etc to friends)</p> <p>Doctor and Captain to keep the Office updated on the situation.</p> <p>Stop transfer of staff moving between vessels and if not possible, only do so with the relevant 48 or 72 hour gap without symptoms</p> <p>After extended periods of enhanced sanitation, the teams will be feeling fatigue. Do your utmost to re-energize them (medics, hit squads, utility cleaners, etc.) and their programs.</p> <p>Implement isolation of up to 48 hrs for any crew member and up to 72 hrs for a food handler after the AGE symptoms have stopped</p>

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OUTBREAK PREVENTION AND RESPONSE PLAN (OPRP)

GREEN	YELLOW	RED
	In addition to the level Green procedures as appropriate	In addition to level Yellow procedures as appropriate
15.2. HOUSEKEEPING - Cabins		
<p>Cabins to be cleaned and sanitised (Vomit / Diarrhoea Accident and/or AGE infected cabins to be cleaned last as per section 14.3) with 200 ppm chlorine solution for 30 sec or with an alternative effective virucide as AHP Accel-Virox/Oxivir RTU/wipes for 30 sec or AHP diluted concentrate 1:16 for 30 sec (see section 16 for recommended disinfectants) and in the following order to prevent cross contamination:</p> <ul style="list-style-type: none"> • Put on new gloves • Clean and disinfect door handle • Empty trash • Remove soiled towels • Change gloves • Spray disinfectant and clean and disinfect bathroom (toilet and brush, bowl, taps, shower, flush, drainage and scuppers, around toilet bowl and floor) • Wipe sink and shower • Change gloves • Clean and disinfect all hard surfaces • Sanitise specific touchable items such as door handles, light switches, phones, remote controls, etc.) • Clean mirrors • Strip bed linen (send to laundry or for incineration) • Change gloves • Change bedding • Restock towels • Discard gloves, wash and dry hands <p>NB. Sanitiser solution must be applied using a</p>	<p>The housekeeping department must provide a detailed ship's plan, deck by deck, with the affected staterooms highlighted.</p> <p>Disinfect with 1000 ppm chlorine solution for 10 mins or with an alternative effective virucide as AHP Accel-Virox/Oxivir RTU/wipes for 1 min or AHP diluted concentrate 1:64 for 5 mins (see section 16 for recommended disinfectants). For soft furnishings use only AHP and not chlorine per above.</p> <p>Vacuuming must be minimised to help limit any possible transfer of virus. HK Staff must pre-spray areas to be vacuumed with the appropriate AHP disinfectant (as above) to help reduce the creation of dust.</p> <p>All garbage must be collected and bagged/binning inside the cabin rather than out in the corridor.</p> <p>HK Staff to spray the soles of their shoes with appropriate disinfectant (with chemicals, concentrations and contact times as above) after working in each cabin.</p> <p>HK Staff must be re-briefed about the importance of washing and drying their hands after cleaning or working in each cabin and/or using hand sanitisers where this is not possible.</p>	<p>Disinfect on continuous basis with 1000 ppm chlorine solution for 10 mins or with an alternative effective virucide as AHP Accel-Virox/Oxivir RTU/wipes for 5 mins or AHP diluted concentrate 1:16 for 5 mins (see section 16 for recommended disinfectants). For soft furnishings use only AHP and not chlorine per above.</p> <p>All vacuuming must be suspended. Vacuum bags must be removed and incinerated. The vacuum bag compartment must be carefully disinfected with effective virucidal disinfectant (with chemicals, concentrations and contact times as above)</p> <p>In infected cabins, blankets that may harbour virus particles must be replaced.</p> <p>De-scale shower heads ,hoses taps before sanitizing</p> <p>Linen must be changed daily. Lightly soiled linen should go to the laundry in dissolvable bags. Heavily soiled linen is placed in bio-hazard bags for incineration.</p> <p>Use disposable personal protection equipment, including gloves which are changed after each cabin as per the sanitation of contaminated areas procedure per section 14.</p> <p>Hands must be washed with liquid soap and dried before proceeding to next cabin.</p> <p>The same cleaning cloth must never be used in more than one cabin. Used cloths must be discarded.</p> <p>Ice to be provided to passengers only upon request. All ice buckets must be washed, rinsed</p>

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OUTBREAK PREVENTION AND RESPONSE PLAN (OPRP)

GREEN	YELLOW	RED
	In addition to the level Green procedures as appropriate	In addition to level Yellow procedures as appropriate
<p>spray or damp cloth and allowed to air dry to give the sanitiser sufficient contact time to kill viruses present.</p> <p>Ensure and maintain ample supply of bleach/ chlorine and an effective virucidal disinfectant as as AHP Accel-Virox/Oxivir RTU/wipes (see section 16 for recommended disinfectants)</p> <p>All cleaning utensils to be disinfected at end of use with chemicals, concentrations and contact times as above.</p>		<p>and sanitized with 200ppm chlorine prior to refilling with ice .</p> <p>Ensure carts/trolleys are kept clean without any risks of cross-contamination between clean and dirty items.</p> <p>Cabins are to be fogged as per section 14.7.</p>
15.3. HOUSEKEEPING - Infected Crew Cabins		
<p>Supplies of 1000 ppm chlorine solution or with an alternative effective virucide as AHP Accel-Virox/Oxivir RTU/ or AHP diluted concentrate 1:16 (see section 16 for recommended disinfectants) to be made up and to any affected crew to help disinfect their own toilet and bathroom areas especially in shared cabins. A Housekeeper must give guidance to affected crew on the use of the disinfectant (ie contact time of 10mins, chemical safety profile and Personal Protective Equipment). The Hit Squad staff must clean and disinfect affected crew cabins whenever possible / necessary.</p>	<p>In outbreaks affecting a high number of crew, additional Hit Squad staff should be designated for cleaning affected crew cabins, when possible.</p>	<p>Implement higher frequency of blanket and bedding changes.</p> <p>Cabins are to be fogged as per section 14.7.</p>
15.4. HOUSEKEEPING - Alleyways, corridors, staircases including elevators		
<p>Sanitise all hand contact surfaces (ie handrails and door handles, phones, buttons etc) with 200 ppm chlorine solution for 30 sec or with an alternative effective virucide as AHP Accel-Virox/Oxivir RTU/wipes for 30 sec or AHP diluted concentrate 1:16 for 30 sec (see section 16 for recommended disinfectants)</p>	<p>The general frequency of cleaning and disinfection levels of hand contact surfaces within public areas must be increased.</p> <p>While pax and/ or crew are present or circulating in the area, cleaning and disinfection of all hand-contact surfaces shall be on a continuous basis without interruption along a logical route by deck, venue and area.</p>	<p>Disinfect with 1000 ppm chlorine solution for 10 mins or with an alternative effective virucide as AHP Accel-Virox/Oxivir RTU/wipes for 5 mins or AHP diluted concentrate 1:16 for 5 mins (see section 16 for recommended disinfectants) on continuous basis.</p> <p>Continuously disinfect the following using a</p>

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	In addition to the level Green procedures as appropriate	In addition to level Yellow procedures as appropriate
	<p>Disinfect with 1000 ppm chlorine solution for 10 mins or with an alternative effective virucide as AHP Accel-Virox/Oxivir RTU/wipes for 1 min or AHP diluted concentrate 1:64 for 5 mins (see section 16 for recommended disinfectants)</p> <p>This precaution should also be used routinely for the first 2 days of each cruise, since many outbreaks start at this time.</p>	<p>clean cloth saturated with an effective virucidal disinfectant (chemicals, concentrations and contact times as above)</p> <ul style="list-style-type: none"> • Elevator/lift controls/doors/interiors • Stairway and public area handrails • Door handles and push panels • Corridor handrails • Gangway handrails when the ship is in port • Telephones, tabletops, and other hand contact surfaces such as seat handles <p>Implement spraying or fogging of disinfectant per sections 14.7 (fogging) in such areas when not in use</p>
15.5. HOUSEKEEPING - Public Toilets		
<p>Public toilets must be washed/rinsed/sanitised thoroughly at least three times a day with 200 ppm chlorine solution for 30 sec or with an alternative effective virucide as AHP Accel-Virox/Oxivir RTU/wipes for 30 sec or AHP diluted concentrate 1:16 for 30 sec (see section 16 for recommended disinfectants)</p> <p>Check all toilets have liquid soap and toilet paper present.</p>	<p>Public toilets to be checked every hour and thoroughly cleaned and disinfected (with 1000 ppm chlorine solution for 10 mins or with an alternative effective virucide as AHP Accel-Virox/Oxivir RTU for 1 min or AHP diluted concentrate 1:64 for 5 mins (see section 16 for recommended disinfectants) whenever soiled and at least every 4 hours.</p> <p>While pax and/ or crew are present or circulating in the area, cleaning and disinfection of all hand-contact surfaces shall be on a continuous basis without interruption along a logical route by deck, venue and area.</p> <p>Particular attention to be paid to all surfaces of toilets, including insides, seat, taps, and any other surfaces that may be contaminated</p>	<p>Cleaning and disinfection on continuous basis with 1000 ppm chlorine solution for 10 mins or with an alternative effective virucide as AHP Accel-Virox/Oxivir RTU for 5 mins or AHP diluted concentrate 1:16 for 5 mins (see section 16 for recommended disinfectants) which includes taps, tiles, faucets and toilet bowls.</p> <p>Use separate rags for the toilet only, one rag per toilet (disposable cloths can be used) then disposed of in sealed bags,</p> <p>All other surfaces must be sprayed with an effective virucide as AHP Accel-Virox/Oxivir RTU for 5 mins or AHP diluted concentrate 1:16 for 5 mins (see section 16 for recommended disinfectants).</p> <p>Then also re-stock public toilets</p> <p>Whenever possible, public toilet / restroom</p>

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GREEN	YELLOW	RED
	In addition to the level Green procedures as appropriate	In addition to level Yellow procedures as appropriate
	<p>All hard surfaces must be cleaned and disinfected (with chemicals, concentrations and contact times as above) ensuring that separate disposable cloths are used for 'dirty' areas such as toilet bowls. All dirty cloths should be disposed of in sealed bags</p> <p>Then restock also as follows: Toilet rolls and paper towels to be changed; Soap dispenser to be replenished with anti-bacterial soap</p> <p>Air dryers (if any) must be disconnected and paper towels used with an appropriate notice.</p> <p>Busy locations must be identified and cleaned / disinfected more frequently.</p> <p>Toilets / Restrooms must be ideally fogged every night (see section 14.7 on fogging)</p>	<p>doors should be propped open to reduce the need to touch door handles.</p> <p>Proper signs to be displayed, also for use of paper towels when leaving the facility.</p> <p>Toilet brushes must be removed</p>
15.6. HOUSEKEEPING - Open Decks (and SPA)		
<p>Deck blankets - must be laundered quarterly. SPA blankets must be laundered daily.</p> <p>Lounger and seating cushions must be sanitized weekly with an effective virucide as AHP Accel-Virox/Oxivir RTU for 30 sec or AHP diluted concentrate 1:16 for 30 sec (see section 16 for recommended disinfectants).</p> <p>Abandoned soiled pool towels must be routinely collected throughout the day and placed in a designated "dirty" bin or trolley. When the bin is</p>	<p>All hand touch / contact points are to be cleaned and disinfected at least 3 times per day with with 1000 ppm chlorine solution for 10 mins or with an alternative effective virucide as AHP Accel-Virox/Oxivir RTU/wipes for 1 min or AHP diluted concentrate 1:64 for 5 mins (see section 16 for recommended disinfectants). This includes pool or spa / door / seat handles, push panels and railings.</p> <p>While pax and/ or crew are present or</p>	<p>Clean and disinfect continuously all hand touch / contact surfaces (ie handrails etc) wiping all hard surfaces with 1000 ppm chlorine solution for 10 mins or with an alternative effective virucide as AHP Accel-Virox/Oxivir RTU/wipes for 5 mins or AHP diluted concentrate 1:16 for 5 mins (see section 16 for recommended disinfectants)</p> <p>Lounger and seating cushions are to be disinfected continuously with an effective virucide as AHP Accel-Virox/Oxivir RTU/wipes for</p>

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GREEN	YELLOW	RED
	In addition to the level Green procedures as appropriate	In addition to level Yellow procedures as appropriate
full, the soiled linens must be bagged and taken directly to the Laundry (the bin should be sanitized with 200 ppm chlorine solution for 30 sec or with an alternative effective virucide as AHP Accel-Virox/Oxivir RTU/wipes for 30 sec or AHP diluted concentrate 1:16 for 30 sec (see section 16 for recommended disinfectants) at least weekly) . After handling the delivery, staff must immediately wash and dry hands prior to starting a new task.	<p>circulating in the area, cleaning and disinfection of all hand-contact surfaces shall be on a continuous basis without interruption along a logical route by deck, venue and area.</p> <p>Separately store used deck (and SPA) blankets from laundered blankets, unfold and disinfectant spray used blankets (AHP Accel-Virox/Oxivir RTU for 1 min or AHP diluted concentrate 1:64 for 5 mins (see section 16 for recommended disinfectants)) before they can be re-used.</p> <p>Disinfect lounge and seating cushions daily with an effective virucidal disinfectant as AHP Accel-Virox/Oxivir RTU for 1 min or AHP diluted concentrate 1:64 for 5 mins (see section 16 for recommended disinfectants)</p> <p>Disinfect the "dirty" towel bin daily with 1000 ppm chlorine solution for 10 mins or with an alternative effective virucide as AHP Accel-Virox/Oxivir RTU/wipes for 1 min or AHP diluted concentrate 1:64 for 5 mins (see section 16 for recommended disinfectants)</p>	<p>5 mins or AHP diluted concentrate 1:16 for 5 mins (see section 16 for recommended disinfectants)</p> <p>Disinfect the "dirty" towel bin continuously with 1000 ppm chlorine solution for 10 mins or with an alternative effective virucide as AHP Accel-Virox/Oxivir RTU/wipes for 1 min or AHP diluted concentrate 1:64 for 5 mins (see section 16 for recommended disinfectants).</p>
15.7. HOUSEKEEPING - Main Laundry		
<p>Laundry from GI affected persons must be kept separate from all other laundry. All laundry items from affected rooms must be placed separately in water soluble bags before transfer to the laundry.</p> <p>All dirty linen must be bagged at the site of collection. During the transfer of laundry bags,</p>	<p>The entire Laundry area including decks and bulkheads must be cleaned/disinfected by Laundry staff daily using with 1000 ppm chlorine solution for 10 mins or with an alternative effective virucide as AHP Accel-Virox/Oxivir RTU/wipes for 1 min or AHP diluted concentrate 1:64 for 5 mins (see section 16 for recommended disinfectants)</p>	<p>Avoid cross-contamination between clean and dirty items.</p> <p>All laundry trolleys, laundry including machines to be sanitized on continuous basis with 1000 ppm chlorine solution for 10 mins or with an alternative effective virucide as AHP Accel-Virox/Oxivir RTU/wipes for 5 mins or AHP diluted</p>

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GREEN	YELLOW	RED
	In addition to the level Green procedures as appropriate	In addition to level Yellow procedures as appropriate
<p>there must be no risk of cross contamination en route.</p> <p>Water soluble bags must be used for all instances of gross contamination. If linen is soiled with body substances e.g. faeces, it must be washed separately, with a pre- wash sluice cycle. All soiled linen must be washed as promptly as possible. Alternatively, heavily soiled linen should be disposed of in a sealed bag.</p> <p>GI contaminated fabrics which can tolerate heat should be washed at a minimum temperature of 70°C for min 5 mins.. Other non-heat tolerant GI contaminated fabrics (ie white) may be disinfected by the addition of 150 ppm chlorine for 5 mins duration.</p> <p>Trolleys must be stencilled or labelled or painted different colours to distinguish them between “clean” and “dirty” linen use. They must be stored in “clean” and “dirty’ areas respectively.</p> <p>Trolley carts used to transport GI soiled linens are be cleaned and disinfected after each use with 1000 ppm chlorine solution for 10 mins or with an alternative effective virucide as AHP Accel-Virox/Oxivir RTU/wipes for 5 mins or AHP diluted concentrate 1:16 for 5 mins (see section 16 for recommended disinfectants)</p> <p>All trolleys must be cleaned daily to remove all dirt and debris from the bottom surface and sanitized with 200 ppm chlorine solution for 30 sec or with an alternative effective virucide as AHP Accel-Virox/Oxivir RTU/wipes for 30 sec or AHP diluted concentrate 1:16 for 30 sec (see section 16 for recommended disinfectants)</p>	<p>Fogging of laundry areas is to be carried out by Laundry staff each day (see section 14.7)</p> <p>All laundry machines must be disinfected each day by 1000 ppm chlorine solution for 10 mins or with an alternative effective virucide as AHP Accel-Virox/Oxivir RTU/wipes for 1 min or AHP diluted concentrate 1:64 for 5 mins (see section 16 for recommended disinfectants) inside and outside and running empty on the hottest temperature cycle.</p>	<p>concentrate 1:16 for 5 mins (see section 16 for recommended disinfectants)</p> <p>All irreparable damaged linen is to be discarded as bio-hazardous waste.</p> <p>Control panel and handles must be disinfected after starting of each load with chemicals, concentrations and contact times as above so that when opening, viral particles are not transferred by hands to clean laundry.</p>

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GREEN	YELLOW	RED
	In addition to the level Green procedures as appropriate	In addition to level Yellow procedures as appropriate
<p>A laundry machine must be designated and labelled for use with all laundry from cabins of passengers/crew known to be affected with GI illness.</p> <p>If an external laundry service is used, the operators must be informed of the likelihood of contaminated bedding, etc and any special requirements for the receipt of such items must be identified</p>		
15.8. HOUSEKEEPING - Crew and Pax Laudrettes		
<p>As per Standard Hotel Operating Procedures, sanitize daily with 200 ppm chlorine solution for 30 sec or with an alternative effective virucide as AHP Accel-Virox/Oxivir RTU/wipes for 30 sec or AHP diluted concentrate 1:16 for 30 sec (see section 16 for recommended disinfectants)</p>	<p>Limit the hours of operation to a maximum of 12 hours a day</p> <p>Increase the frequency of cleaning and disinfection to at least three times per day: disinfect with 1000 ppm chlorine solution for 10 mins or with an alternative effective virucide as AHP Accel-Virox/Oxivir RTU/wipes for 1 min or AHP diluted concentrate 1:64 for 5 mins (see section 16 for recommended disinfectants).</p> <p>While pax and/ or crew are present or circulating in the area, cleaning and disinfection of all hand-contact surfaces shall be on a continuous basis without interruption along a logical route by deck, venue and area.</p> <p>Disinfect surfaces on all machines, laundry equipment, ironing boards, irons, hand contact surfaces) with chemicals, concentrations and contact times as above</p>	<p>Limit use of or closing launderettes (including passengers' laundrette)</p> <p>If kept open initially:</p> <ul style="list-style-type: none"> -the launderettes, including all laundry equipment, must be continuously disinfected with 1000 ppm chlorine solution for 10 mins or with an alternative effective virucide as AHP Accel-Virox/Oxivir RTU/wipes for 5 mins or AHP diluted concentrate 1:16 for 5 mins (see section 16 for recommended disinfectants) -notices must be posted in all self-service launderettes recommending passengers to use the hottest cycle of the machines only. If possible the laundry machines must be set to only run at these temperatures during an outbreak and warning notices displayed to avoid any accidental damage to delicate laundry. <p>Areas and surfaces are to be fogged (see section 14.7), including outside and inside of washing</p>

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GREEN	YELLOW	RED
	In addition to the level Green procedures as appropriate	In addition to level Yellow procedures as appropriate
	<p>Spray inside washing machines, cycle with chemicals, concentrations and contact times as above at least twice daily.</p> <p>Run all empty machines through the highest temperature wash cycle at the end of opening hours and then re-spray inside with chemicals, concentrations and contact times as above.</p> <p>An effective virucidal disinfectant as AHP Accel-Virox/Oxivir RTU for 1 min or AHP diluted concentrate 1:64 for 5 mins (see section 16 for recommended disinfectants) solution sprays must be made available in crew laundrettes and a notice posted on its use</p>	<p>and drying machines</p> <p>After fogging inside washing machines they are to be run once using the hottest cycle</p>
15.9. HOUSEKEEPING - Disembarkation / Embarkation Days		
Standards of general cleanliness especially within crew areas must not be compromised during turnaround days.	<p>Extra housekeeping personnel must be made available for cleaning</p> <p>Cleaning and disinfection of the main hand contact surfaces and toilets must be done after disembarkation including gangway, handrails etc. (with 1000 ppm chlorine solution for 10 mins or with an alternative effective virucide as AHP Accel-Virox/Oxivir RTU/wipes for 1 min or AHP diluted concentrate 1:64 for 5 mins (see section 16 for recommended disinfectants))</p>	<p>Extra housekeeping personnel must be made available for cleaning</p> <p>Cleaning and disinfection of the main hand contact surfaces and toilets must be on continuous basis throughout disembarkation. (with 1000 ppm chlorine solution for 10 mins or with an alternative effective virucide as AHP Accel-Virox/Oxivir RTU/wipes for 5 mins or AHP diluted concentrate 1:16 for 5 mins (see section 16 for recommended disinfectants))</p> <p>Designated cleaners must follow immediately behind the last group of disembarking passengers and disinfect the gangways, handrails, stair handrails, lift buttons, door</p>

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GREEN	YELLOW	RED
	In addition to the level Green procedures as appropriate	In addition to level Yellow procedures as appropriate
		<p>handles, door push plates, telephones, keyboards, sports, casino, library areas and equipment with chemicals, concentrations and contact times as above</p> <p>Designated cleaners must then clean and disinfect the toilets as per section 15. 5.</p> <p>Turn every mattress onto its side and spray with an effective virucide as AHP Accel-Virox/Oxivir RTU/wipes for 5 mins or AHP diluted concentrate 1:16 for 5 mins (see section 16 for recommended disinfectants)</p> <p>Laundry mattress pads and protectors, duvet / inserts, bedspreads, pillow protectors in between cruises and occupancies.</p> <p>Blankets may be washed at a low temperature, but use proper disinfectant (AHP Accel-Virox/Oxivir RTU for 5 mins or AHP diluted concentrate 1:16 for 5 mins) to pre-soak and always dry completely before making up the beds</p> <p>All linen including sheets to be washed at a high temperature (above 70 °C/160° F for min 5 minutes)</p> <p>Other items such as pillows, curtains and bed cushions should also be changed or laundered.</p> <p>Passengers remaining on for a second cruise to be closely monitored, especially if ill the previous week.</p> <p>Crew and passengers embarking the ship following an outbreak cruise, or an outbreak segment, are to be advised of the previous outbreak by means of letters in cabins for passengers and announcements during safety</p>

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GREEN	YELLOW	RED
	In addition to the level Green procedures as appropriate	In addition to level Yellow procedures as appropriate
		inductions for crew and safety muster for passengers
15.10. HOUSEKEEPING - Public Areas (general requirements for those not separately listed herewith below)		
Handrails and hand contact surfaces (especially door push plates) must be sanitised at least twice daily with 200 ppm chlorine solution for 30 sec or with an alternative effective virucide as AHP Accel-Virox/Oxivir RTU/wipes for 30 sec or AHP diluted concentrate 1:16 for 30 sec (see section 16 for recommended disinfectants)	<p>Surfaces, especially hand contact surfaces and seats, must be disinfected after each large gathering (this includes passenger drill musters and any 'welcome onboard' cocktail parties or functions) with 1000 ppm chlorine solution for 10 mins or with an alternative effective virucide as AHP Accel-Virox/Oxivir RTU/wipes for 1 min or AHP diluted concentrate 1:64 for 5 mins (see section 16 for recommended disinfectants).</p> <p>While pax and/ or crew are present or circulating in these areas, cleaning and disinfection of all hand-contact surfaces shall be on a continuous basis without interruption along a logical route by deck, venue and area. Vacuuming must be done overnight or when rooms/areas are free from passengers and after applying effective virucidal disinfectant (AHP Accel-Virox/Oxivir RTU for 1 min or AHP diluted concentrate 1:64 for 5 mins (see section 16 for recommended disinfectants)) with hand sprayer</p> <p>Increase (overnight) frequency of spraying or fogging in areas of high passenger usage</p>	<p>Vacuuming of carpets must be suspended, carpets could be spot cleaned by hand</p> <p>Continuous disinfection of all hand contact surfaces (door handles, push plates, hand rails, equipment, etc) and hard surfaces with 1000 ppm chlorine solution for 10 mins or with an alternative effective virucide as AHP Accel-Virox/Oxivir RTU/wipes for 5 mins or AHP diluted concentrate 1:16 for 5 mins (see section 16 for recommended disinfectants)</p> <p>Sanitation of carpets and soft furnishings with an effective virucidal disinfectant as AHP Accel-Virox/Oxivir RTU for 5 mins or AHP diluted concentrate 1:16 for 5 mins (see section 16 for recommended disinfectants)</p> <p>Public areas that can be closed are to be fogged as per section 14.7</p>
ENTERTAINMENT VENUES (THEATRE, CINEMAS, SHOW LOUNGES ETC.)		
Typical theatre / lounge sitting and hand surfaces ie theatre chair arms and tray tables need routine cleaning and sanitising (ie twice a	All theatre hand and sitting surfaces ie chair arms and tray tables must be disinfected at the end of each night when all shows have	Theatre chair tray tables must be disinfected after every major event with 1000 ppm chlorine solution for 10 mins or with an alternative

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GREEN	YELLOW	RED
<p>cruise). These tables must be unfolded prior to applying a 200 ppm chlorine solution for 30 sec or with an alternative effective virucide as AHP Accel-Virox/Oxivir RTU/wipes for 30 sec or AHP diluted concentrate 1:16 for 30 sec (see section 16 for recommended disinfectants)</p> <p>Cleaning and disinfecting surfaces must generally take place when passengers are not present.</p> <p>Avoid placing entertainment equipment directly on the deck wherever possible.</p> <p>Microphones must be wiped with a cloth saturated in an effective disinfectant (as AHP Accel-Virox/Oxivir RTU/wipes for 30 sec or AHP diluted concentrate 1:16 for 30 sec (see section 16 for recommended disinfectants)) between each use, especially if shared by passengers and Entertainment Staff.</p>	<p>In addition to the level Green procedures as appropriate</p> <p>been completed with 1000 ppm chlorine solution for 10 mins or with an alternative effective virucide as AHP Accel-Virox/Oxivir RTU/wipes for 1 min or AHP diluted concentrate 1:64 for 5 mins (see section 16 for recommended disinfectants).</p> <p>While pax and/ or crew are present or circulating in the area, cleaning and disinfection of all hand-contact surfaces shall be on a continuous basis without interruption along a logical route by deck, venue and area. Equipment must be disinfected with chemicals, concentrations and contact times as above once per day.</p> <p>Disinfect all soft furnishings, tables, counters and other hard surfaces which may be touched or sat on with chemicals, concentrations and contact times as above daily if in use</p>	<p>In addition to level Yellow procedures as appropriate</p> <p>effective virucide as AHP Accel-Virox/Oxivir RTU/wipes for 5 mins or AHP diluted concentrate 1:16 for 5 mins (see section 16 for recommended disinfectants)</p> <p>Any re-used items of equipment must be disinfected continuously with chemicals, concentrations and contact times as above.</p> <p>Disinfect all tables, counters and other hard surfaces which may be touched or sat continuously with 1000 ppm chlorine solution for 10 mins or with an alternative effective virucide as AHP Accel-Virox/Oxivir RTU/wipes for 5 mins or AHP diluted concentrate 1:16 for 5 mins (see section 16 for recommended disinfectants). On Soft furnishing use AHP and not chlorine.</p> <p>Surfaces need to be made moist enough to give the required above 5-10 minutes contact time without being too wet for re-use.</p> <p>Disinfect all surfaces at the end of work, or overnight with chemicals, concentrations and contact times as above</p>
15.11. CONCESSIONS (BEAUTY SALON, SPA, GYM, SHOP, BOUTIQUE, CASINO ETC)		
<p>All hard surfaces and door handles, sales racks, Micros machines (point of sale) and equipment must be sanitised daily after closing for business This must target areas and items which are touched by users with 200 ppm chlorine solution for 30 sec or with an alternative effective virucide as AHP Accel-Virox/Oxivir RTU/wipes for 30 sec or AHP diluted concentrate 1:16 for 30 sec (see section 16 for recommended</p>	<p>Clean and disinfect hard surfaces and accessories twice or three times per day using 1000 ppm chlorine solution for 10 mins or with an alternative effective virucide as AHP Accel-Virox/Oxivir RTU/wipes for 1 min or AHP diluted concentrate 1:64 for 5 mins (see section 16 for recommended disinfectants)</p> <p>Spa, Salon and Gym staff must clean and</p>	<p>Frequent hand washing must be encouraged and alcohol hand sanitizer gel must be made available</p> <p>Staff must minimise direct contact with passengers. This involves minimizing hand shaking, passing items and other bodily contact (including removal of perfume testers etc)</p>

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GREEN	YELLOW	RED
	In addition to the level Green procedures as appropriate	In addition to level Yellow procedures as appropriate
<p>disinfectants).</p> <p>Gymnasium and the Spa Salon areas, hand and bottom contact hard surfaces and accessories (including Casino chips) are to be cleaned and sanitized on a daily basis with chemicals, concentrations and contact times as above</p> <p>Cleaning and sanitizing surfaces must generally take place when passengers are not present.</p> <p>The Spa, Salon, Casino or Gym staff must clean and sanitize the back office at least once per cruise with chemicals, concentrations and contact times as above. This shall include but is not limited to: computer keyboards, mouse and mouse pads, light switches, copy machine buttons, telephone receivers and keypads, drawer handles and knobs, door handles, waste bins, etc.</p>	<p>disinfect the back office at least every other day with chemicals, concentrations and contact times as above</p> <p>While pax and/ or crew are present or circulating in the area, cleaning and disinfection of all hand-contact surfaces shall be on a continuous basis without interruption along a logical route by deck, venue and area. All carpets must be sprayed with an effective virucide as AHP Accel-Virox/Oxivir RTU for 1 min or with AHP diluted concentrate 1:64 for 5 mins (see section 16 for recommended disinfectants) and ideally shampooed / extracted at night or when in ports (i.e., the shops are closed) as often as possible</p> <p>Soft furnishings other than carpets must be sprayed with an effective virucide as AHP Accel-Virox/Oxivir RTU for 1 min or with AHP diluted concentrate 1:64 for 5 mins (see section 16 for recommended disinfectants) after the shop has closed.</p> <p>Alcohol hand sanitisers must be provided at the entrance of the gym</p> <p>Disinfectant wipes (AHP for 1 minute) must also be provided for the wiping down of equipment between use.</p> <p>Disinfect the "dirty" towel storage bin daily with 1000 ppm chlorine solution for 10 mins or with an alternative effective virucide as AHP Accel-Virox/Oxivir RTU/wipes for 1 min or AHP diluted concentrate 1:64 for 5 mins (see section 16 for recommended disinfectants)</p>	<p>Disinfect hand contact, tables, counters and other hard surfaces which may be touched or sat upon and equipment with 1000 ppm chlorine solution for 10 mins or with an alternative effective virucide as AHP Accel-Virox/Oxivir RTU/wipes for 5 mins or AHP diluted concentrate 1:16 for 5 mins (see section 16 for recommended disinfectants) on continuous basis while in use and after closing each night.</p> <p>Disinfect all soft furnishing with an effective virucide as AHP Accel-Virox/Oxivir RTU/wipes for 5 mins or AHP diluted concentrate 1:16 for 5 mins (see section 16 for recommended disinfectants)</p> <p>All re-usable fabric materials to be disinfected by washing at a temperature of 70°C or more for min 5 minutes,.</p> <p>Avoid putting items on the deck</p> <p>Any towels provided must be bagged and sealed before removal and laundered after use as above for fabric materials.</p> <p>Disinfect the "dirty" towel bin each time it is emptied with 1000 ppm chlorine solution for 10 mins or with an alternative effective virucide as AHP Accel-Virox/Oxivir RTU/wipes for 5 mins or AHP diluted concentrate 1:16 for 5 mins (see section 16 for recommended disinfectants)</p> <p>Close sauna</p> <p>Spray all soft furnishings with an effective</p>

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GREEN	YELLOW	RED
	In addition to the level Green procedures as appropriate	In addition to level Yellow procedures as appropriate
	Whenever possible, Shop Managers must limit the availability of merchandise that may be handled by passengers	<p>virucidal disinfectant as AHP Accel-Virox/Oxivir RTU/wipes for 5 mins or AHP diluted concentrate 1:16 for 5 mins (see section 16 for recommended disinfectants) and allow them to air dry over night.</p> <p>Vacuuming must be suspended. Any cleaning of carpets must be carried out by spot cleaning only.</p> <p>The back offices must be cleaned and disinfected at least daily with 1000 ppm chlorine solution for 10 mins or with an alternative effective virucide as AHP Accel-Virox/Oxivir RTU/wipes for 5 mins or AHP diluted concentrate 1:16 for 5 mins (see section 16 for recommended disinfectants)</p> <p>Use of the outside tables for shop sales must be suspended; no anti-diarrhea medication shall be sold in the shops</p>
15.12. INTERNET FACILITIES / BUSINESS CENTRE / LIBRARY		
Hard surfaces and all tables, counters and other hard surfaces or items which may be touched or sat upon must be cleaned and sanitised at the end of each day with 200 ppm chlorine solution for 30 sec or with an alternative effective virucide as AHP Accel-Virox/Oxivir RTU/wipes for 30 sec or AHP diluted concentrate 1:16 for 30 sec (see section 16 for recommended disinfectants). This includes: pens, computer keyboards, mouse and mouse pads, web cam, monitors, card swipe units, light switches, copy machine buttons, telephone receivers and keypads, drawer handles and knobs, door handles, waste bins,	<p>Carry out the disinfection of all hard surfaces and accessories which may be touched at least twice per day (particularly between customers and at quiet times) using 1000 ppm chlorine solution for 10 mins or with an alternative effective virucide as AHP Accel-Virox/Oxivir RTU/wipes for 1 min or AHP diluted concentrate 1:64 for 5 mins (see section 16 for recommended disinfectants)</p> <p>Disinfect all soft furnishings at least twice per day with an effective virucide as AHP Accel-Virox/Oxivir RTU for 1 min or with AHP diluted concentrate 1:64 for 5 mins (see section 16 for</p>	<p>Sanitize all surfaces and accessories continuously throughout the day (particularly between customers and at quiet times) and nightly using 1000 ppm chlorine solution for 10 mins or with an alternative effective virucide as AHP Accel-Virox/Oxivir RTU/wipes for 5 mins or AHP diluted concentrate 1:16 for 5 mins (see section 16 for recommended disinfectants). Disconnect all units from power supply.</p> <p>Spray soft furnishings on continuous basis using effective virucidal disinfectant as AHP Accel-Virox/Oxivir RTU/wipes for 5 mins or AHP diluted concentrate 1:16 for 5 mins (see section 16 for</p>

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GREEN	YELLOW	RED
	In addition to the level Green procedures as appropriate	In addition to level Yellow procedures as appropriate
<p>chairs and chair seats, etc. Disconnect all units from the electrical supply before sanitizing.</p> <p>Soft furnishings, such as carpets and couches or chairs, must be on a routine cleaning schedule. Administrative Offices must be cleaned and sanitized at least once per cruise with chemicals, concentrations and contact times as above</p>	<p>recommended disinfectants). Clean and disinfect the back office targeting hand contact surfaces at least daily with chemicals, concentrations and contact times as above While pax and/ or crew are present or circulating in the area, cleaning and disinfection of all hand-contact surfaces shall be on a continuous basis without interruption along a logical route by deck, venue and area.</p>	<p>recommended disinfectants)</p> <p>Hand sanitizer to be made available.</p> <p>Suspension of total vacuuming but only spot cleaning is to be implemented</p>
15.13. CHILD ACTIVITY AND YOUTH CENTRES		
<p>Particular attention must be taken in the cleaning of children's play clubs. Uncontrolled vomiting and diarrhoea is more likely in young children and therefore the play area and toys may be heavily contaminated. All the area and contents must be cleaned and sanitized daily (with 200 ppm chlorine solution for 30 sec or with an alternative effective virucide as AHP Accel-Virox/Oxivir RTU/wipes for 30 sec or AHP diluted concentrate 1:16 for 30 sec (see section 16 for recommended disinfectants).) and disinfected immediately after an incident of vomiting and diarrhoea (per section 14.1)</p> <p>Toys in children's clubs must be capable of withstanding sanitizing and disinfection.</p> <p>All chemicals solutions must be labelled and kept (for max 30 days) in a lockable cabinet out of the reach of children.</p> <p>Soft surfaces such as carpets and soft furnishings, must be cleaned at least daily.</p>	<p>Use 1000 ppm chlorine solution for 10 mins or with an alternative effective virucide as AHP Accel-Virox/Oxivir RTU/wipes for 1 min or AHP diluted concentrate 1:64 for 5 mins (see section 16 for recommended disinfectants) three times a day (or more often if heavily used or surfaces become dirty) and at the end of the day to clean and disinfect all hard surfaces and toys.</p> <p>Tables and highchairs and surfaces must be cleaned and disinfected with chemicals, concentrations and contact times as above.</p> <p>Nappy changing areas, toilets and hand washing facilities must be thoroughly cleaned and disinfected with chemicals, concentrations and contact times as above.</p> <p>While pax and/ or crew are present or circulating in the area, cleaning and disinfection of all hand-contact surfaces shall be on a continuous basis without interruption</p>	<p>Continuously disinfect hard surfaces with 1000 ppm chlorine solution for 10 mins or with an alternative effective virucide as AHP Accel-Virox/Oxivir RTU/wipes for 5 mins or AHP diluted concentrate 1:16 for 5 mins (see section 16 for recommended disinfectants)</p> <p>Infants and toddlers must not be allowed to share toys. When an infant or toddler finishes playing with a toy, it should be retrieved from the play area and put in a bin (out of reach) reserved for dirty toys.</p> <p>Toys must be cleaned and disinfected before being transferred to a bin for clean toys, after each shift as follows (for hard plastic toys with 1000 ppm chlorine solution for 10 mins or with an alternative effective virucide as AHP Accel-Virox/Oxivir RTU/wipes for 5 mins or AHP diluted concentrate 1:16 for 5 mins (see section 16 for recommended disinfectants)</p> <p>This clean bin will then be disinfected with chemicals, concentrations and contact times as</p>

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GREEN	YELLOW	RED
<p>Hard surface toys must be sanitized with 200 ppm chlorine solution for 30 sec or with an alternative effective virucide as AHP Accel-Virox/Oxivir RTU/wipes for 30 sec or AHP diluted concentrate 1:16 for 30 sec (see section 16 for recommended disinfectants) daily.</p> <p>Computer and Video Games - buttons, joy sticks and other hand contact surfaces shall be wiped with 200 ppm chlorine solution for 30 sec or with an alternative effective virucide as AHP Accel-Virox/Oxivir RTU/wipes for 30 sec or AHP diluted concentrate 1:16 for 30 sec (see section 16 for recommended disinfectants) at the end of each day.</p> <p>Toilets must be cleaned and sanitised with 200 ppm chlorine solution for 30 sec or with an alternative effective virucide as AHP Accel-Virox/Oxivir RTU/wipes for 30 sec or AHP diluted concentrate 1:16 for 30 sec (see section 16 for recommended disinfectants) twice daily at a minimum. Regular checks must be made every 2 hours and toilets cleaned as required</p>	<p>In addition to the level Green procedures as appropriate</p> <p>along a logical route by deck, venue and area.</p>	<p>In addition to level Yellow procedures as appropriate</p> <p>above</p> <p>Blankets, sheets, pillow cases must be laundered at 70° C for min 5 mins, if a hot wash is not possible, white fabrics may be disinfected by the addition of 150ppm of chlorine or by pre-soaking in effective virucide as AHP Accel-Virox/Oxivir RTU for 5 mins or AHP diluted concentrate 1:16 for 5 mins (see section 16 for recommended disinfectants)</p> <p>Normal ball play areas must be taken out of use during outbreak and balls removed.</p> <p>Fogging (see section 14.7) of child areas to be carried out overnight.</p>
15.14. PURSER'S /CRUISE DESK / RECEPTION		
<p>Pursers / Cruise Staff must:</p> <ul style="list-style-type: none"> inform the Doctor of the name, cabin number and any illness details arising from passenger complaints which may otherwise go unreported. advise the individual to remain in his/her cabin and have the Duty Nurse contact him/her. 	<p>Clean and disinfect all hard surfaces at least three times daily using 1000 ppm chlorine solution for 10 mins or with an alternative effective virucide as AHP Accel-Virox/Oxivir RTU/wipes for 1 min or AHP diluted concentrate 1:64 for 5 mins (see section 16 for recommended disinfectants)</p> <p>Surfaces and items requiring special attention</p>	<p>Disinfect all hand contact surfaces (e.g., counters, hard surfaces and equipment on continuous basis with 1000 ppm chlorine solution for 10 mins or with an alternative effective virucide as AHP Accel-Virox/Oxivir RTU/wipes for 5 mins or AHP diluted concentrate 1:16 for 5 mins (see section 16 for recommended disinfectants)</p>

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GREEN	YELLOW	RED
<p>If the individual presents at the Reception/Front Desk, have him/her escorted to his/her cabin to await contact from the Medical Centre staff.</p> <p>Reception/Front Desk counters must be cleaned and sanitised with 200 ppm chlorine solution for 30 sec or with an alternative effective virucide as AHP Accel-Virox/Oxivir RTU/wipes for 30 sec or AHP diluted concentrate 1:16 for 30 sec (see section 16 for recommended disinfectants) daily.</p> <p>Staff are to avoid all hand to mouth contact exposure, especially after handling money, credit cards, pens and other items, etc. that may have been handled by passengers or other crew members.</p>	<p>In addition to the level Green procedures as appropriate</p> <p>include: cash drawers, phones, keyboards, printer and copier command boards, 2 way radio buttons, passport holding pens, ATM machine command boards, Wifi cards, laptops, etc.</p> <p>Disinfect pens/pencils after each use with chemicals, concentrations and contact times as above.</p>	<p>In addition to level Yellow procedures as appropriate</p> <p>Soft furnishings and carpets must also be treated with an effective disinfectant virucidal as AHP Accel-Virox/Oxivir RTU for 5 mins or with AHP diluted concentrate 1:16 for 5 mins (see section 16 for recommended disinfectants) during periods with minimal activity.</p> <p>Remove shared contact items (e.g., pens, pencils, brochures, etc.) from passenger areas to avoid cross contamination.</p>
15.15. MEDICAL CENTRE		
<p>The Medical Centre is to undergo a strict sanitation procedure at the end of each clinic and additional cleaning procedures adopted each time gastroenteritis illness patients are treated within the facility as detailed below.</p> <p>Medical Staff must comply with universal precautions by wearing disposable gloves and aprons when examining all patients with gastroenteritis symptoms.</p> <p>The general sanitation in the Medical Centre is with 200 ppm chlorine solution for 30 sec or with an alternative effective virucide as AHP Accel-Virox/Oxivir RTU/wipes for 30 sec or AHP diluted concentrate 1:16 for 30 sec (see section</p>	<p>All waiting room chairs, examination/treatment rooms, x-ray room, wards, dispensary and nurses' station must be cleaned and disinfected with 1000 ppm chlorine solution for 10 mins or with an alternative effective virucide as AHP Accel-Virox/Oxivir RTU/wipes for 1 min or AHP diluted concentrate 1:64 for 5 mins (see section 16 for recommended disinfectants) after each clinic.</p> <p>All carpets must be sprayed with effective disinfectant (AHP Accel-Virox/Oxivir RTU/wipes for 1 min or AHP diluted concentrate 1:64 for 5 mins (see section 16 for</p>	<p>All surfaces which may be touched or sat upon in the medical centre, waiting room and reception Area must be disinfected continuously throughout opening hours and after the end of clinic with with 1000 ppm chlorine solution for 10 mins or with an alternative effective virucide as AHP Accel-Virox/Oxivir RTU/wipes for 5 mins or AHP diluted concentrate 1:16 for 5 mins (see section 16 for recommended disinfectants)</p> <p>All magazines, pamphlets and other shared materials in waiting areas must be removed and discarded.</p>

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GREEN	YELLOW	RED
<p>16 for recommended disinfectants).</p> <p>Examination tables and hand touch surfaces in the consulting/examination/treatment rooms must be cleaned and disinfected after each patient with GI illness 1000 ppm chlorine solution for 10 mins or with an alternative effective virucide as AHP Accel-Virox/Oxivir RTU/wipes for 5 mins or AHP diluted concentrate 1:16 for 5 mins (see section 16 for recommended disinfectants)</p> <p>Disposable gloves must be changed between the cleaning of separate areas of the Medical Centre to avoid possible cross-contamination. All waiting room chairs, examination/treatment rooms, x-ray room, wards, dispensary and nurses' station must be cleaned and disinfected after each evening clinic.</p> <p>Vinyl floors, sluice, sinks, and toilets must be cleaned sanitized with chemicals, concentrations and contact times as above after evening clinic.</p> <p>Replace any linen on all couches or used with patients being examined after each clinic.</p> <p>All carpets should be HEPA vacuumed after evening clinic and cleaned using shampoo machines with AHP Accel-Virox/Oxivir RTU/wipes for 30 sec or AHP diluted concentrate 1:16 for 30 sec (see section 16 for recommended disinfectants)between each voyage.</p>	<p>In addition to the level Green procedures as appropriate</p> <p>recommended disinfectants)) and HEPA vacuumed at the end of each day.</p> <p>Hand touch and food contact surfaces must be cleaned and disinfected with 1000 ppm chlorine solution for 10 mins or with an alternative effective virucide as AHP Accel-Virox/Oxivir RTU/wipes for 1 min or AHP diluted concentrate 1:64 for 5 mins (see section 16 for recommended disinfectants) three times a day (including at the end of each clinic)</p> <p>While pax and/ or crew are present or circulating in the area, cleaning and disinfection of all hand-contact surfaces shall be on a continuous basis without interruption along a logical route by deck, venue and area.</p>	<p>In addition to level Yellow procedures as appropriate</p>

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GREEN	YELLOW	RED
	In addition to the level Green procedures as appropriate	In addition to level Yellow procedures as appropriate
FOOD & BEVERAGE		
15.16. FOOD AND BEVERAGE (F&B) - Galley and Food Preparation Areas (“Back of the House”)		
Hand Washing frequencies and methods must be effectively managed. Staff must wash and dry their hands immediately upon entering any food area. This is to include any authorised visitors or members of the Technical Department carrying out repairs.	All passenger galley tours if any must be suspended	<p>Daily spot checks of all galleys (by the Officer responsible for sanitation) to ensure highest standards of hygiene are maintained and to remind crew of situation and its control.</p> <p>F&B areas are to be washed, rinsed and sanitized with 50-200 ppm chlorine solution continuously including all tabletops, work surfaces, hand contact surfaces and all food contact equipment.</p> <p>1000 ppm chlorine can be used in food areas only if there has been a vomit or diarrhea incident, otherwise the max chlorine concentration is 200 ppm. If 1000 ppm chlorine has been used on food contact surfaces in cases like the above incidents, after its contact time of 10 mins, the surfaces are to washed, rinsed and sanitized with 50-200 ppm chlorine</p> <p>All self-service in buffets and counters must be suspended if possible and all food incl. wrapped items and beverages must be served to passengers</p> <p>Information relating to virus outbreak and the added importance of illness reporting to be displayed throughout galley.</p> <p>Refresher training to emphasize outbreak dangers and modes of spread.</p> <p>Galley Personnel to change the uniform twice a</p>

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	In addition to the level Green procedures as appropriate	In addition to level Yellow procedures as appropriate
		day (if possible) Dishwashing machines must be cleaned and then sanitized with Chlorine 200-ppm solution with a contact time of 10 mins after every meal. The temperatures are to be monitored continuously (min wash temperature 70°C/160°F, min rinse temperature 82°C/180°F)
15.17. FOOD AND BEVERAGE (F&B) - Dining Rooms, Restaurants, Buffets, Food Outlets		
<p>An approved hand sanitiser dispenser must be installed near the entrance of the Buffet/Restaurant with appropriate and correct signage and the dispenser should be checked before each service</p> <p>Tongs and other serving utensils must be replaced at a minimum of every 30 minutes and also if dropped, or if handles come into contact with open food.</p> <p>Surfaces are to be washed, rinsed and sanitized with 50-200 ppm chlorine solution daily</p> <p>At the end of service or earlier whenever an area is heavily soiled, the three bucket system (wash-rinse-sanitize) must be used, then a final disinfection as above can follow</p> <p>Tables or seating areas that are preset with utensils and dishware must not exceed a 4 hour set up time.</p>	<p>A staff member shall encourage all passengers to use the wall mounted or portable hand sanitisers provided in buffet areas.</p> <p>Tongs and serving utensils shall be replaced at least every 15 minutes and always kept under sneeze guards.</p> <p>Use of paper napkins vs cloth ones is to be implemented</p> <p>All cutlery polishing must be suspended. Exposed cutlery must be minimised. All utensils shall be covered with food grade plastic wrap or rolled up in a single service cloth / paper napkin.</p> <p>Buffet Stewards must wear disposable gloves (clear) and hand all clean dishware and wrapped utensils to passengers in the buffet line.</p> <p>Ensure passengers do not return to buffets and reuse dirty tableware</p> <p>Complete disinfection regime (wash, rinse,</p>	<p>All food & beverages must be serviced, suspend self-service and buffet.</p> <p>Shared items such as salt and pepper shakers, sugar, mustard, ketchup, sauces, etc. shall be provided only on request and disinfected after each use before storage. Where possible, individual packets of these items will be provided rather than bottles or dispensers.</p> <p>Surfaces (including seating areas, table tops, chair arms, hand rails, buffet tray rails, sneeze guards and other likely contact surfaces) in food areas are to be washed-rinsed- sanitized with 200 ppm chlorine solution on continual basis during service times and between sittings and then again at the end of each service period (or every 4 hours for operations which remain open for long periods)</p> <p>1000 ppm chlorine can be used in food areas only if there has been a vomit or diarrhea incident, otherwise the max chlorine concentration is 200 ppm. If 1000 ppm chlorine has been used on food contact surfaces in cases</p>

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OUTBREAK PREVENTION AND RESPONSE PLAN (OPRP)

GREEN	YELLOW	RED
	In addition to the level Green procedures as appropriate	In addition to level Yellow procedures as appropriate
	<p>sanitize with 50-200 ppm chlorine)) must be carried out every hour on all waiter stations, all beverage stations, any hard surfaces which may be touched by passengers such as hand rails and door handles, counters, chair backs and arms, condiment items etc.</p> <p>Ensure that taps and push buttons, etc. on drink machines are frequently disinfected too.</p> <p>Condiments including salt and pepper shakers must be removed from the table in self-service buffets and individually provided to guests on request or must be provided in single service sachets. Reusable condiments must be disinfected before returning to storage.</p> <p>Where possible, displayed foods shall be individually plated or wrapped, in order to minimise any possible contamination from passenger handling during service. Or all displayed food must be discarded at the end of the service.</p>	<p>like the above incidents, after its contact time of 10 mins, the surfaces are to washed, rinsed and sanitized with 50-200 ppm chlorine</p> <p>Carpets must not be vacuumed.</p> <p>Once a dining room table has been occupied, even partially, all unused silverware and chinaware must be removed from the table and processed through dishwasher machines (the temperatures to be monitored continuously (min wash temperature 70°C/160°F, min rinse temperature 82°C/180°F))</p> <p>All dining, specialty food outlet and restaurant staff must shower and change on completion of their duty.</p> <p>Ice machines and ice scoops are to be washed, rinsed and sanitized with 50-200 ppm chlorine every 48 hours</p> <p>Maitre D' to report all missing tables and their room numbers to Chief Housekeeper and Sanitation Officer/Doctor.</p>
15.18. BARS AND PANTRIES		
<p>Daily wash-rinse-sanitize with 50-200ppm chlorine solution including at the end of the day service</p> <p>If tables become soiled they shall be cleaned using the 3 bucket system and then disinfected as above</p>	<p>All bar areas must be washed, rinsed and sanitized with 200 ppm chlorine solution between passengers and at least every hour during service and after the end of service</p> <p>An adequate supply of pens should be kept at each bar and once used by passengers to sign for drinks, each pen should be disinfected</p>	<p>All bar outlets and contact surfaces (table-tops, bar-stools, chair-arms, hand rails, oens, chit folders, telephones etc) in bar (food areas) must be washed, rinsed and sanitized with 200ppm chlorine solution</p> <p>1000 ppm chlorine can be used in food areas only if there has been a vomit or diarrhea</p>

LOCAL WORKING INSTRUCTION (LWI) # 52
OUTBREAK PREVENTION AND RESPONSE PLAN (OPRP)

GREEN	YELLOW	RED
	In addition to the level Green procedures as appropriate	In addition to level Yellow procedures as appropriate
	<p>outside food areas before being reused (with 1000 ppm chlorine solution for 10 mins or with an alternative effective virucide as AHP Accel-Virox/Oxivir RTU/wipes for 1 min or AHP diluted concentrate 1:64 for 5 mins (see section 16 for recommended disinfectants)</p> <p>All shared peanuts and bar snacks must be immediately removed. Individual size portions or packets may still be issued upon request.</p> <p>All bar menus must be removed from tables and provided on request only. All used menus must be disinfected outside food areas (with an alternative effective virucide as AHP Accel-Virox/Oxivir wipes for 1 min (see section 16 for recommended disinfectants)</p>	<p>incident, otherwise the max chlorine concentration is 200 ppm. If 1000 ppm chlorine has been used on food contact surfaces in cases like the above incidents, after its contact time of 10 mins, the surfaces are to be washed, rinsed and sanitized with 50-2000 ppm chlorine</p> <p>All straws are to be capped, glasses inverted or covered and bar items used in drinks kept as far away from passengers as possible to help prevent any viral contamination.</p> <p>Glass washer temperatures to be monitored continuously (min wash temperature 70°C/160°F, min rinse temperature 82°C/180°F))</p> <p>Ice machines and ice scoops are to be washed, rinsed and sanitized with 50-200 ppm chlorine every 48 hours. Scoop handles must not be allowed to touch ice.</p> <p>On turnaround days Hotel Director / F&B Manager / Bars Manager to develop a system for opening/closing bars, to minimise risk of cross contamination between embarking and disembarking passengers.</p>
15.19. SHORE EXCURSIONS		
<p>Ensure supply of sick bags, disinfectant wipes, plastic bags, scoops and sanitising solution to all coaches (or tenders)</p> <p>Driver/guide to ensure all passengers aware of vomit bags at the front of the coach.</p> <p>If a passenger feels ill, nausea, about to vomit, if</p>	<p>Shorex Manager to supply Doctor with all tour cancellations (names, cabin numbers) to account for the maximum number of unconfirmed cases.</p>	<p>Shorex desk and tour escorts:</p> <ul style="list-style-type: none"> • Supplied with alcohol hand sanitiser • Advised of the importance of using sanitiser • Informed of modes of viral spread, • Report any information re suspect cases to the Doctor

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OUTBREAK PREVENTION AND RESPONSE PLAN (OPRP)

GREEN	YELLOW	RED
	In addition to the level Green procedures as appropriate	In addition to level Yellow procedures as appropriate
possible stop the bus and have passenger to vomit outside in a sick bag. If a pax vomits or has diarrhoea on a coach (tender), where possible, an alternative coach (tender) should be provided and passengers moved to it.		It is forbidden for any passengers or crew with symptoms of diarrhoea to take tours. Only those that have been symptom free for 48 hours will be allowed on tours. Passengers taken ill during an excursion should be sent back onboard if possible using taxis (or separate transport) to help minimize the spread.

16. EFFECTIVE DISINFECTION AGENTS (IN ADDITION TO PURE CHLORINE/BLEACH) AND THEIR APPLICATION IN ORDER OF PREFERENCE

16.1. General

16.1.1. Efficacy

16.1.1.1. Efficacy testing of disinfectants for Norovirus is done using a surrogate virus, typically the feline calicivirus (FCV).

16.1.1.2. Heat inactivation of FCV:

- 56°C for 60 minutes, complete inactivation
- 70°C for 3 minutes, 6.5 log₁₀ reduction
- 70°C for 5 minutes, complete inactivation – for laundry washing (and/or steam cleaning)
- 100°C for 1 minute, complete inactivation

16.1.2. Criteria for choosing disinfectant:

- Efficacy
- Spectrum
- Versatility
- Ease of use
- Safety profile
- Cost
- When selecting a disinfectant, it's important to consider the product's entire formulation since there may be significant disinfectant action synergism produced by the specific combination of ingredients

16.1.3. Supply of disinfectants

- 16.1.3.1. As managed vessels trade worldwide, apply this OPRP also worldwide (ie not only in US waters) and have a variety of suppliers - a chart of effective Norovirus disinfectants is given below for ordering as available and as per the criteria above.
- 16.1.3.2. The US EPA also lists registered antimicrobial products effective against Norovirus. The list is available [Here](#)
- 16.1.3.3. Product labeling information and data on the EPA registered can be obtained at:
<http://iaspub.epa.gov/apex/pesticides/f?p=PPLS:1>

16.1.4. Chart of recommended effective disinfectants against (FCV as a surrogate for) Norovirus

- 16.1.4.1. Products listed as non-toxic may still cause mild eye and/or skin irritation in some people.
- 16.1.4.2. Some compounds may leave a surfactant residue on various surfaces.
- 16.1.4.3. You should test any specific disinfectant for adverse effects on your own ships' environmental surfaces prior to its general use.
- 16.1.4.4. Ppm solutions below are to be determined using test strips, 1:xx dilution ratios by dispensing equipment where available, or by mixing proportions as follows: 1 ounce per US gallon of water (3.78 L) = 1:128; 2 ounces per gallon = 1:64; 4 ounces per gallon = 1:32; 8 ounces per gallon = 1:16
- 16.1.4.5. It is a violation of US Federal law to use products in a manner inconsistent with their labelling.

LOCAL WORKING INSTRUCTION (LWI) # 52
OUTBREAK PREVENTION AND RESPONSE PLAN (OPRP)

Disinfectant's Type and Brand:	Chlorine -Bleach 5.25%	Accelerated Hyrdogen Peroxide (AHP) - Accel TB RTU, Accel 5 (Virocide) RTU, Accel concentrate (Accel also branded as Virox on some markets)	Accelerated Hyrdogen Peroxide (AHP) – Oxivir TB RTU, Oxivir wipes, Oxivir Five 16 Concentrate	Peroxy- mono-sulphate - Virkon (powder)	Quaternary Ammonium Compounds (QUAT) – Mikro-Quat
Manufacturer	(Generic)	Virox Technologies Inc	Johnson Diversey	E.I. Dupont de Nemours and Co.	Ecolab
US EPA registration No.	(Generic)	74599-1 74599- 8 74599-4	70627-56 70627-60 70627-58	71654-7	1677-21
Main Active Ingredients	Sodium hypochlorite 0.1% (1000 ppm)	Hydrogen peroxide 0.5% (RTU) to 4% in concentrate	RTU: Hydrogen peroxide 0.5%; benzyl alcohol 1 -5 % ; Concentrate: Hydrogen peroxide: 1-5%, phosphoric acid 1-5%	Sodium chloride 1.50%; Potassium peroxymonosulfate 21.45%	Alkyl Dimethybenzyl Ammonium Chloride 9.5%
Pre-cleaning required?	Yes	No, as is a cleaner also itself (unless is a heavily soiled surface)	No, as is a cleaner also itself (unless is a heavily soiled surface)	No, unless grossly dirty	If grossly soiled
Product use	Virucidal disinfectant	All in one multi surface one step disinfectant cleaner and deodorant; general virucide, bactericide, fungicide, sanitizer compatible with all surfaces (non-food)	One step germicidal disinfectant cleaner and deodorant for hard, non-porous surfaces	Broad Spectrum Disinfectant; One step cleaner and disinfectant for hard non-porous surfaces including food areas	Detergent, Germicide, Deodorizer; Cleans, disinfects and deodorizes in one operation; for hard, non-porous surfaces
Application	Clean properly. Apply by cloth, disposable wipe or	Pre-clean heavily soiled surfaces; apply solution by spray from 15-20	Pre-clean heavily soiled areas; apply by spray from 15-20 cms	Remove gross dirt , prepare 1% solution; apply to surface	Apply with cloth, mop or hand

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	mop	cms, cloth, disposable wipe or mop to hard non-porous environmental surfaces (non-food); all surfaces must remain wet per the contact times below (1 min RTU or 5 mins diluted concentrate 1:16 for Norovirus). Wipe surfaces dry (or rinse)	or apply by wipes; wet thoroughly; all surfaces to remain wet per the contact times below (1 min RTU and wipes; 5 mins diluted concentrate 1:16 for Norovirus) ; wipe surfaces dry (or rinse) (or allow to air dry); All food contact surfaces must be rinsed with potable water;	using a sponge, brush or spray device till surface visibly clean; let stand for 10 mins and air dry	spray bottle; wet surfaces to remain wet for min 10 mins.
Food Contact Surface application	50-200 ppm only; (1000ppm for 10 mins only in case of a vomit or stool incident, after which wash, rinse and sanitize 50-200ppm)	No	No (unless rinsed with potable water); do not apply on glassware, utensils, dishes	Yes	No
Soft Furnishing use		Yes	No data	No	No data
Dilution / Concentration and contact time (at 20°C)	Virucide at 1000ppm for 1 min Disinfectant at 1000ppm for 10 mins	Sanitizer for Non-food contact surfaces: - If ready to use (RTU) – no dilution and: 30 seconds; -If concentrate: 1:16 for 30 secs or 1:128 for 3 mins	Sanitizer: -if Ready to use (RTU)– no dilution and wipes: 30 seconds contact; -If Concentrate non-food contact sanitizer: 1:16 for 30 secs or 1:128 for 3 mins	Virucide and disinfectant; 1 % solution for 10 mins. (1 % solution preparation: 40 g tablets or 10 teaspoons in one US	Sanitizer for non-food contact surfaces : 1/3 ounce per US gallon of water ie 1:384 (235

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		Virucide and disinfectant: -If ready to use (RTU) – no dilution and 1 minute; -if concentrate: 1:16 to 1:64 for 5 mins	Virucide and disinfectant; - if RTU – no dilution / wipes for 1 minute - if Concentrate: 1:64 for 5 mins as Virucide and 1:16 for 5 mins as disinfectant	gallon water; 1x 50g sachet in 160 ounces (oz) or 5 Quarts of water)	ppm) for 1 min; Virucide and disinfectant: 1:128 (1 ounce per gallon (700 ppm)) for 10 mins
Shelf life	Unmixed with water: 3months. Mixed: 24hours. Keep in an airtight container away from light.	24 months; 90 days diluted concentrate	36 months, 90 days use solution stability	1% solution stable for 7 days	One day for fresh solution
Safety profile / health risks	Irritant to mucous membranes, eyes and skin.	RTU: no hazards to health Concentrate: May be mildly irritating to skin; moderate eye irritation; irritation to mouth, throat and stomach if ingested;	RTU and wipes: no hazards to health Concentrate: moderately irritating to eyes, mildly irritating to skin; may be irritating to mouth, throat and stomach if ingested	Powder is corrosive – burns to skin and eye damage; harmful if swallowed or absorbed through skin	-As sold: Corrosive, eye damage and skin burn; harmful if swallowed; acute toxicity -At use dilution; No health risks under normal conditions
Exposure Controls / Personal Protective Equipment (PPE):	Increased ventilation. PPE for >200ppm:	RTU: no PPE; Concentrate; General ventilation;	RTU/wipes: no PPE; Concentrate: Adequate general	Appropriate ventilation Powder:	-As sold: Protective clothing and

LOCAL WORKING INSTRUCTION (LWI) # 52
OUTBREAK PREVENTION AND RESPONSE PLAN (OPRP)

Disinfectant's Type and Brand:	Chlorine -Bleach 5.25%	Accelerated Hyrdogen Peroxide (AHP) - Accel TB RTU, Accel 5 (Virocide) RTU, Accel concentrate (Accel also branded as Virox on some markets)	Accelerated Hyrdogen Peroxide (AHP) – Oxivir TB RTU, Oxivir wipes, Oxivir Five 16 Concentrate	Peroxy- mono-sulphate - Virkon (powder)	Quaternary Ammonium Compounds (QUAT) – Mikro-Quat
	eyewear protection, respiratory protection, protective clothing, chemical gloves	chemical safety goggles; chemical resistant gloves; respiratory protection in case of fogging	room ventilation; Concentrate: chemical splash goggles	Protective clothing, rubber gloves, goggles, face shield, or safety glasses; respiratory protection with high dusting levels and spray mists; wash hands after use	rubber gloves, protective eyewear (goggles, face shield or safety glasses); wash hands after use. -At use dilution; General ventilation; no PPE.
Env issues / disposal	Toxic to aquatic organisms; do not dispose in waterways	Prevent large spills from entering sewers or waterways	Do not discharge effluent into waterways or sewers	Do not discharge effluent into waterways or sewers	Do not discharge effluent into waterways or sewers
Disadvantages	If mixed with ammonia or acidic products can create poisonous chlorine gas; Can cause damage to floor finishes, metals, carpets, clothing and other fibres at higher concentrations (>500	Avoid high temperatures; when heated to decomposition releases oxygen which may intensify fire	Decomposition releases oxygen, which may intensify fire	Do not use on acid-sensitive surfaces such as marble and soft metals such as copper, brass, aluminum; do not use on textiles and carpets; Avoid powder exposure to moisture;	As sold health risks and PPE

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OUTBREAK PREVENTION AND RESPONSE PLAN (OPRP)

Disinfectant's Type and Brand:	Chlorine -Bleach 5.25%	Accelerated Hyrdogen Peroxide (AHP) - Accel TB RTU, Accel 5 (Virocide) RTU, Accel concentrate (Accel also branded as Virox on some markets)	Accelerated Hyrdogen Peroxide (AHP) – Oxivir TB RTU, Oxivir wipes, Oxivir Five 16 Concentrate	Peroxy- mono-sulphate - Virkon (powder)	Quaternary Ammonium Compounds (QUAT) – Mikro-Quat
	ppm). Inactivated in the presence of organic matter (therefore prior cleaning with a detergent is essential for full efficacy) and by light and some metals			decomposes into sulphur dioxide, chlorine, oxygen	
Advantages	Does not leave toxic residues, unaffected by water hardness, inexpensive and fast acting. Non-flammable	Not flammable; Non-toxic; active ingredient Hydrogen Peroxide breaks down into water and oxygen, leaving no active residuals; no PPE for RTU product	Non-flammable; active ingredient Hydrogen Peroxide breaks down into water and oxygen, leaving no active residuals ; no PPE for RTU product	Non-flammable;	Non-flammable

17. Procedures to protect passengers and crew from exposure to disinfectants

17.1. Safety Management System (and Risk Assessments)

In addition to related procedures already included in the vessel's Safety Management System on occupational health and safety and Control of Substances Hazardous to Health (COSHH), the requirements below shall be reinforced

17.2. Storage of Disinfectants

Disinfectants shall be so stored as to prevent incompatible chemicals coming in contact and creating a chemical reaction with hazards to crew and passengers.

Expiry date of disinfectants shall be controlled and expired one shall be treated as hazardous waste.

17.3. Crew familiarization

Crew who may be exposed to disinfectants will be familiarized with their proper use and information per their MSDS and the use of appropriate PPE minimizing respiratory and dermal exposure (see table in Section 16 above – last/rh column).

The familiarization of crew who perform disinfection will include proper dosing / dilution of disinfectants either by means of test strips (ie for chlorine ppm solutions), dosing stations when provided, or mixing ratios (ie 1 ounce per US gallon of water (3.78 L) = 1:128; 2 ounces per gallon = 1:64; 4 ounces per gallon = 1:32; 8 ounces per gallon = 1:16)

17.4. Restricted access and exposure limitation

Disinfectants chemicals storage will be secured in places with restricted access (to passengers and to crew without related operational duties), with adequate signage




Disinfection should normally be planned for out of passengers' service hours and notices in affected areas will be posted that disinfection with chemicals is in progress restricting crew and passengers exposure in the area.

Particulate care is to be taken to restrict passengers and crew exposure when applying disinfectants in high concentrations like chlorine at 1000 ppm

Adequate ventilation where possible shall be provided limiting respiratory exposure


18. HOTEL OPERATIONS – RECOMMENDED/EXAMPLE ILLNESS OUTBREAK KIT (FOR APPROX. A VESSEL OF 600 PAX) AND INVENTORY LIST

RECOMMENDED ILLNESS OUTBREAK KIT (for approx. 600 passengers)

ITEM	DESCRIPTION	EXAMPLES of Equipment with Notes	UNIT	MIN. REQ'D TO BE HELD O/B	TOTAL (HELD IN STORES)	VARIANCE	EXPI R DATE
	EQUIPMENT						
1a	Vacuum / Extraction Dry - Wet Machine (Hepa) [with a spare filter and bag kit]	<p>(1.Pullman Holt 86ASB 54C Wet Dry Vacuum Cannister HEPA; 2.George - NaceCare GVE370W with A26kit)</p> 	EA	1			
2a	Foggers [with 15cs x spare plastic bag liner filters]	<p>1.Fogmaster Micro Jet ULV 4701; 2.Fogmaster Tri-Jet 6208</p> 	EA	3			
3a	(Wide Area) Sprayer	<p>1.RL Flo-master PRO 2 Gal; 2.RL Flo-master backpack 4 Gal</p> 	EA	5			
4a	electrical extension cord	30 metres	EA	1			

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RECOMMENDED ILLNESS OUTBREAK KIT (for approx. 600 passengers)

ITEM	DESCRIPTION	EXAMPLES of Equipment with Notes	UNIT	MIN. REQ'D TO BE HELD O/B	TOTAL (HELD IN STORES)	VARIANCE	EXPI R DATE
	EQUIPMENT NON DURABLE						
1b	Full Facial PPE Mask with CARBON filter	to be used only when fogging	EA	3			
2b	Goggle Safety non vented	to be used only for body fluid cleaning / picking up	EA	15			
3b	Dustpan Long Handle & Brush Long Handle		EA	6			
4b	Bucket Plastic ~10 liters	white, grey, red (wash rinse sanitize)	EA	3x6			
5b	Bottle Spray Plastic	with nozzles; 20oz- 32oz; ECOLAB	EA	50			
6b	Scraper /Spatula for cleaning	approx size L= 25 cm x W = 10 cm ; Extendo 	EA	10			
	CONSUMABLE						
1c	Bag laundry dissolvable	Recommended standard sizes: 28" X 39" or 3' X 5' OR 660 X 840 mm; Sani Melt Hamper Liner by Medline (Bag ties dissolve at 40 degrees F, the bag itself dissolves in hot water flush at 149 degrees F)	Case/50	7			
2c	Plastic bag garbage	(biohazard (red or yellow))	Case/1000	1			
3c	Dust Mask disposable	airborne respirator; respiratory PPE; to be used only for body fluid cleaning / picking up	Case/20	15			
4c	Glove vinyl blue size M 100ea/box	disposable, non or slightly powdered	Case/10	1			
5c	Glove vinyl blue size L 100ea/box	disposable, non or slightly powdered	Case/10	1			




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RECOMMENDED ILLNESS OUTBREAK KIT (for approx. 600 passengers)

ITEM	DESCRIPTION	EXAMPLES of Equipment with Notes	UNIT	MIN. REQ'D TO BE HELD O/B	TOTAL (HELD IN STORES)	VARIANCE	EXPI R DATE
6c	Shoe cover disposable		Case/200	2			
7c	Towel hand paper 150ea 1Pty		Case/15	2			
8c	Disposable cloth towels / multi purpose cloth	1. Chix 	Case/25	50			
9c	Apron disposable plastic 100eac		Case	5			
10c	Bag sea sick disposable plastic case 500		Case	1			
11c	absorbent body fluid spillage granules	1.Virusafe (10 g absorbs 1 litre of fluid) 	Tub /1 kg	5			
12c	caution / hazard warning tape		Roll /100m	3			
	PAPER CONSUMABLE						
1d	Plate disposable	1. approx size 9 3/4inch	Case/400	9			
2d	Plate disposable	1. approx size 6 3/4inch	Case/1400	3			
3d	Bowl disposable	1. soup approx size 16 oz	Case/1000	4			
4d	Cup coffee disposable	1. approx size 9 oz	Case/800	5			
5d	Lid, plastic disposable		Case/1000	4			


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RECOMMENDED ILLNESS OUTBREAK KIT (for approx. 600 passengers)

ITEM	DESCRIPTION	EXAMPLES of Equipment with Notes	UNIT	MIN. REQ'D TO BE HELD O/B	TOTAL (HELD IN STORES)	VARIANCE	EXPI R DATE
6d	Cutlery disposable (set) knife/Fork/Spoon/Teaspoon ind. wrapped		Case/250	14			
7d	Tray disposable	1. approx size 12x9" (Cardboard)	Case/240	15			
	CHEMICALS						
1e	<p>Accelerated Hydrogen Peroxide:</p> <p>-Accel TB RTU, or Accel 5 RTU, -Accel Concentrate</p> <p>OR</p> <p>-Oxivir TB RTU, -Oxivir Five 16 Concentrate</p> <p>If CONCENTRATES: with a dispenser for cruise ship use</p>	<p>www.virox.com www.viroxaccel.ca</p> <p>www.diversey.com/oxivir</p> 	<p>RTU Case/12x1 L</p> <p>Concentrate Litres</p>	20	15		
2e	<p>Wipes :</p> <p>-Virox wipes OR -Oxivir wipes</p>		Canister/60 sheets	30			
3e	Sanitiser kay 5 (Ecolab)	<p>powdered Chlorine sachets; Ecolab</p> 	EA	500			

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RECOMMENDED ILLNESS OUTBREAK KIT (for approx. 600 passengers)

ITEM	DESCRIPTION	EXAMPLES of Equipment with Notes	UNIT	MIN. REQ'D TO BE HELD O/B	TOTAL (HELD IN STORES)	VARIANCE	EXPI R DATE
4f	Chlorine (Bleach) Generic	Generic, 1000 ppm solution	LTRS	50			
5e	Dispenser - Endure Hand Sanitizer	Ecolab	EA	4			
6e	Sanitizer Endure 300; 540 ml with pump	Purell Ultra (aka Purell VF 481) Ecolab product #61430327	EA	18			
7e	Sanitiser Alcohol hand gel 1litre	Purell Ultra Hand Gel Bag 1000 ml Endure -300; Ecolab product number: 61430340	Case/6	10			
8e	Chlorine Test Strips, 1000ppm	e.g.: http://bit.ly/1tEILQu 	Pk / 100	10			
	UNIFORMS & LINEN						
1f	suite disposable M white	Plastic whole body with Hood ; Tyvek	EA	30			
2f	suite disposable L white	Plastic whole body with Hood ; Tyvek	EA	30			

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OUTBREAK PREVENTION AND RESPONSE PLAN (OPRP)

RECOMMENDED ILLNESS OUTBREAK KIT (for approx. 600 passengers)

ITEM	DESCRIPTION	EXAMPLES of Equipment with Notes	UNIT	MIN. REQ'D TO BE HELD O/B	TOTAL (HELD IN STORES)	VARIANC	EXPI R DATE
3f	suite disposable XL white	Plastic whole body with Hood ; Tyvek	EA	30			
4f	Bag Mattress Covers plastic	king and twin	EA	50 +50			

19. ANNEXES

19.1. Cruising Tips

Cruising Tips

Each year millions of U.S. citizens enjoy cruise vacations. In 2010, approximately 10 million passengers embarked from North American ports for their cruise vacation (from Cruise Lines International Association).

Traveling on cruise ships exposes people to new environments and high volumes of people, including other travelers. This exposure can create the risk for illness from contaminated food or water or, more commonly, through person-to-person contact.

Follow these tips to help prevent the spread of illness:

1. Wash your hands often!

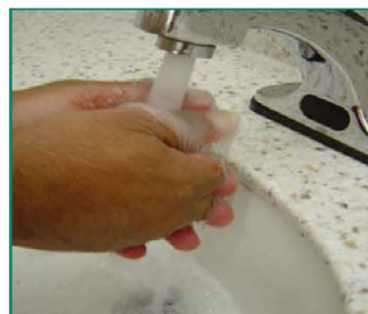
Before:

- eating,
- drinking, and
- brushing your teeth.

After:

- touching your face, and
- going to the bathroom.

When your hands are dirty.



2. Leave the area if you see someone get sick (vomiting or diarrhea).

Report it to cruise staff, if not already notified.

You could get sick if you ingest germs that travel through the air.

3. Take care of yourself.

Get plenty of rest and drink lots of water. Resting helps rebuild your immune system. Drinking water helps prevent dehydration.



4. Be considerate of other people's health.

If you're sick before taking a cruise, call the cruise line to find out if there are alternative cruising options. If you're sick during a cruise, report your illness to the crew and stay in your room until your symptoms are gone.

CDC's Vessel Sanitation Program helps the cruise industry control and prevent the spread of gastrointestinal illnesses aboard cruise ships and assists them in monitoring ships if they have an outbreak. Learn more about CDC's Vessel Sanitation Program at www.cdc.gov/nceh/vsp.

National Center for Environmental Health
Division of Emergency and Environmental Health Services



CS234329_A

August 2012

19.2. Hand washing

Keeping Your Hands Clean on a Cruise

To stay healthy and clean, wash your hands with warm water and soap.

When to wash your hands:

Before:

- Touching your hand to your mouth, including
 - » Eating,
 - » Drinking, and
 - » Brushing your teeth.
- Helping a sick person.

After:

- Going to the bathroom.
- Changing diapers.
- Touching high-hand contact surfaces such as
 - » Door knobs,
 - » Elevator buttons, and
 - » Railings.
- Returning to your cabin.
- Helping a sick person.
- Blowing your nose.

How to wash your hands:

1. Wet your hands with warm water.
2. Apply a generous amount of soap.
3. Rub your hands together for 20 seconds.
4. Rinse your hands.
5. Dry your hands with a paper towel.
6. Use the paper towel to turn off the faucet and open the door.



What about alcohol-based hand sanitizers?

- CDC recommends that cruise ship passengers use warm water and soap to wash their hands. Washing is always best.
- If water and soap are NOT available (perhaps on excursions), use an ethanol alcohol-based hand sanitizer, preferably in a gel form. The sanitizer should be at least 62% ethanol. Hand sanitizers do not get rid of all types of germs.

CDC's Vessel Sanitation Program helps the cruise industry control and prevent the spread of gastrointestinal illnesses aboard cruise ships and assists them in monitoring ships if they have an outbreak. Learn more about CDC's Vessel Sanitation Program at www.cdc.gov/nceh/vsp.

National Center for Environmental Health
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19.3. Norovirus Factsheet



Facts About Noroviruses on Cruise Ships

What are noroviruses?

Noroviruses are a group of viruses (previously known as Norwalk-like viruses) that can affect the stomach and intestines. These viruses can cause people to have gastroenteritis, an inflammation of the stomach and the large intestines. Gastroenteritis is sometimes called a calicivirus infection or food poisoning, even though it may not always be related to food.

What are the symptoms of norovirus?

- **Common symptoms:** vomiting, diarrhea, and some stomach cramping
- **Less common symptoms:** low-grade fever, chills, headache, muscle aches, nausea, and tiredness

How long do the symptoms normally last?

This illness often begins suddenly, and the infected person may feel very sick. Normally the illness lasts about 1 to 2 days. Children often vomit more than adults.

How noroviruses are spread

People can become infected with the virus by:

- Eating food or drinking liquids infected with noroviruses
- Touching surfaces or objects infected with noroviruses and then touching own mouth, nose, or eyes
- Having person-to-person contact (with a norovirus-infected person) by
 - being present while someone is vomiting
 - sharing food or eating from the same utensils
 - caring for a sick person
 - shaking hands
- Not washing hands after using the bathroom or changing diapers and before eating or preparing food.

What to do if you get a norovirus

Advise the medical staff of your illness. Drink plenty of fluids. Wash hands often.

Norovirus infections are not usually serious

January 29, 2004

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DEPARTMENT OF HEALTH AND HUMAN SERVICES
CENTERS FOR DISEASE CONTROL AND PREVENTION
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Noroviruses are highly contagious, but infections are not usually serious. People may feel very sick and vomit often or get diarrhea, becoming dehydrated if lost liquids are not replaced. Most people recover within 1 or 2 days and have no long-term adverse health effects.

Where noroviruses are found

Noroviruses are found in the stool or vomit of infected people and on infected surfaces that have been touched by ill people. Outbreaks occur more often where there are more people in a small area, such as nursing homes, restaurants, catered events, and cruise ships.

Reasons why noroviruses are associated with cruise ships

- Health officials track illness on cruise ships. Therefore, outbreaks are found and reported more quickly on a cruise ship than on land.
- Close living quarters may increase the amount of group contact.
- New passenger arrivals may bring the virus to other passengers and crew.

How to prevent getting and spreading noroviruses

- Wash hands often. Wash hands after using the bathroom or changing diapers and before eating or preparing food. Wash hands more often when someone in your home is sick. For hand washing tips, click on the following link:
<http://www.cdc.gov/ncidod/op/handwashing.htm>
- Avoid shaking hands during outbreaks.
- Use alcohol-based hand sanitizer along with handwashing.

For more information, visit <http://www.cdc.gov/ncchv/vsp/default.htm>, E-mail vsp@cdc.gov, or call the CDC public response hotline at (888) 246-2675 (English), (888) 246-2857 (Español), or (866) 874-2646 (TTY).

19.4. Sample notifications/ letters

19.4.1. Passenger notification for entering Elevated (Yellow) Level- Sample Letter

HEALTH NOTICE – Yellow Level

Location, Date

During the past several days, we have seen an increase in the number of gastrointestinal illness cases onboard the XXXXX _____. As a result, we have taken immediate steps to address the situation. It is important to understand the GI illness we are seeing onboard. It is very common worldwide, is not life threatening and does not carry any long-term consequences. In the United States it is second in occurrence only to the common cold. Fortunately, it is not long-lasting; symptoms usually disappear in 24-48 hours.

Unfortunately, this illness is easily spread from person to person, particularly in a closed environment. The single most effective action in stopping the spread of this illness is to isolate people while sick, and for an additional period of 24 hours once all symptoms have subsided. If you begin to feel symptoms consistent with gastrointestinal illness, we ask that you isolate yourself in your cabin after notifying the Medical staff of your condition. Full room service will be provided.

In addition, it is absolutely imperative that all passengers regularly and thoroughly wash their hands with soap and warm water. Rub all surfaces of lathered hands vigorously for at least 20 seconds prior to rinsing. We cannot stress enough the importance of this simple procedure.

XXXXX Cruises greatly appreciates your understanding of this issue and your cooperation in combating this illness. If you have any questions regarding this notice, please contact the Medical Center.

Regards,

Officer NAME

19.4.2. Passenger notification for entering Maximum Response (Red) Level – Sample Letter

HEALTH NOTICE – Entering Red Level

Date

Further to the health information provided on embarkation day, I would like to advise you that unfortunately we have seen an increase in the number of reported cases of gastrointestinal illness which are strongly suggestive of Norovirus. We have been informed that Norovirus is currently circulating widely and we suspect that the virus may have been inadvertently introduced on board by embarking passengers. Norovirus, as you are now aware, is extremely contagious and easily transmitted from person to person, especially if meticulous attention is not paid to personal hygiene.

In order to interrupt the spread of this illness, we have proactively initiated an extensive sanitation programme on board which was developed in conjunction with the international health authorities. You are likely to notice evidence of these additional measures around the ship over the coming days.

I would like to remind you it is vitally important that excellent standards of personal hygiene are maintained by all on board, as the virus is easily passed on by touching surfaces such as handrails, door handles and elevator buttons.

I would once again urge you to follow all of the health precautions described below:

- To prevent person to person spread, please ensure that you wash your hands frequently and thoroughly with soap for at least 20 seconds and rinse them well under running water. Please ensure

that you follow this procedure each time you use the toilet, after coughing or sneezing and before eating, drinking, or smoking. Avoid touching your mouth.

- Please attempt to always use your own cabin/stateroom's toilet facilities.
- In addition to hand washing, please also use the hand sanitizers where available and before eating in the buffet.
- Should you experience any symptoms of vomiting or diarrhoea, please return to your stateroom and report this by immediately contacting the Medical Center.

The health and safety of our passengers and crew is of paramount importance to us and we thank you for your continued efforts to help eradicate this illness.

If you have any questions or concerns, please contact the Reception Desk or a member of our Medical Staff.

Regards,

Officer NAME

19.4.3. Passenger in Isolation - Sample Letter

Passenger in Isolation

Location, Date

I am truly sorry to hear you have fallen ill, especially while on your cruise.

I would like to thank you for your cooperation and understanding of the situation and for remaining in your cabin until 24 hours following your last symptoms. This precaution is necessary due to the fact that gastrointestinal illness is highly contagious 24 hours after the last symptoms and is easily spread. It is transmitted from person-to-person by direct contact or indirectly by transferring the virus to surfaces that could be touched by another person. When you feel you are ready to leave, it is vital you speak with Medical staff prior to doing so.

To combat the spread of the illness, we must take several preventive steps, including enhanced cleaning procedures and isolation of affected individuals. These actions have been developed in conjunction with international Public Health authorities. Even following this strict regime, the chance of spreading the virus to other passengers or crew members is not completely eliminated. Therefore I cannot overemphasize the importance of remaining in your cabin. Failure to remain in isolation presents an unacceptable risk to other passengers and crew members.

Our staff will make sure that everything you need will be brought to your cabin. For all your food and beverage needs, complete room service will be provided. This will include the opportunity to order from the regular menu.

Our Medical Staff are available to assist you on the road to recovery. Please accept my apologies for any inconvenience and gratitude for your cooperation and understanding.

My best wishes for a speedy recovery,

Officer NAME

19.4.4. Crew in Isolation Notification -Sample Letter

You have been placed in isolation in your cabin due to Gastrointestinal (GI) illness. Symptoms include vomiting or diarrhea, usually lasting 24-48 hours. We ask that you remain in your cabin except for visits to the Medical Center twice daily to check the status of your symptoms. You will not be working, and are not to have any visitors during this time. Isolation will be in effect until you have been symptom-free for 24-48 hours and cleared by the Medical Staff.

Again, you are not to leave your cabin, report for work or have visitors while in isolation. Meals will be delivered to your room by Room Service.

While in isolation, thorough hand washing is highly recommended after each visit to the bathroom. Using warm water and soap, rub lathered surfaces together vigorously for at least 20 seconds and rinse under running water.

If you have any medical problems, please call the Medical Center at ext. XXX. You will be evaluated twice daily while ill, and once per day when recovering. You will be cleared to return to your duties 24 hours after your last symptoms.

Your roommates may be removed from your cabin during your isolation. This is dependent upon the needs of the ship, medical department and circumstances.

Please be mindful that non-compliance with isolation will result in disciplinary action.

For any questions or concerns, please contact the HR Manager or the Medical Staff.

Officer NAME

19.4.5. Passengers Embarking after an Outbreak Notification -Sample Letter

Location, date

Unfortunately, we experienced an outbreak of gastrointestinal illness amongst passengers and crew during our previous voyage. This illness is transmitted person-to-person and is highly contagious, causing vomiting and diarrhea for 24 to 48 hours. Although it usually resolves without treatment, it may be more severe for older people, very young children and those with debilitating conditions.

The safety and health of our passengers is of utmost importance to us. In our efforts to combat this illness and eradicate it from our ship, we instituted an extensive sanitation program in compliance with guidance from the international public health authorities.

To reduce the odds of infection, we recommend the following precautions:

- Frequent and thorough hand washing with soap and warm water, rubbing all surfaces of lathered hands together vigorously for at least 20 seconds followed by a thorough rinse under a stream of water. This procedure should be followed after every use of the toilet and before eating, drinking or smoking.
- Contact the Medical Center after experiencing vomiting or diarrhea, should you require medical experience. There are no charges for medical care related to this illness.
- Please inform our staff of any episode of vomiting or diarrhea outside the toilet (carpet, public areas, etc). They are prepared to assist in cleaning and sanitizing the area.

If you have questions or concerns, please contact our Medical Staff or the Reception Desk.

Officer NAME