COMMUNICABLE DISEASE MANAGEMENT PLAN



Rainier Preschool Hudson Park Elementary Rainier Junior/Senior High School North Columbia Academy

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Introduction

Students and staff health and safety is a priority of the Rainier School District. One area of health and wellness in the school setting includes controlling communicable diseases. Providing a safe, comfortable, and healthy environment facilitates the educational process, encourages social development, and allows children to acquire healthy attitudes toward school (NRC, 2020).

Illness and injury are not uncommon in the school setting, and thus, policies, procedures, and guidance in regard to infection control are of the utmost importance. When children are injured or feel unwell, it can create difficulties in the school setting in regard to both risk to others and the ability of a child to participate in class or educational activities fully. Like the Whole School, Whole Community, Whole Child model, staff collaborate for the best outcomes of the student population and individuals. In this regard, staff must be prepared to have accessible resources and materials to identify appropriate measures and interventions for child health issue including communicable diseases (ACSD, 2020).



Associated plans include:

- Exposure Control Plan
- Pandemic Plan

COMMUNICABLE DISEASE MANAGEMENT PLAN

Communicable disease control and prevention is of significant importance in creating a safe and healthy environment for students and staff. A communicable disease is an infectious disease transmissible by contact with infected individuals or their bodily discharges or fluids, by contact with contaminated surfaces or objects, by ingestion of contaminated food or water, or by direct or indirect contact with disease vectors. Although the terms *infectious disease*, *communicable disease* and *contagious disease* are often used interchangeably, it is important to note that not all infectious diseases that are spread by contact with disease vectors are considered to be "contagious" diseases since they cannot be spread from direct contact with another person (ACPHD, 2013).

In the school setting, there is a prevention-oriented approach for communicable disease, which is grounded in education, role modeling, and standard precautions and hygiene. However, the nature of a population-based setting lends to the need to establish practices for measures and interventions associated with exposures or potential exposure. This management plan focuses on a population-based set of prevention practices for communicable disease in the school setting.

Rainier School District Board Policies

• Click this link for Rainier School District's board policies.

Oregon Legislation

- OAR 581-022-2220 Communicable Disease Management Plan/Isolation Space/Standards for Public Elementary and Secondary Schools: Health Services
- OAR 333-019-0010 Exclusion Measures
- OAR 581-022-2225 Emergency Plan and Safety Programs
- OAR 166-400-0010 Educational Service Districts, School Districts, And Individual School Records
- ORS 433.255¹ Persons with or exposed to restrictable disease excluded from school
- ORS 336.201¹ Nursing services provided by district.
- OAR 437-001-0744 Oregon Occupational Safety and Health Division
- OAR 333-019-0015 Investigation and Control of Diseases: General Powers and Responsibilities
- OAR 333-003-0050 Impending Public Health Crisis: Access to Individually Identifiable Health

Oregon Health Authority & Oregon Department of Education

Oregon Communicable Disease Guidelines for School

Guidance on Applying the Communicable Disease Management Plan

The following plan is intended to be used in the context of daily practice, outbreaks, uncommon occurrence and overall prevention as it relates to communicable disease. This is outlined in under the Levels of Prevention model utilizing primary, secondary and tertiary levels. Excluding primordial and quaternary prevention, which are beyond the scope of the school setting (Kisling & Das, 2022). This is detailed under Prevention Oriented Measures.

Items throughout the plan are organized by designated color as itemized below:

Specific indicators for actionable items are identified in green squares.





Reference to Other Internal Plans of Companion Documents is identifiable in Yellow

Clarifying information related to practices, plans or addendums are identifiable in light blue boxes



Communicable Disease Prevention

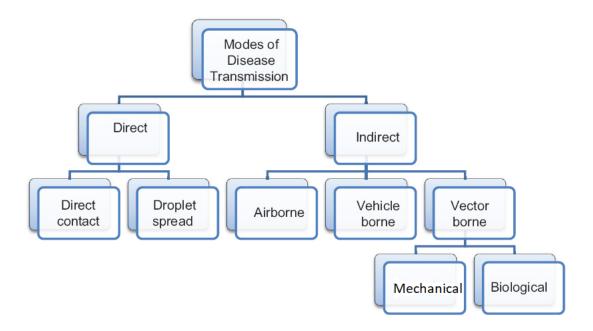
Communicable Diseases may be categorized in a variety of ways when considering population settings. the population settings. When categorizing communicable diseases for response-oriented processes one such method of categorization includes acuity and frequency (Augello, 2005). This allows individual operationalizing communicable disease prevention and response to identify the potential severity of a condition.

- Low acuity Low frequency: Communicable Diseases which are not uncommon but typically occur sporadically, that pose low risk to the general school population in terms of morbidity and mortality (e.g., hand foot and mouth disease, fifths disease, impetigo)
- Low acuity, High frequency: Communicable diseases that are very common to pediatric populations that pose little risk of significant morbidity and mortality of the general school population (e.g. head lice, common cold, norovirus).
- Medium Acuity, Medium Frequency: Communicable Diseases that pose a slightly heightened risk of morbidity and mortality on an infrequent or seasonal basis in subsets of school populations (Influenza, Parainfluenza).
- **High acuity, Low frequency**: Communicable diseases that have greater potential severity to infected population with less predictable trends or unestablished seasonality that pose potential for increased risk of morbidity and mortality to the school population or subset of the school population (Meningococcal, E. Coli).

Determining acuity and frequency of a condition requires a level of clinical understanding of communicable disease and the potential epidemiological variability of communicable diseases and speaks to the important rationale of placing the nurse at the forefront of communicable disease decision making. Additionally, response of low acuity conditions may require a modified response if morbidity is atypical, reiterated the importance of clinical consultation,

In addition to understanding the frequency and potential severity of a communicable disease, understanding how communicable diseases can be spread is a critical layer to communicable disease prevention and mitigation. How communicable diseases are spread depends on the specific infectious agent. Common ways in which communicable diseases spread include direct contact and indirect contact:

- **Direct Physical contact with an infected person**, such as through touch (staphylococcus), sexual intercourse (gonorrhea, HIV), fecal/oral transmission (hepatitis A), or droplets (influenza, TB)
- **Direct Contact with a contaminated surface or object** (Norovirus), food (salmonella, E. coli), blood (HIV, hepatitis B, hepatitis C), or water (cholera, listeria).
- Vector Borne-Bites from insects or animals capable of transmitting the disease (mosquito: malaria and yellow fever; flea: plague); and
- Travel through the air -aerosolized transmission (measles).



In the school setting, the most frequent risks are associated with direct contact with ill individuals, contamination of surfaces or through airborne transmission. Primary sources of prevention-oriented measures include hand and surface hygiene, isolation, exclusion, and standard precautions.

The district *Exposure Control Plan* discusses *Standard Precautions* in detail as well as *Transmission Based Precautions*, which include contact, droplet, and airborne precautions. The District *Pandemic Plan* provides a framework for Novel Virus Response Planning.

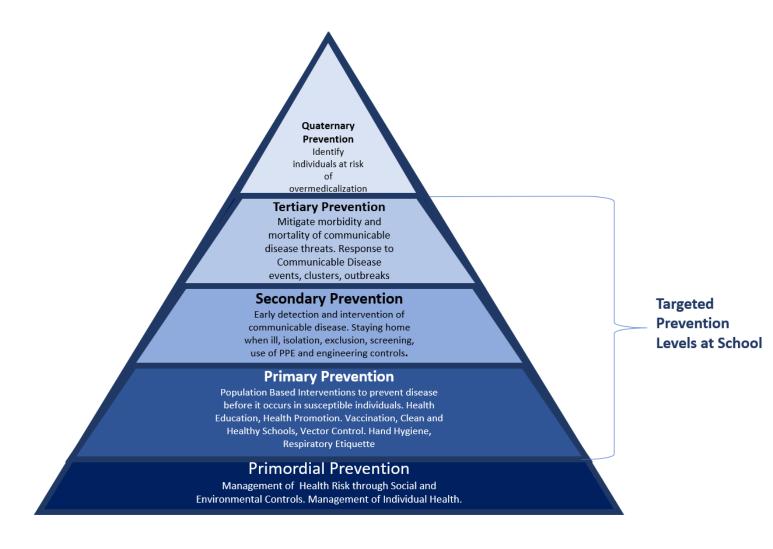
Prevention Oriented Measures

Prevention oriented measures are those which seek to prevent, reduce and control transmission of communicable diseases based on the actual and perceived risk relative to the circumstances that surround transmission and exposure potential. Prevention can be described and applied in a variety of ways. This plan will focus on *Levels of Prevention* translated to address communicable disease in the school setting.

Levels of Prevention

Levels of Prevention are regarded as essential public health operations to protect and improve overall health of populations and communities (WHO, 2022). Endorsing a leveled approach to communicable disease management creates a framework of embedding prevention at every level of management and response [i.e. preventing disease, preventing spread, preventing complications, preventing sequelae].

Levels of Prevention are categorized by primordial, primary, secondary, tertiary and quaternary. This plan will focus on those applicable to the school environment, which include primary, secondary, and tertiary.





Secondary Prevention

Minimize the impact of disease where infection has been identified.

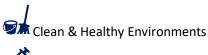
Tertiary Prevention

Prevent morbidity and morality
associated with an infection once
it is established.

PRIMARY PREVENTION

Primary prevention consists of measures which are aimed at a susceptible population or individual. The purpose of primary prevention is to prevent a disease from ever occurring. Thus, the target population in primary prevention is healthy individuals. This level of prevention commonly institutes activities that limit risk exposure or increase the immunity of individuals at risk to prevent a disease from progressing in a susceptible individual to subclinical disease. For example, immunizations are a form of primary prevention (Kisling & Dos, 2022). In the context of communicable disease and the school environment, this focuses on prevention of exposure to communicable diseases at school.

Primary prevention may include:









Clean & Healthy Environments

Clean schools contribute to healthy environments and minimize the risk of communicable disease transmission. Some of the important concepts associated with a reduction in illness include scheduling routine cleaning of each classroom and common areas, ensuring appropriate stock of appropriate sanitizers and disinfectants, ensuring garbage is emptied regularly, ensuring working ventilation and clean filtration, and ensuring any classrooms with pets have a cleaning plan in place to minimize odors or contamination.

While environmental cleaning is primarily governed by facilities management and custodial services, there are specific classroom measures that can be practiced improving cleanliness and reduce the risk of illness transmission during peak illness such as increasing access to sanitizing wipes, tissue and hand sanitizer, disposal of tissues in appropriate receptacles and immediate notification of body fluid spills (such as vomit).

Defer Facility Management Plans for Sanitation and Ventilation Practices
Defer to Exposure Control Plan Engineering Controls

High Risk Students

In addition, classrooms with immunocompromised students may take additional sanitation measures to protect students at increased risk related to communicable disease. These students may include:

- o Individuals who are undergoing chemotherapy or immunosuppressive therapy
- Transplant recipients
- o Individuals I with certain autoimmune diseases
- o Individual without spleens or whom are functionally asplenic

For these or other students who are not immunocompetent, additional measures or accommodations may be considered to prevent communicable disease transmission. Examples of these measures include:

- Not sharing supplies or items
- Not seating immunocompromised students with students who are actively coughing or exhibiting signs of respiratory illness
- o Promoting increased hand washing and surface hygiene
- Allowance of masking in the classroom setting
- For severely immunocompromise students, at home tutoring support or remote learning may be considered

Clinical Considerations

Students who undergo health care procedures in the school setting that may include risk of transmission or infection to the student or to staff related to invasiveness or aerosolization (e.g. trache, catheter, feeding tubes, colostomy) must maintain a prevention oriented care plan and specialized training for staff to include standard precautions.

Defer to Exposure Control Plan

Developmental Considerations

Specific consideration shall be given to students who may have difficulty with hygiene, respiratory etiquette or maintaining environmental due to functional or intellectual disabilities. In these cases, students should be accommodated with assistance to provide a clean and healthy space for students and peers.

Equity Considerations

All students must be given the equitable measures related to health and safety in the school setting regardless of or race, ethnicity, nation or origin, gender, orientation, ability or socioeconomic status. Clean and Healthy school environments should focus on the environmental need of the school and the individual needs of students relative to health status and support needs.

Vaccination

In the school setting, vaccines are an important piece of communicable disease control. Vaccines are a requirement for attending school in Oregon. However, it is important to remark that certain populations may not be vaccinated because of medical contraindications or because of religious or philosophical decisions. Each school has a record of which students are and are not vaccinated with routine childhood immunizations as a primary control measure for outbreaks of vaccine-preventable diseases. For the purposes of communicable disease mitigation, it is important to ensure accurate and appropriate immunizations records are kept, which are accessible when needed.

Vaccine process is covered in detail in <u>the Oregon Health Authority's Vaccine</u> webpage. Vaccine Preventable Diseases are covered under Notifiable Diseases in this plan.

Standard Precautions

Standard Precautions are the minimum infection prevention practices that apply to all direct care, regardless of suspected or confirmed infection status, in any setting where direct care or first aid is delivered. These practices are designed to both staff and students from spreading infections. Standard Precautions include:

- Hand hygiene.
- Respiratory hygiene / cough etiquette.
- Use of personal protective equipment (e.g., gloves, masks, eyewear).
- Sharps safety (engineering and work practice controls).
- Safe injection practices (i.e., aseptic technique for parenteral medications).
- Disinfecting environment/spills/cleanup.

Defer Exposure Control Plan for PPE, Sharps Safety, Safe Injection Practice and Disinfecting Environment

Respiratory Etiquette



Respiratory hygiene and cough etiquette are terms used to describe infection prevention measures to decrease the transmission of respiratory illness (e.g., influenza and cold viruses). A respiratory infection is spread when a person who is infected with a virus coughs or sneezes. The droplets released from an ill person's cough or sneeze can travel for several feet, reaching the nose or mouth of others and causing illness. Viruses can spread easily from person to person through direct

contact via touching or shaking hands. Droplets can also live for a short time on a variety of objects such as high touch areas like doorknobs or desks. Because some individuals cough without having respiratory infections (e.g., persons with chronic obstructive lung disease), we do not always know who is infectious and who is not. Therefore, respiratory hygiene and cough etiquette are essential components to protecting yourself from illness and preventing others from becoming ill. Like hand hygiene, respiratory hygiene is part of the standard precautions that will be taught, practiced, and role-modeled to prevent the spread of disease. Practices and interventions are described under *Respiratory Hygiene* and *Cough Etiquette* and *Transmission Based Measure* in *Exposure Controls Plan*

Hand Hygiene

Hygiene and sanitation are some of the most important methods of disease prevention. Handwashing is one of the single most important methods of keeping germs at bay, specifically in the school setting. Appropriate handwashing practices will be taught, rolemodeled, and practiced.

Hand sanitizer, while not effective against a large number of pathogens, will be made available for times that handwashing is not immediately accessible. Hand sanitizer will be easily accessible throughout the building, specifically in high contact areas and at entrances and exits as feasible. Hand sanitizers will be accessible in each classroom.





Students and staff will wash their hands:

- **Before, during,** and **after** preparing food.
- Before eating food
- Before and after caring for someone at home who is sick with vomiting or diarrhea
- Before and after treating a cut or wound
- After using the toilet
- After changing diapers or cleaning up a child who has used the toilet
- After blowing one's nose, coughing, or sneezing
- After touching an animal, animal feed, or animal waste
- After handling pet food or pet treats
- After touching garbage (CDC, 2020)

To prevent the spread of germs handwashing with soap and water for at least 20 seconds is recommended.

Health Promotion

Prevention oriented measures are grounded in education of how diseases are transmitted, as well as practice application and role modeling related to appropriate measures and precautions.



Communicable Disease Related Health Promotion

- Age-appropriate hand hygiene curriculum can be found from a variety of resources and will be
 provided annually in the fall and as needed during peak illness season or specific increases of disease
 in the school setting.
- Cleanliness, germ transmission, and cough etiquette will be taught as age appropriate, and signage will be endorsed during peak illness seasons.
- Reminders will be provided to families about keeping children home when ill and reinforcing health
 and safety measures as a matter of practice.
- Vaccination reminders will be provided each year to students and families. Vaccines clinic advertisements will be forwarded to families in English and Spanish.
- Illness, isolation and exclusion policies will be taught to applicable staff and endorsed by building administration and School Health Services staff.
- Provision of food safety and hygiene measures will be followed and endorsed with mealtimes
- Provision of hygiene and safety information around recess and physical education will be endorses.
- Coordination with counseling services to minimize fear when illness is present in the school setting will occur to maximize student understanding and build a safe environment.
- Communication will be made to families of immunocompromised children when illness is present in the school setting or specific classroom environment.
- Health promotion for staff including education, reinforcement of guidelines and recognition of illness will be done at least annually.
- Families will receive communications each school year related when children should remain home related to illness.

Equity Considerations

Health Promotion materials and content should be effectively disseminated at an appropriate literacy level and provision of materials should be representative of the demographic and languages in the school setting.

SECONDARY PREVENTION

Secondary prevention measures are those used to detect and minimize effects of illness related to early identification. Secondary prevention measures are hold the defining elements of *School Illness Policy*. These include:



Staying home when ill



Symptom based Isolation and Exclusion



Specific Disease Exclusion/Restrictable Diseases



Screening, when appropriate

Communicable diseases are transmitted from person to person by various routes. While some conditions are restrictable based on diagnosis, more often early identification of signs and symptoms of communicable disease is of paramount importance to increase the health of the school population and decrease school absenteeism. In the school environment, many communicable diseases are easily transmitted from one individual to another.

Staying Home When Ill

An important element of prevention is the policy and practice of staying home when ill with symptom or conditions that are excludable. Information on when to stay home should be easily accessible to families and embedded in communications throughout the year. Annual reminders to students and staff regarding when to stay home is an important element of prevention. As well, additional communication can be endorsed during peak illness seasons.



Communication of When to Stay Home:

- Provide annual reminders of when to stay home as it related to illness policy
- Additional communications shall be considered during peak illness seasons.
- Targeted communication may need to be endorsed during uncommon communicable disease occurrences or trends.

Symptom Based Exclusion

Oregon public health law mandates that persons who work in or attend school who are diagnosed with certain diseases or conditions be excluded from school until no longer contagious. However, diagnosis often presumes a physician visit and specific testing, and schools must often make decisions regarding exclusion based on non-diagnostic but readily identifiable signs or symptoms. The Oregon Department of Education Communicable Disease Guidance Document details both symptom based and disease specific exclusion guidelines. The following exclusion criteria and actions are extracted from the ODE Guidance Document to abbreviate symptom-based exclusion:

EXCLUSION CRITERIA	EXCLUSION ACTION
Fever : a measured oral temperature of 100.4°F, with or without the symptoms below	Stay home until fever is below 100.4°F for 24 hours WITHOUT the use of fever-reducing medication such as ibuprofen (Advil), acetaminophen (Tylenol), aspirin.
Skin rash or sores : ANY new rash if not previously diagnosed by a health care provider OR if the rash is increasing in size OR if new sores or wounds are developing day-to-day OR if rash, sores or wounds are draining and cannot be completely covered with a bandage	Stay home until the rash is resolved OR until sores and wounds are dry or can be completed covered with a bandage OR until diagnosis and clearance are provided by a licensed healthcare provider
Difficulty breathing or shortness of breath not explained by a situation such as exercise: feeling unable to catch their breath, gasping for air, breathing too fast or too shallowly, breathing with extra effort such as using muscles of the stomach, chest, or neck.	Seek medical attention; return to school when advised by a licensed healthcare provider, may return after 24 hours and per disease specific guidance, if applicable.
New cough illness: persistent cough that is not yet diagnosed and cleared by a licensed healthcare provider OR any acute (non-chronic) cough illness OR cough that is frequent or severe enough to interfere with active participation in usual school activities or any new cough illness.	Stay home until symptoms improving for 24 hours (no cough or cough is well controlled.
Diarrhea : three or more watery or loose stools in 24 hours OR sudden onset of loose stools OR student unable to control bowel function when previously able to do so	Stay home until 48 hours after diarrhea resolves or with orders from doctor to school nurse.
Vomiting: at least 1 episode that is unexplained	Stay home until 48 hours after last episode
Headache with a stiff neck and fever	Referral to physician and/or 24 hours after fever has resolved. <i>Urgent medical care may be needed.</i>
Jaundice: yellowing of the eyes or skin (new or uncharacteristic)	Must be seen by a licensed prescriber and cleared before return to school
Concerning eye symptoms: colored drainage from the eyes OR unexplained redness of one or both eyes OR eye irritation accompanied by vision changes OR symptoms such as eye irritation, pain,	Students with eye symptoms who have been seen and cleared by a licensed prescriber may remain in school after indicated therapy has been started or when symptom free.

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Equity Considerations

All students must be given the equitable measures related to health and safety in the school setting regardless of or race, ethnicity, nation or origin, gender, orientation, ability, or socioeconomic status. Communicable disease mitigation measures should be imposed based on identifiers of the disease, symptoms, circumstances and potential outcomes, not relative to student identifiers.

Restrictable Diseases

Restrictable diseases are specific infectious disease diagnoses that require students or staff to remain at home for a specified amount of time to limit transmission. Restriction is typically associated with the communicability or severity of a disease. Restrictable diseases are reportable to the local health department (LHD). The local health department typically notifies school health services of a diagnosis in students or staff. Although there are occasions when the parent will notify the school first and in such cases the RN should notify the LHD.

Students with diagnoses of disease restrictable by the local public health authority (LPHA) under Oregon Administrative Rule (OAR) 333-019-0010 will return to school when documentation is obtained from the local health department (LHD) indicating they are no longer communicable including:

- Diphtheria,
- Measles,
- Salmonella
- Typhi infection,
- Shigellosis,
- Shiga-toxigenic Escherichia coli (STEC) infection,
- Hepatitis A,
- Tuberculosis,
- Pertussis,
- Rubella
- Acute Hepatitis B

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Restrictable Disease Steps

- If a report is made to the school office, administration, or other school staff in regard to any communicable disease diagnosis in students or staff, this will immediately be referred to the district RN immediately.
 - Report of a restrictable disease is regarded as an urgent referral to the RN.
 - The District RN and Administrators will identify the need for communication, surveillance, or control measures.
 - The response is highly variable depending on the condition and the circumstances around the condition.
 - Interventions and communication are driven by multiple factors, including the diagnosis, student health status, risk of exposure number of individuals infected, and risk to cohort or specific students.
 - School staff receiving reports will not inform any other students, staff, or parents of the report. This is a privacy violation.

Columbia County Disease Reporting (503)-397-7247

Isolation Spaces

As per OAR 581-022-2220, The school district is required to maintain a prevention-oriented health services program which includes a health care space that is appropriately supervised and adequately equipped for first aid and isolation of ill or injured child from the student body.

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Isolation Steps:

- When students are identified with restrictable diseases or excludable symptoms, students will be isolated in a designated healthcare isolation space until they can be dismissed to home.
- Students with respiratory illness should be offered a mask to limit airborne transmission.
- The isolation space should be in close proximity to adult supervision, and ill students should not be left unattended.
- The isolation space must be sanitized regularly. The space will be cleaned in between ill students.
- Appropriate PPE should be accessible for both students and staff. (i.e., gloves for first aid, masks for respiratory illness).

Defer to Exposure Control Plan



Exclusion & Transportation Considerations

- Students under the age of 18 who are identified as needing to be dismissed to home should be dismissed to their parent and will remain in the isolation space until parents arrive.
- If parents cannot be reached, then emergency contacts should be notified.
- If a transportation barrier exists, student may be transported home under the process outlined in contractual language.
- For children whose parents and emergency contacts cannot be reached, transportation by school employees is discouraged due to insufficient parental consent and inability to determine parental presence in the home setting.
- Children experience distress related to illness should be transported via EMS.

TERTIARY PREVENTION

Tertiary prevention measures are those implemented when a disease has already occurred, in the context of communicable disease the school setting this may be relative to identification of outbreaks, clusters or specific response to a high acuity low frequency disease/vaccine preventable disease/restrictable disease and the specific mitigation measures used to prevent additional morbidity, mortality and associated communication measures.

It is of significant importance to note that response of communicable diseases is not universal, and is highly dependent on the disease, conditions or exposure and potential risk. Indicators identified in the green squares are those which should prompt potential coordination with the LPHA, nursing team and administrative team. Procedures are identified in blue boxes.

these may provoke individualized response based on the condition, the exposure risk and transmission type, a standard response process should be considered for communicable disease activities and response in the school setting.

Standard Response Guidance for Notifiable or Restrictable Disease, Clusters or Outbreaks

- 1. Verify symptom compatibility with a communicable disease or report of disease or outbreak.
 - a. This may require coordination with LPHA
 - b. This may require syndrome or symptoms surveillance
- 2. Identify type of transmission associated with the syndrome of condition
 - a. Respiratory (aerosol, airborne, droplet, etc.)
 - b. Fecal Oral
 - c. Contact
- 3. Determine the Response Required:
 - a. Identify infectious period for the specific disease, including maximum incubation period.
 - b. Identify exposure risk in the school setting or school sponsored activities (Was the infectious person(s) at school or a school sponsored event while contagious?)
- 4. Identify susceptible individuals
 - a. For example, unvaccinated for a vaccine preventable disease exposure.
- 5. Identify individuals who would be candidates for prophylaxis, if applicable
 - a. For example, close contacts of a case of meningococcal meningitis.
- 6. Coordinate imposition of restrictions with LPHA and Administration, if applicable
- 7. Coordinate appropriate communication, health promotion materials and actions relative to the specific event.
- 8. Identify additional measures that may be required:
 - a. School Closure
 - b. Communication
 - c. Legal consultation

Outbreaks & Clusters

Outbreaks are most often defined as compatible diagnoses or syndromes in individuals from 2 or more households in the same time period. Because of the nature of the ongoing congregate setting of school, this definition is insufficient for the purposes of seasonal illness, rather an increase in morbidity or severity will be indicators to report to the district RN for consideration of outbreak reports or control

measure implementation. The attention to outbreaks, interventions, and resources are highly dependent on the severity or communicability of the syndrome or pathogen identified. Outbreak response including surveillance, infection control measures, and potentially exclusion are also diagnosing specific and may be indicated when:

- A single significant infectious diagnosis is confirmed in the school setting.
- Clusters of compatible syndromes or diagnoses associated with an infectious condition are identified within the school setting.
- Significant absenteeism is identified to be associated with compatible syndromes.
- Community transmission of an infectious disease is significant in the community and the Local Public Health Authority (LPHA) or the RN has deemed increased surveillance or response to outbreak a necessary measure.

Outbreak investigations will be facilitated through the district RN in collaboration with administration and the local health department with the use of Oregon Health Authority Outbreak Toolkits for Schools. The following outbreak guidance is outlined by:



Gastroenteritis



Respiratory



Vaccine Preventable Diseases



Infectious Rashes and Lesions



Uncommon Circumstances

Gastroenteritis

An outbreak of gastroenteritis is defined as more cases than expected for a given population and time period. For example, two children in a 25- person classroom with vomiting or diarrhea within one week could potentially indicate an outbreak.

Although there are many pathogens that may lead to gastroenteritis the single most common cause, specifically related to clusters or outbreaks, is Norovirus.

Because the nature of norovirus is common, seasonal, and highly infectious, it is unlikely to result in an outbreak investigation unless the number infected, frequency, or duration is unusual (e.g., 10 children in 25-person classroom).

Norovirus Investigative Guidelines

Gastroenteritis is largely transmitted by fecal oral transmission. This means that fecal matter, typically from poor hand hygiene, and less commonly bowel accidents, has contaminated surfaces or food that someone else touches, and subsequently ingests. Less commonly and limited to certain viruses (such as Norovirus) vomiting in groups of people may aerosolize and result in infection of those within closest proximity.

Bacterial gastroenteritis, although typically less infectious, can be more severe than viral gastroenteritis. These infectious may start with a similar presentation, thus it is important to evaluate the severity for the duration of illness when present. Many bacterial GI illness fall into the category of notifiable diseases.

Notifiable and Restrictable GI Illnesses

Gastrointestinal illness that are also notifiable or restrictable have individual measures that require collaboration with local public health and may include investigation and implementation of specific measures, restrictions, and prophylaxis in the event of a single case. The level of response is dependent upon the exposure risk (e.g., A food prep worker with Salmonella). These most common parasitic and bacterial diarrheal illnesses include:

- Campylobacter
- Cryptosporidiosis
- Giardiasis
- Enterotoxigenic Escherichia coli (ETEC)
- Shigatoxigenic Escherichia coli (STEC)
- Salmonellosis
- Shigellosis

- Multiple children with compatible gastrointestinal symptoms in 48 hours within the same cohort, but separate households.
- More than 2 cases of diarrhea with bloody stool in the school setting.
- Sudden onset of vomiting in multiple persons in the same cohort.
- Any unusual combination of gastrointestinal symptoms, severity, duration, or incidence.

Gastroenteritis Outbreak Steps

- Indicators of gastroenteritis clusters or outbreaks should be deferred to the RN. This may prompt
 increased surveillance or information finding, increased health promotion or coordination with the
 LPHA depending on the presentation, severity, conditions, and population impacted.
- Any single case of a notifiable gastrointestinal infection reported to the school, should be immediately deferred to the RN

XOHA: Norovirus Outbreak Detection and Management

Respiratory Outbreaks

Respiratory illness or disease refer to the pathological conditions affecting the organs and tissues that make gas exchange possible, and includes conditions of the upper respiratory tract, trachea, bronchi, bronchioles, alveoli, pleura and pleural cavity, and the nerves and muscles of breathing. Respiratory diseases range from mild and self-limiting, such as the common cold, to life-threatening pathogens or conditions like bacterial pneumonia or Covid-19.

Respiratory illnesses are common in the school setting, but increased incidence and severity may be an indication that specific response is needed beyond routine hygiene and exclusion. The following indicators will be reported to the district RN in regard to respiratory illness:

- respiratory illness resulting in hospitalization or death of a student or staff member.
- Diagnosed pneumonia in 3 or more individuals in the same cohort.
- Identification of 2 or more cases of a vaccine preventable respiratory illness in the same cohort.
- Unusually high (10 or more individuals or 20% or more, whichever is greater) population of individuals affected with compatible respiratory symptoms.
- Prolonged illness, lasting longer than three days on average, among ten or more persons of the same cohort.
- Any uncommon incidence of illness in more than two students.

Indicators of unusual respiratory illness due to frequency, severity or incidence should be referred to the RN Immediately.

OHA: Respiratory Disease Outbreaks

OHA: Influenza Outbreak Toolkit

In the event of respiratory illnesses related to novel viruses, the *Pandemic Plan* or State issued disease specific protocols or guidelines will be deferred to. Most respiratory illnesses that have major interventions or mitigation measures associated fall under the Vaccine Preventable Disease (VPD) category.

Vaccine-Preventable Disease

A vaccine-preventable disease (VPD) is an infectious disease for which an effective preventive vaccine exists. Current VPD routinely immunized for in the United States includes:

- 1. Diphtheria*
- 2. Tetanus*
- 3. Measles*
- 4. Mumps*
- 5. Rubella*
- 6. <u>Haemophilus influenzae</u> type b infections (Hib)*
- 7. Pneumococcal infections*
- 8. Meningococcal disease*
- 9. Pertussis (whooping cough) *
- 10. Poliomyelitis (polio)*
- 11. Hepatitis A*
- 12. Hepatitis B*
- 13. Varicella
- 14. Influenza
- 15. Covid-19

Most VPD's are also notifiable diseases*, meaning they are reportable to the local health department and are under consistent surveillance. These diseases, when diagnosed in a population setting may have specific actions associated with them.

Other VPD's that are not routinely vaccinated for the United States may arise for a particular person or group of people in specific situations such cholera, plague, rabies, bat lyssavirus, yellow fever, Japanese encephalitis, Q fever, tuberculosis, and typhoid. While these conditions are uncommon locally, a diagnosed case should be deferred to the RN immediately.

In the school setting, indicators for VPD reports include:

• A single case of a vaccine-preventable disease that is also a notifiable disease* or uncommon locally.

- More than 2 cases of chickenpox (varicella) from separate households in the same classroom or more than 5 cases in a school.
- More than 3 cases of diagnosed influenza from separate households in the same school setting.

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Vaccine Preventable Disease Response

- When VPD are identified in the school setting, the risk of exposure to students and staff will be determined in consultations with the Local Public Health Authority (LPHA).
 - Under coordination and direction from administration or nursing staff, staff may be asked to:
 - Run immunization reports to identify susceptible students in the school community
 - When prescribed by public health vaccine information will be collected for staff members
 - In certain cases, individuals who are unvaccinated or who have insufficient vaccination for the disease of interest may be excluded for a maximum incubation period for the disease to which they were exposed for certain conditions.
 - o COVID-19: 14 days
 - o Varicella: 21 Days
 - Measles: 21 days
 - In some cases, vaccination may be advised for contacts.
 - Certain conditions may require coordination of antibiotic prophylaxis for certain exposures with the LPHA:
 - o Meningococcal
 - Pertussis

COVID-19 Measures

COVID-19 Measures are subject to change for the duration of the global pandemic, until the SARS-CoV-2 Virus is recognized as an endemic condition. Measures associated with COVID-19 are dependent upon the epidemiological trends, executive orders, and mandates from the state of Oregon. Measures may include:

- Masking
- Increased hygiene
- Cohorting
- Distancing
- Screening
- Isolation
- Quarantine

- Communication
- Logistical Changes
- Environmental Health
- Testing
- Vaccination

Infectious Rashes and Lesions

Skin Infections such as staphylococcus and streptococcus are common in pediatric populations. While draining and open skin rashes are excludable, there may be indicators when additional measures related to skin infections need to be considered.

- More than two students from separate households with reported compatible skin infections in the same school setting or athletic team.
- Students in the same athletic or academic environment with repeated skin infections by the same pathogen.

Immediate Measures Related to Skin Infections

- o Identified open and draining lesions are excludable until they can remain dry and covered at school.
- When individuals who share a common space exclusive to the school setting or athletic teams are identified, this should be immediately referred to the school nurse.
- Measures such as surface sanitation can be taken immediately while interventions and communication are determined.

Other/Uncommon Circumstances

Less commonly indicators of novel diseases, or unusual infectious disease circumstances, events or emergencies arise. In efforts to ensure appropriate disease control, interventions, and coordination with appropriate stakeholders, these other situations will be referred to the school nurse and administration immediately. These circumstances will be handled on a case-by-case basis. Examples of these circumstances may be related to:



Animals in Schools





Biohazards



Epidemic or Pandemic



Large scale event or disaster

Indicators of uncommon events are highly variable and not always anticipated. So critical indicators may include:

- Any student or staff member coming into contact with blood, saliva, or feces from a nondomestic animal in the school setting.
- Any student or staff coming into contact with blood that is not their own.
- Any combination of illness, symptoms, severity, duration, or frequency that seems unusual as compared to routine seasonal illness.
- Any major event caused by violence or natural disaster that results in a large number of body fluid or blood spills.

Immediate Measures Related to Uncommon Circumstances

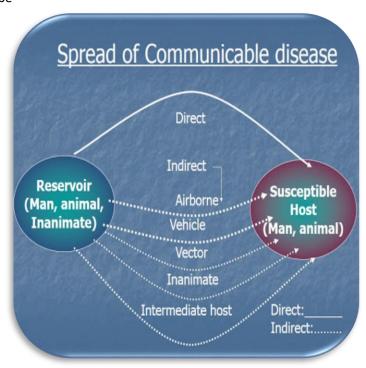
- When uncommon circumstances occur, the school nurse, administration, or specific response teams. may decide that additional control measures or data collection is necessary and will consult with LHD, animal control or law enforcement as needed.
- o The school RN will always be consulted regarding any written communication that may be developed to notify parents about illness, disease outbreaks, and risks to students, families, and staff and/or control measures specific to the outbreak in collaboration with the administrator.
- o Any reports of these circumstances or similar will not be communicated by school staff to students and families.
- o Any presentation of illness or combination of illnesses as described above will be reported to the district RN and administrator.
- o Any large-scale event that poses risk of disease transmission related to blood spills is the jurisdiction of law enforcement and or public health, and administration. The nurse serves in a consulting capacity only.

Defer to Pandemic Plan, Emergency Operations Plan, Exposure Control Plan

Animals in School

Animals in schools can have a positive effect in the school environment, but also may cause infectious disease issues for staff and students. Rainier School District only allows for animals on district property with specific approval under specific circumstances. School board policies and district applications will be visited for this. Other considerations will be made in regard to controlling spread on infectious disease from animals:

- Wild mammals, alive or recently dead, will not be allowed in school. Bats and skunks have a significant risk of being rabid, and other wild animals may be more prone to causing injury through bites and scratches.
- Dogs, cats, and ferrets allowed in school will have a current rabies vaccine under circumstances that are consistent with board policies and building guidelines.
- Any animal bites on school premise will be reported to the local health department for follow up.
- Animals who are ill will not be allowed into the school setting.
- Class pets will be removed if they become ill.
- Handwashing must occur before and after handling of animals to prevent diseases such as transmission.



[Image: Science Direct]

- Animals will not be present or handled in areas where food and drink are consumed or prepared.
- Children will not kiss high-risk animals such as chicks, ducks, turtles, and other reptiles.
- Children will always be monitored with animal interactions.
- Consider the medical needs of students who may be immunosuppressed or who may have allergies as they may become severely ill when exposed to certain pathogens.
- Service animals fall under specific guidelines which include protection of the animal to the
 extent that signage and education may be provided to prevent interaction with a service animal
 while it is working.

In the event of an animal bite:

- o Ensure standard first aid is rendered, and the student/staff is deferred to medical care.
- Unprovoked bites sustained from canines are reportable to the local health department.
 (503) 655-8411
- o In the event that a student in a classroom is diagnosed with a disease known to be carried by animals (campylobacteriosis or salmonellosis, for example), the animal will be removed from the classroom setting until the risk is determined to be resolved.
- o If an animal in the school setting becomes ill, it should be removed from the environment until a licensed vet has deemed it healthy.

FOOD SAFETY

Food safety for kitchen staff is supervised by nutrition services and the Environmental Health Division of the Local Health Department. For the purpose of population-based health and food preparation and consumption within the classroom, general food safety standards and disease prevention principles will be endorsed.

For elementary school classrooms

- Hand hygiene is practiced prior to eating,
- General principles of food safety can be taught that are age appropriate.
- Food sharing will be avoided.
- For classroom and school-sponsored events, only commercially prepared products are permitted. No homemade goods from non-licensed kitchens are permitted.
- Consideration must be given to allergies in addition to potential for food contamination or food borne illness.

For middle school or high school culinary classrooms

- Hand hygiene will always be encouraged.
- Age-appropriate food safety principles are taught.
- Appropriate food handling processes must be taught, rolemodeled, and endorsed when food is being prepared in the academic setting. This includes overview of:
 - o Hand hygiene and appropriate use of gloves.
 - Clean surfaces and appropriate use of sanitizers.
 - Separating raw and ready to eat foods/ avoidance of cross-contamination.
 - Cooking food to appropriate temperatures.
 - Appropriate storage and refrigeration.
 - Measures to prevent allergic reactions



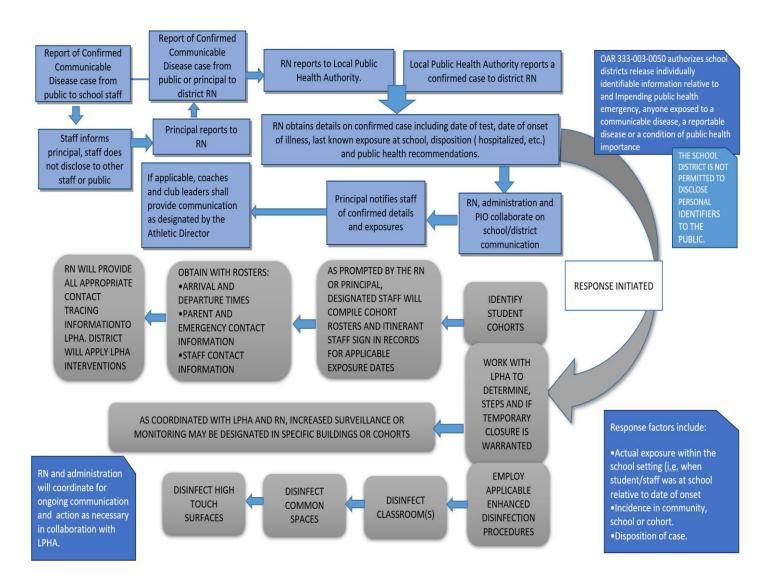
 Abstaining from food preparation when specific symptoms or specific illnesses have been identified.

Other considerations:

Additional considerations related to food safety include diagnosed gastrointestinal illness among food prep workers or in classrooms where food is being prepared. Defer to gastroenteritis outbreaks above.

COMMUNICATION REGARDING COMMUNICABLE DISEASE

Communications regarding communicable disease that require public health intervention, have a specified process when coordinating with the LPHA and/or the community or individuals potentially exposed to a communicable disease.



GLOSSARY OF TERMS

Airborne precautions: Precautions that are required to protect against airborne transmission of infectious agents. Diseases requiring airborne precautions include, but are not limited to: Measles, Severe Acute Respiratory Syndrome (SARS), Varicella (chickenpox), and Mycobacterium tuberculosis

Antibody: A protein produced as an immune response against a specific antigen.

Antigen: A substance that produces an immune response.

Bacteria: Microscopic living organisms. Some bacteria are beneficial, and some are harmless, but some can pathogenic (cause disease).

Bloodborne pathogens: Microorganisms which are spread through contact with infected blood, that can cause diseases such as human immunodeficiency virus (HIV) and hepatitis B (HBV).

Communicable Disease: Illness that spreads from one person to another through contact with the infected person or their bodily fluids, or through contaminated food/water or disease vectors, such as mosquitos or mice.

Contact Tracing: Working with an infected person to determine who they have had contact with and potentially exposed, to an illness.

Disinfection: High level cleaning intended to kill germs on surfaces

Droplet precautions: Safety measures used for diseases or germs that are spread in tiny **droplets** caused by coughing and sneezing (examples: pneumonia, influenza, whooping cough, bacterial meningitis).

Epidemic: A disease affecting a large number of people in a community or region.

Exclusion: Preventing someone from entering a place or participating in an activity

Immunocompromised: Having a weakened immune system that cannot respond normally to an infectious agent. This limits the body's ability to fight disease.

Isolation: Being kept separate from others. A method of controlling the spread of a disease.

Novel: New—in medical terms, previously unidentified, as in, novel coronavirus

Pandemic: An epidemic that spreads over countries or continents.

Pathogen: A microorganism that can cause disease.

Personal Protective Equipment (PPE): Physical barriers used when exposure to hazards cannot be engineered completely out of normal operations and when safe work practices and administrative controls cannot provide sufficient protection from exposure to infectious or hazardous conditions. PPE includes such items as gloves, gowns, and masks.

Restrictable Diseases: Diseases that require exclusion from work, school, childcare facilities, for the protection of public health. According to the Oregon Health Authority, restrictable disease include diphtheria, measles, Salmonella enterica serotype Typhi infection, shigellosis, Shiga-toxigenic Escherichia coli (STEC) infection, hepatitis A, tuberculosis, open or draining skin lesions infected with Staphylococcus aureus or Streptococcus pyogenes, chickenpox, mumps, pertussis, rubella, scabies, and any illness accompanied by diarrhea or vomiting.

Sanitize: Reduce contaminants (viruses, bacteria) on an object or surface.

Seasonal Illness: Illnesses whose occurrence appears to be associated with environmental factors (temperature and humidity changes). For example, colds, and other upper respiratory illness are more common during the winter months when people are more often indoors.

Standard Precautions: A set of infection control practices used to prevent transmission of diseases that can be acquired by contact with blood, body fluids, non-intact skin (including rashes), and mucous membranes. These measures are to be used when providing care to all individuals, whether or not they appear infectious or symptomatic.

Surveillance: Collecting and analyzing data related to a disease in order to implement and evaluate control measures

Transmission: How a disease spread. There are four modes of transmission:

- Direct—physical contact with infected host or vector
- Indirect contact with infected fluids or tissues.
- Droplet—contact with respiratory particles sprayed into the air (sneezed or coughed)
- Droplet Nuclei—dried droplets that can remain suspended in the air for long periods of time (e.g., tuberculosis)

The mode of transmission of a disease will determine what PPE is required.

Universal Precautions: Preventing exposure to blood borne pathogens by assuming all blood and bodily fluids to be potentially infectious and taking appropriate protective measures.

Vaccine: A preparation containing a weakened or killed germ. Vaccines stimulate the immune system to produce antibodies to prevent a person from contracting the illness.

Variant: A difference in the DNA sequence, a mutation. Viruses can change and mutate, and these variant forms can be intractable to established treatments.

Vector: A carrier of a pathogen (germ) that can transmit the pathogen to a living host. Mosquitoes, fleas, ticks, and rodents are examples of vectors.

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