

Communicable Disease Management in the Camp Setting

*Information for individuals who
coordinate their camp’s response to
communicable disease outbreak.*

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Purpose Statement

Campers and staff arrive ready to participate in the camp program. When communicable illness strikes, it impacts that participation and changes the camp experience in unanticipated ways. This Practice Guideline describes strategies that, if utilized, minimize the potential that communicable illness will occur (prevention). It also describes strategies that minimize impact when an outbreak happens (response).

The commentary is written from the perspective of the person responsible for coordinating a camp's outbreak response. Content was drawn from experience with the H1N1 outbreak (Erceg and Bialeschki, 2009) and the COVID¹⁹ pandemic, from communicable disease control literature (Erceg, 2008; Heymann, 2015; Osterholm & Olshaker, 2020; Webber, 2020), and the many camp professionals who've had practical experience coping with outbreaks (personal communications; Hill, Austin & Goodrow, 2008; Lankford, 2009; Rodd, 2009).

Part 1. Prevention: Making It Less Likely that Communicable Disease Occurs at Camp

The strategies below have the potential to minimize the potential for communicable diseases at camp. When going through the list, keep in mind that no single strategy will be 100% effective; rather, campers & staff have stronger protection when more prevention strategies are in place.



KEY POINT: *implement as many strategies as possible, then MONITOR to make sure they're used.*

- **Augment pre-camp materials** for campers, parents, and staff to address these points:
 - Ask that each camper and staff member arrives well rested, nourished and hydrated. The goal is for individuals to arrive healthy with strong resilience.
 - Tactfully state that the camp reserves the right not to admit people who pose a communicable disease risk to others.
 - Direct that ill people not come to camp until they are healthy. Provide parents/staff with the name and contact information of an appropriate camp professional should questions arise in the days before arrival. Be prepared to discuss a delayed start for ill people and/or the option of coming to a different session. *Note: the Healthy Camp research (2010) determined that between 5-7% of illness at camp started before the person arrived.*
 - Briefly describe, in both parent and staff policies, the potential actions taken by camp should a communicable disease outbreak occur. If this includes having campers go home early, state that. Consider providing access to an insurance that covers the cost of "camp interruption."

Note Day & Resident Camp Differences

There are differences between day and resident camps in their risk profile for communicable illness. Day campers and staff go "home" each day and mix with the general population; consequently, their risk profile includes a daily potential for exposure to communicable illness from that population and the potential to bring illness to camp the next day. This is not as likely in resident camps, although the likelihood can't be ruled out. Some people at resident camps move between camp and the outside world. In addition, people from the outside may come into camp. Consider distinctions such as these for your camp's communicable disease management plan.

- Make use of ACA’s “A Healthy Camp Begins & Ends at Home.” This downloadable PDF, available at <https://www.acacamps.org/resource-library/research/healthy-camp-toolbox>, is an excellent addition to a camp’s registration packet. It sets the groundwork for effectively partnering with parents.
- **Describe arrival day’s individual health screening.** Include comment that screening is not diagnostic; consequently, emerging diseases (i.e., prodromal status) may not be identified only to present later. Discuss options should questionable signs/symptoms be identified during the arrival screening process.
 - **Determine and publish the camp’s immunization policy** for campers and staff. Gather immunization information via the health history form. This will be particularly useful should illness associated with lack of immunization occurs. That being said, note that some immunizations, once thought to provide lifetime immunity, may no longer do so (e.g., pertussis/whooping cough) or they have a high failure rate (e.g., varicella immunization). Others, like flu, require annual updates. Remind people to consult their healthcare professional and appropriately update their immunization profile so it complements the camp experience.
 - **Pre-screen health history forms before Opening Day** to identify those who may be more at risk for communicable illness. Follow this by talking with appropriate people (e.g., parents; staff) to develop a plan that minimizes the risk potential for these people. *Note: Healthy Camps research (ACA, 2010) noted that individuals with chronic illness diagnoses have a greater potential to get ill while at camp.*
 - **Implement pre-arrival personal health monitoring** as a risk-reducing tool. COVID¹⁹ taught the benefit of providing campers and staff with a personal monitoring form to complete 10-14 days prior to camp arrival and submit upon arrival. The completed forms get attached to the individual’s health record and include the name/contact information for a camp professional should pre-arrival questions come up.
 - ACN’s website provides sample forms at <https://campnurse.org/education-and-resources/covid-19-considerations-for-camp/>.
 - In addition to monitoring for signs/symptoms of illness, also direct the individual to include their health-promoting information such hours of sleep each night, hydration & nutrition profile, and amount of time their heart rate was elevated that day.
 - Conduct **arrival day screening** of both campers and staff that includes assessment for communicable diseases. Follow-up any questionable findings.
 - **Pre-determine, implement and monitor practices that minimize potential for communicable disease.** Implement these with staff arrival so staff get used to doing things “the camp way.” Direct staff supervisors to monitor each strategy:
 - Appropriate hand-washing and/or hand sanitizing. This assumes adequate wash basins with soap and/or sanitizing pumps are at key locations. (See Appendix A: Hand-Washing: Making It Really Effective)

What Immunizations Should a Camp Require?

This manuscript is about communicable disease control. My opinion is that campers & staff should be appropriately immunized for the camp experience. At minimum, that means up-to-date tetanus (PPT), measles (MMR), meningococcal, and flu -- perhaps COVID¹⁹ -- immunizations. A camp’s immunization policy should be based on the camp’s risk tolerance as well as information from the AAP and CDC. Access their immunization schedules at <https://www.cdc.gov/vaccines/schedules/hcp/imz/child-adolescent.html> (CDC, 2020).

- Cough/sneeze “into your sleeve.” Covering coughs/sneezes with one’s hands is undesired behavior; bury coughs/sneezes in one’s shoulder/elbow. *Note: view “Why Don’t We Do It in Our Sleeves?” on YouTube.*
 - Keep peoples’ hands away from their faces. Hands may carry various pathogens but those pathogens don’t impact health until they have a route into the body. Strongly push the “hands off your face” message to minimize transferring hand pathogens into the body. (Read about the game, “Got’cha,” in Appendix A. Handwashing: Make It Really Effective.)
 - Make it a rule that personal supplies – hairbrushes, pillows, hats, contact lens solutions, make-up – are exactly that: personal. They belong to the owner and should not be shared with others. They’re “personal” for a reason.
 - Make it regular practice that one drinks only from one’s own drinking cup; no sharing, even “to be nice.”
 - Increase the physical distance between people, especially in dining rooms and other areas with prolonged shoulder-to-shoulder grouping. (See Appendix B: Physical Distancing)
 - Sleep head-to-toe rather than nose-to-nose – in bunks, tents & so forth. Go for the greatest distance between sleeping heads. Teach the adage: “Sneeze on the toes, not on the nose.”
- Resident camps:
- Maintain 6’ between beds and sleep head-to-toe. That means the top bunk person’s head is at one end and the bottom bunk person’s head at the other end. But it also means this is reversed in the next bunk so distance between sleeping heads is as far apart as possible.
 - Consider placing walls between beds if distance can’t be accomplished.
- Utilize universal precautions – for and by everyone.
 - Regarding Health Center staff:
 - Educate them so they recognize the signs/symptoms associated with reasonably anticipated communicable diseases (e.g., strep throat; common cold; infectious conjunctivitis).
 - Direct them to isolate people with questionable symptoms and use personal protective equipment (PPE) until communicable illness can be ruled out.
 - Provide accessible resources to consult when questions come up (e.g., CDC.gov; *Control of Communicable Diseases Manual*).
 - Explain the camp’s “tipping point,” the point at which an outbreak should be considered, and who to notify. In other words, don’t keep this potential a Health Center secret; at minimum, the camp director should be alerted.
 - Instruct staff to direct campers complaining of gastro-intestinal upset, including diarrhea, to the Health Center for assessment. Don’t wait for kids to throw up!
 - Regarding Food Service staff:
 - Make certain this group, including trip staff who prepare food, know and implement safe food handling practices with emphasis on good hand-washing after toileting.
 - When food service personnel experience questionable symptoms, especially gastro-intestinal symptoms (e.g., diarrhea; nausea; vomiting), keep them away from food preparation until appropriately assessed by a healthcare professional.
 - Know and follow State guidelines regarding food service personnel.



- **Orient (all) staff to illness-reducing strategies.** Couple this with assessment of each staff member’s ability to implement and personally use the strategies (e.g., through supervisor observation and performance

appraisal process). Consider utilizing resources such as ACA’s online course, “No Outbreaks Here” (American Camp Association, 2010).

- **Maintain access to reliable information** about communicable illness.
 - Provide a copy of the American Public Health Association’s *Control of Communicable Diseases Manual* (Heymann, 2015) to Health Center staff or subscribe to the service’s electronic version.
 - Monitor the CDC website (www.CDC.gov) for information about outbreaks (consider where your campers and staff come from) and for information specific to a given illness.
 - Continue membership in ACA and ACN; both organizations support camp professionals and pro-actively survey for emerging threats. Stay linked to these resources!
 - www.ACAcamps.org
 - www.CampNurse.org

- Learn what external community supports/resources might be available should an outbreak occur and how to access those resources. Examples include:
 - Public, community and/or county health nursing: this may be a resource for extra nurses and a conduit for access to other resources attached to the community’s emergency plan.
 - County/local emergency preparedness coordinator: this individual may provide access to supplies such as extra cots, blankets and canvas wall tents.
 - The business that supplies Port-a-Potties: extra toilet units with exterior hand-washing units can be a real boon when dealing with sick campers and staff.

- Define (know) your “Tipping Point.” Instruct Health Center staff to alert camp administration when four, five people present with similar symptoms within a given time period (3-4 hours). This is especially important when the symptoms are gastro-intestinal in nature. Minimize the potential to be “surprised” by an outbreak.

Part 2. Response Planning: Minimize Impact by Planning for an Outbreak

Even the best risk reduction plans will not be 100% successful. Norovirus, the common cold, and infectious conjunctivitis are just three of the many illnesses with which camps routinely cope, let alone more impactful illnesses like measles, COVID¹⁹ or pertussis (whooping cough). We’re dealing with human beings, so “stuff happens.” Consequently, put as many strategies in place as possible to prevent an outbreak but also hedge your bets by developing a response plan. Someday you will need it.

“In preparing for battle, I always found that plans were useless, but planning was indispensable.”
Dwight D. Eisenhower

There’s a difference between planning and implementing an outbreak plan. Perhaps Eisenhower said it best when he recognized the value of planning while also acknowledging that nothing seems to unfold as planned. Consequently, go into your planning process recognizing that a plan serves to guide, not define, one’s actions.

Effective communicable disease planning is predicated on factors that color the plan’s specifics. These factors include:

- The camp’s immunization policy.

- The health profile of campers and staff, attributes that are based on the camp’s essential eligibility criteria for campers and, for staff, the essential functions of each job.
- The credential(s) and experience of Health Center staff.
- The ability of all staff to know and apply outbreak control strategies.
- Pertinent State health regulations.
- The camp’s capacity for handling outbreaks.

Each factor plus others has the potential to influence elements of one’s plan. Be familiar with those that are characteristic of your camp.

It’s also important to understand the different impacts associated with a camp-only outbreak, endemic illness, epidemic and pandemic. Each outbreak is different with potential to impact things like the camp’s supply chain, availability of additional personnel, scope of geographic impact, and availability of response resources. Consider the scope of an outbreak when developing your plan; you may need to ramp up or down depending on how widespread the infectious disease is. For example, access to PPE can be different when an outbreak affects only your camp community as opposed to an entire geographic region. **Be prepared to scale plans accordingly.**

Develop a Response Team: Roles & Personnel

Start by identifying the key roles for the camp’s plan, those roles that support critical services should an outbreak occur, and then list the tasks associated with each role. Developing the roles can be done by an individual (e.g., camp director) but may be better when two or three people cooperatively consider them.

Roles common to response plans include:

- **Plan Coordinator:** has overall responsibility for the camp’s response plan. Coordinates other team roles/members, holds final decision-making power, and may be the camp’s official spokesperson. This is often the camp director’s role.
- **Communication Liaison:** this role coordinates and often develops messaging about the outbreak to both internal and external audiences. While the camp director may be the visible spokesperson to out-of-camp groups, the communication liaison crafts messages, monitors their impact, and maintains the communication record. This includes messaging with and from various stakeholder groups.
- **Health Center Lead:** this role focuses on the care of ill people, staffing to support that process, and routing requests for needed supplies/supports to the appropriate person. It is particularly helpful if the person in this role is knowledgeable about communicable disease processes.
- **Food Service Liaison:** this role focuses on nutritional support of ill people and the care-taking team while maintaining food service for the rest of camp. The role also oversees risk-reduction strategies used by the food service staff.
- **Business & Records Oversight:** this includes procuring needed supplies, overseeing office processes (e.g., answering phones, responding to individual needs), and maintaining records associated with financial outlays, potential reimbursements, and insurance paperwork.
- **Day-to-Day Camp Management:** camp has got to continue for non-ill people; consequently, this role focuses on the healthy campers & staff and is key to communicating with them about the

“Epidemiology is a team sport.”

Michael Osterholm

There is no magic number of people on a response team. Focus on the roles needed to support the plan. Then select individuals who can champion those roles, people who understand how camp works, are effective team players, and are skilled communicators. The response team must be able to accomplish tasks, keep the plan coordinator informed, and interface with one another in ways that may change with barely a moment’s notice.

outbreak. This includes staff assignments and is, consequently, the “gatekeeper” for diverting extra hands to help in the Health Center if needed.

- **Facilities** (maintenance): An outbreak can stress various utilities (including refuse removal), reveal a need to augment facility resources (e.g., more toilets, more laundry needs), and/or disclose needed changes to the physical set-up (e.g., adding a tent as an admit area, moving campers out of a cabin that will change to an admit area). Filling this role demands a person familiar with the camp’s facility and its systems.
- **Mental Health Maintenance:** Typically provided by a mental health professional who may – or may not – be at camp, this role monitors the MESH resilience of the responding team as well as that of campers and staff. Some camps also include work with parents.
- **Parent Contact:** This role focuses on providing support to parents of ill as well as healthy campers and maintains contact with them (communication should go both ways). The role must consider how parent communication will take place for both parent groups (e.g., email messages twice a day for routine updates; immediate phone contact when someone’s illness doesn’t go as expected). In addition, this role should anticipate needs associated with getting a sick child home (e.g., arrange hotel rooms, airport pick-up, car rental access).
- **Representative from the local community** who knows how to access additional supports should they be needed and who serves as a communication conduit between camp and the external community. This might be a representative from the Department of Health or a person connected to the county’s emergency preparedness plan. *NOTE: Having such a person aware of the camp’s response capacity can also influence decisions associated with determining when to close a camp. Keep this representative informed.*

The point is to think about how your camp functions and what it – and you, as leader – might need when responding to an outbreak. This means modifying suggested roles to “fit” your camp operation. Note that some roles may not be activated during a given outbreak. Strep throat cases, for example, usually don’t need the support required by a norovirus outbreak. The plan coordinator is responsible for activating roles as needed. That being said, it’s possible that some functions get launched and others are added as the incident unfolds.

Once roles are identified, it’s time to consider who might fill each of those roles. Talk with prospective team members. Determine their interest in the role, sense of responsibility, and willingness to work as a team. Once team members are identified, it’s time to bring them together and launch the response planning process.

Prepare Response Team Personnel

Each team member will communicate with others. Knowing how to do this effectively, especially when outbreak emotions may run high, is a critical skill. Have each person read CIDRAP’s Viewpoint, “Crisis Communication,” accessible from <https://www.cidrap.umn.edu/covid-19/covid-19-cidrap-viewpoint>.



RECOMMENDATION: Before going into the first planning meeting, talk with representatives from groups that may have a vested interest in the camp’s plan. Input from these entities may color some things. Common stakeholders include the Board and/or the camp’s insurance carrier.

Initiate a Planning Meeting

Bring team members together for an initial planning meeting. The goal of this meeting is to (a) plan for meeting immediate needs associated with an outbreak and (b) explore how the plan might be adapted as more people get ill. Some topic areas that need attention are listed below. As each is discussed, members of the planning team should consider how their functional responsibilities might be affected by another area; ability to interface/interact is key to the plan's success. Understanding the plan's interconnectedness also reinforces the need to keep the coordinator informed.

PRIMARY FOCUS → Respond to the problem. Don't get side-tracked by other things.

- Focus on (a) supporting recovery for those who are ill, (b) using behaviors that break the chain of communicability, and (c) keeping key people informed.
- Sometimes there isn't an exact diagnosis when an outbreak begins; one just knows that "people are sick and more are getting sick." Until definitive answers emerge, focus on what is known. That may mean simply caring for people based on their signs/symptoms while making sure classic risk reduction behaviors are being used (i.e., cough/sneeze etiquette; hand washing; physical distancing).

Support Health Center Needs:

- Stock adequate supplies of PPE; consider reliability for restocking and/or need to provide campers/staff with PPE in addition to Health Center staff.
- Create a charting process that captures needed information in a streamlined way while also remaining readily accessible to the care-giving team.
- Make sure Health Center personnel get adequate food, sleep and breaks. Consider adding extra help, including during the night.
- Consider how the illness is passed from person to person. In particular, implement strategies to minimize the potential that caregivers get ill.
- Allow Health Center staff to focus on their essential services (e.g., passing daily medications; care of ill people); arrange for others to assume non-essential services (e.g., cabin sanitation checks) or temporarily suspend these.

Food Service:

- Designate a person to coordinate Health Center needs with kitchen personnel.
- Determine how meals get to and from the Health Center and how the kitchen will know the number of meals needed. Stock the Health Center with food classically associated with illness (e.g., saltines, chicken noodle soup, 7-Up™); consider the benefits of using disposable tableware and utensils.
- Discuss how to maintain the camp's food service should some food service staff become ill.
- Consider the potential for running out of key food items; what items might be "stock piled" (e.g., instant milk powder; canned proteins; canned fruits, juice, vegetables).



Designate a threshold for critical food items, something that triggers automatic restocking when that threshold is reached. Audit food supplies to determine (a) how long the camp could feed people if need arose and (b) designating which food items are held in reserve for urgencies.

Campers and Staff:

- Tactfully explain what's going on to healthy campers and staff. Assume them of support and explain what they can do to help. Explain the need to quarantine individuals should the outbreak be an illness that carries this potential.
- As more people get ill, it may be necessary to divert counseling staff to assist in the Health Center. Consider who is appropriate for this work, the impact on programming, and the flexibility of reassigned staff.
- Ill people may want/need diversion; what aspects of programming might be provided? As individuals get better, what activities might be brought into the Health Center?
- Discuss how campers and staff will be updated about the outbreak, the frequency of this update, and who will deliver it.
- Explain the camp's need to control information about the outbreak to the media, parents and others, including one's personal contacts. How are campers and staff folded into control practices? What policies are needed to minimize this potential? In addition, assume photos, texting, and email leaks will occur; prepare to handle the impact of these exposures.

Communication:

- Determine how and by whom parents will be informed of their child's health status and develop a record-keeping system to track this information exchange. Consider providing parents with a designated phone number (cell phone?) should they have need for immediate information about their child or need immediate access to a camp professional.
- Consider the difference between staff who are legal adults and those who are minors. In addition, know State regulations about disclosure of employee health information. Shape messaging to staff parents accordingly.
- Determine how and when healthy campers & staff get updates, who will deliver those messages, and any continued reminders associated with the messaging process (e.g., cell/email/photo reminders).
- Determine how the camp office is informed of people who come down with the illness and how this information is passed to others who need to know; might there be a difference if the person is a camper or staff member?
- Prepare to handle inquiries from media and coach staff, especially staff near phones (e.g., office; Health Center; kitchen; maintenance), how to respond should they be asked for information.
- Create templates for anticipated media messages.
- Utilize the camp's website to quickly update individuals, especially "hidden" pages that can be opened as needed by parents should need arise.

Parent Communication

Develop three communication modes: one for parents of ill campers, one for parents of (still) healthy campers, and a third policy for parents of staff. Each group has different needs; straightforwardly address those needs. When doing so, provide the name/contact info of a camp professional the parent can contact if needed. Do not use the Health Center's phone, or limit its access to parents of ill campers, so that staff can focus on care of ill people.

Facilities:

- Determine the best location to admit ill people; this may mean moving campers out of a cabin that then switches to an admit area and/or setting up additional housing (e.g., wall tents). Consider separation of sexes/genders as well as camper housing vs staff areas.

- Discuss toilet and hand-washing facilities. These should be convenient to admit areas and accessible at night – consider lighting – as well as during the day. Schedule appropriate intervals for emptying waste containers.



Separate toilet & hand washing areas for ill and healthy people helps control the outbreak. Recall that some infectious diseases can be spread via fecal shedding and that toilets with open lids are commonly linked to aerosolized transmission. Keep lids closed!

- Assess ventilation and climate control options in the admit area. Keeping ill people comfortable is important but so is adequate & appropriate air-exchange.



Adequate ventilation is also needed in the sleeping areas of healthy campers & staff. This helps minimize disease transmission, especially when individuals may transmit the illness before they, themselves, feel sick. Consider using fans that vent room air out an open window or door.

- Determine how people will be moved in and out of the admit area; who collects and transports their personal belongings?
- Consider how soiled laundry gets handled and by whom, especially if the illness includes emesis and/or diarrhea that may be infectious.
- Arrange garbage disposal for the Health Center and admit areas. Consider more frequent dumpster emptying if the illness includes use of disposable items (e.g., PPE; paperware for food service).
- Understand the difference between INFECTIOUS waste and MEDICAL waste. Handle infectious waste via “Red Bag” protocols and medical waste via general waste disposal methods. Know where to dispose of infectious (Red Bag) waste.

Record Keeping:

- Maintain notes/minutes of the Response Team’s meetings.
- Pre-determine what records the camp’s liability insurer may need or require for claims associated with an outbreak; develop processes to compliment this.
- Develop a system to capture incurred costs and document the response process; be sure all team members know how to use this system.
- Collaborate with the Communications liaison to capture a physical record of all communication associated with the outbreak including:
 - Any phone call: date/time, content of discussion, and who participated. This is especially important for office phone and Health Center personnel.
 - Media coverage: print, online, radio, visual (e.g., TV).
 - Camp-posted, online information.
 - Copy of emails that include date/time as well as to/from addresses.

Once your plan’s core framework has been developed, ask these questions:

- At what point might the number of ill people overwhelm the camp’s ability to continue care? Where is this tipping point? Is that tipping point contingent upon anything?
- What leadership staff are critical to continuing camp? Can camp continue if they get ill?

- What conditions might warrant camp getting closed by an external agency? What are the criteria used to make this determination?

Purchase additional supplies needed to support both the response team and an outbreak. Lay in a supply of these items. For example, bleach for cleaning, bed linens, baby monitors to assist with supervision of sick people, and anticipated Health Center supplies (e.g., acetaminophen, gloves, protective masks, hand sanitizer).

Recall that communicable disease outbreaks don't happen every day and those that do typically require a fairly low-level response (e.g., common cold; strep throat; impetigo). As a result, the **Response Team may need periodic meetings** to review the plan, refresh plan processes, and update personal skills. Consider doing a **Table Top Training Exercise** to bring outbreak responses alive and stress-test aspects of the plan. (See Appendix C: Table Top Training)

Part 3. Initiating & Sustaining the Response Plan

TRIGGER: The Tipping Point is the point at which one is aware that an outbreak may be occurring/has occurred. Reaching the camp's tipping point triggers the Response Plan.

Once aware of an outbreak – or a potential one – who is told, how, and how quickly? When determining this notification, make a distinction between a potential outbreak (e.g. “We may have a problem . . .”) as opposed to a “for real” situation.



Health Center staff see many people with generic stomach aches, headaches and other problems that are often benign – but sometimes those signs/symptoms aren't. Consequently, Health Center staff are at-risk for missing an outbreak's start. Talk to them about this and occasionally revisit the point.

Confirm the Problem: Identify the Concern(s)

- Identify the symptoms that one is coping with and, if possible, identify the illness. Some illnesses – like chicken pox and infectious conjunctivitis – are easy to identify because of the presenting symptoms. Others – for example, influenza-like illnesses and Norwalk virus – take time to diagnose. The point is to focus on providing care for ill people based on their symptoms until a definitive diagnosis indicates otherwise.
- Be prepared for change as more information is learned. This often happens as an outbreak unfolds.
- Having a diagnosis presents a critical decision point. Further actions are determined based on that diagnosis.
- Regardless, isolate symptomatic people from non-symptomatic campers and staff.

Take Action; Don't Wait Too Long

- Consult with Health Center staff:
 - Make sure identified cases have been isolated and that these people are receiving appropriate care.
 - Evaluate the need for additional resources and/or assistance in the Health Center.
 - Plan how routine Health Center activities will continue in spite of the outbreak.
 - Because this is a changing (emerging) situation, be sure Health Center staff know how to quickly contact the camp director and/or when the director will again check in.
- Work toward a definitive diagnosis of the problem.
 - Involve a MD/NP from the local community so access to local resources is eased.

- If there's an in-residence MD/NP at camp, have the in-camp and out-of-camp MDs/NPs interface.
- Activate needed response team members; bring them together to launch the plan. Leave this meeting knowing when the team will meet again and discuss the potential to activate others should their functional area be needed.
- Consider the need to contact Department of Health and/or other oversight bodies.
- Decide what key messages should be delivered to various groups and who will deliver those messages. These groups include:
 - Currently unaffected campers and staff. Tell these people what is going on – including comment that affected people are being cared for – and what they might do to keep healthy. Explain what to do if they start feeling ill. In so doing, expect that some “sympathetic” illness may show up. Create a “holding area” until illness status is determined.
 - Parents, both those with affected children and those whose child is currently healthy.

It is possible that a parent may not have fully disclosed a particular child's health profile on that child's health form. Consider this when contacting parents and provide an option for them to contact a designated individual should concerns arise.
 - Other stakeholders (e.g., insurance carrier).
- Note the potential for news to leak out of camp (e.g., texting, email); be prepared for this. Identify a spokesperson to whom inquiries must be routed and inform people – campers and ALL staff (don't forget the kitchen & maintenance personnel) – how to respond and where to direct inquiries. Consider practicing this with staff.
- Review health forms to identify individuals who may be at greater risk for the presenting illness; take appropriate steps to protect these people (e.g., immune-compromised camper may need gamma globulin with chicken pox outbreak).
- Contact the camp's liability insurance carrier; brief them on the situation (start a case file?).



Parents want to know what's going on, even those whose child is not directly involved. Develop two communication groups: one for parents of ill campers and the other for parents of healthy campers.

Sustain the Response Plan

Once a communicable outbreak has started, expect that more people will become ill before the load of illness begins to ease off. How long one must sustain the response depends on how “catchy” the illness is, its incubation period, and the effectiveness of control strategies. This is where a person (consultant) skilled in communicable disease control can be quite helpful.

Sustaining response includes **meeting with the Response Team** at least once a day. Meet oftener if the outbreak isn't stable or if it's early in the outbreak. These meetings must prioritize (a) care for ill people and (b) protecting those who are not ill. These two points include continued assessment of supplies and communication with stakeholders. But also assess the Team's resilience. Are individuals remaining well-rested and nourished? Do they have what's needed to do their tasks? Might someone need help because an area is overwhelmed? Respond to team member questions but also get them to think about the next 24-48 hours; what might the future hold?

Fecal Shedding

Some communicable illnesses are transmitted via fecal shedding (e.g., norovirus; coronaviruses). This means emphasizing effective hand washing after toilet use, something especially important for food handlers. Consider potential for fecal shedding & the strength of those control measures when trying to determine how long your outbreak might last.

While routine Response Team meetings facilitate communication about the outbreak, the meeting also allows team members to “decompress” by expressing their own emotions in a setting where how they're feeling won't

impact other campers and staff. This emotional decompression is valuable; it allows people to vent in an appropriate place and with supportive individuals. Take note of people who may be over-reacting to the situation; talk one-on-one with them outside the meeting and/or refer them to your mental health professional.

Responding to an outbreak over a period of time may be particularly trying for some people, especially young adults who may not have previous experience. Consequently, consider having your mental health professional meet one-on-one with each team member to “take their pulse.” Early intervention when concerns are minor are better than waiting for someone to totally break-down.



When an outbreak occurs, Health Center staff are particularly susceptible to getting worn-down (fatigued), feeling overwhelmed, and missing their daily “down time.” Pay particular attention to this group, arrange for additional professional help, and insist that their schedule includes adequate breaks, including time for meals.

When the illness has been identified, adjust the response plan to focus on that illness’s profile, especially the ways in which it is passed from person-to-person and the care needed by ill individuals. For example, if the illness is transmitted via air-borne droplets, enforce cough/sneeze etiquette, note singing, cheering & loud talking/shouting, consider the need for face masks, and make sure people sleep with their heads at least six feet from the next person’s. On the other hand, if the illness is communicable only to those who have an inadequate immunization profile – like pertussis (whooping cough) – then the risk pool becomes those individuals rather than the entire camp population.

Along with transmission, another sustaining factor is the illness’ incubation period. Recall that “incubation” refers to the time between when a susceptible person is exposed (acquires enough of the pathogen to cause disease) and when the illness actually emerges. Some communicable illnesses – like norovirus – have a fairly short incubation period. People will get sick pretty quickly. But other infectious diseases – like chicken pox – have a longer incubation period. This means new cases may emerge over a longer time span (e.g., up to three weeks for chicken pox).



Know the illness’ profile, particularly its transmission route and incubation period; this enables you to shape risk-reduction strategies appropriate and specific to that event.

Assuming the Department of Health has not already made the decision, evaluate the feasibility of continuing to care for people at camp, having ill people go home, and/or delaying the start of the next camp session. Several factors play into this decision, including the capacity of the camp staff to sustain their support efforts.

Reassess communication processes to be sure they are meeting the needs of vested stakeholders. Adjust this process as needed; document the reason for each change/adaptation. Remember to consider upcoming sessions; might it be helpful to postpone the start date and/or inform those parents of what is going on? Also consider the previous session; should they be informed?

Do a daily review of camp processes to determine if plans are supporting outbreak needs. Adjust as needed, keeping a keen eye on the number of new cases, the number of current cases, and the number of recovered people. Look for connections among those who are getting ill; might some aspect of control have been overlooked?

Part 4. Recovery & Mitigation

Assuming control measures were effective, the number of new cases will eventually start to taper off. Consult with a communicable disease specialist to **determine how long control measures should be kept in place**. Do not get lulled into assuming an outbreak is over only to have it re-emerge because controls were terminated too soon.

Process records of the outbreak. These include Health Center records, receipts for incurred costs, and copies of communication with stakeholders, especially parents. Reconnect with the camp's liability insurance carrier if the outbreak has bearing on that agreement; make sure appropriate insurance forms are completed and submitted.

Expect the Response Team and the Health Center staff to be fatigued once the fray of response is over. **Debrief the team as a group and individually**. Your mental health professional can facilitate this through a process called "critical incident stress debriefing." Allow down time as needed by each person (including the camp director).

Evaluate and update the camp's communicable disease response plan. Adjust areas that need improvement and look for places where greater efficiency with less effort might exist. Discuss lessons learned; capture that information. Identify gaps and shore them up.

We learn from one another. Information in this Practice Commentary was possible because camp professionals shared their experiences.

. . . and we need to continue learning. When your camp copes with a communicable disease outbreak, please call Linda Erceg at 218-444-5923 or the Association of Camp Nursing (ACN) at 502-830-8393 to talk about your experience. Thank you!

Handwashing: Make It Really Effective

Linda E. Erceg, RN, MS, PHN – September 2020



Handwashing remains one of our most effective protective behaviors against communicable disease. While handwashing doesn't guarantee protection and safety, a person can certainly reduce risk exposure. That protection, however, is directly tied to how well a person washes their hands coupled with keeping hands away from the face. Here are tips to make your handwashing most protective.

KEY MESSAGE:

Wash your hands with soap and water and keep the dear things AWAY from your face!
Link those two behaviors forever!

- According to the CDC (2019), handwashing is most protective when done:
 - Before putting something in your mouth, eyes or nose.
 - After toileting.
 - After coughing/sneezing – even if you used a Kleenex® or “did it in your sleeve.”
 - Before and after providing care to someone (e.g., changing their clothing; helping them bathe/shower or eat; giving them medication or food/fluids).
 - Before, during and after preparing food.
- Because both beneficial and potentially harmful microbes are on our hands, handwashing alone isn't protective *unless we keep our hands AWAY from our faces and other body openings*. Yes, germs collect on our hands but they can't do much there. They become impactful when we delightfully transfer them by bringing our hands to our face (aka: provide a “portal of entry”). Work on keeping your hands from touching your face.
 - *One camp played “Got ‘Cha” to emphasize this point. For one day, counselors traveled around camp with washable markers in their pocket and used that to draw a “contamination dot” the face of anyone – camper or staff member – caught touching their face. Then, following supper, they debriefed the event and celebrated anyone with a clear face.*
 - *Early one morning, another camp used a fluorescing substance to “contaminate” commonly touched camp surfaces like the coffee pot handle, door knobs, and counter tops. Then, at breakfast, the camp nurse said to everyone: “A respiratory illness is going around; a staff member is already sick. This illness is spread by contact so I want you to be especially careful to wash your hands today and keep them away from your face.”*
At lunch, the nurse updated the group: “Two campers are now sick too. You've got to remember to wash your hands – frequently and well – and keep them away from your face.”

Want Fluorescing Powder?

Check www.GloGerm.com.
This company has the substance in various forms and provides educational resources.

Then, as campers & staff came for supper, the nurse and a couple helpers used a black light to screen people (fluoresce for contamination). Those who fluoresced around their mouth or eyes sat at one table; they were sick. Those who fluoresced but only on their hands sat at different tables; they were “contaminated” but not ill. Some people didn’t fluoresce at all; they sat as a “healthy, not sick” group. Needless to say, resulting discussion brought home the point about effective handwashing coupled with keeping one’s hands away from one’s face.

- When handwashing, scrub where microbes enjoy lurking. Sometimes we don’t scrub everywhere. We wash our palms but often neglect:

- Between fingers;
- Under rings;
- The back of our hands; and
- Fingernails. These benefit from using a fingernail brush. Get one, maybe even one for every person to minimize cross-contamination?



Figure 1. This fingernail brush is easy to use & can be slipped over an edge to help it dry between uses.

- Wash long enough to make a difference. Evidence indicates that a 20 second, soap and water scrub is *minimal*. That’s longer than singing the “Happy Birthday” song. Time yourself. Sing it two or three times.
- Washed hands should be rinsed in clean, running water. Plunging one’s hands back into a basin of used water re-contaminates hand surfaces. In addition, the water’s temperature can range from cold to quite warm. Temperature doesn’t make a difference; scrubbing with soap does.
Consider how this might impact out-of-camp trips too.
- There’s some evidence that using soap from a pump dispenser is better than grabbing a bar that’s been sitting around who-knows-how-long and/or used by who-knows-who for what. A personal bar of soap can harbor microbes but these usually don’t make one ill because they’re sluffed off as the bar is used. Besides, the bar is personal. You know those microbes.
- While using a personal towel to dry one’s hands may be fine at home, in public settings – like camp bathrooms – reach for a paper towel (Novella, 2018). These single-use items aren’t contaminated by others and people tend to use them long enough to actually dry their hands. That beats alternatives like rubbing wet hands against one’s contaminated clothing.

Air-dryers might be appropriate depending on the dryer's source of air. Pulling air from the bathroom with its aerosolized microbes is quite different from using air pulled from Mother Nature's Great Outdoors. Bottom line: go for the paper towels.



- Not all hand sanitizers are created equal. Based on CDC (2020) information, washing with soap and water is preferred but, when that's not possible, hand sanitizers may be useful with these points in mind:
 - The sanitizer should contain at least 60% alcohol. This often *reduces* the number of germs but does not, necessarily, eliminate (kill) them.
 - Sanitizers are meant to be used in sufficient quantity (read the directions to know how much) and hands should be rubbed until the sanitizer dries.
 - Sanitizers aren't good at removing grease and/or dirt. Indeed, grime on one's hands reduces the sanitizer's effectiveness.
 - Can't find any hand sanitizer to buy? Want to make your own? Don't. Yes, hand sanitizer recipes are online but SOAP & WATER is BEST! Having campers & staff take time to wash their hands with soap and water might delay lunch for five minutes, but that's better than then eating with contaminated hands.

- Pathogens like COVID-19, Norovirus and even the common cold are driving continued research in topics like handwashing. That means the topic is a moving target; we'll learn more given time. Consequently, keep yourself connected to reliable resources such as the CDC and informed partners like ACA (www.ACAcamps.org) and ACN (www.campnurse.org).

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Physical Distancing: A Communicable Disease Control Strategy for Camp

Linda E. Erceg, RN, MS, PHN – September 2020

The notion of “social distancing” became common-place as a control strategy linked to COVID¹⁹. However, the strategy wasn’t really meant to “socially” distance people from one another; doing that had the potential to trigger all kinds of MESH concerns for humans. The strategy was based on physical distancing people so droplet and airborne pathogens were less likely to be transmitted. Consequently, I have chosen to refer to physical distancing in these documents and save the notion of “social distancing” when the intent is to keep people away from one another.

Physical distancing is a communicable (infectious) disease control measure that’s most useful *during* an outbreak. It helps by slowing or stopping the spread of the illness. While typically implemented during a pandemic, physical distancing can also be used on a smaller scale – at camp – to help break the cycle of communicability for infectious diseases such as norovirus.

The strategy is based on keeping people far enough away from one another to minimize, if not eliminate, the possibility of “catching” an infected person’s illness (see Figure 1) when that illness is transmitted via droplet or aerosolized particles.

However, physical distancing is most effective when partnered with other control strategies such as effective handwashing and cough/sneeze etiquette.

Camp professionals and their nurses are probably most familiar with using isolation for a person who has a communicable illness and/or implementing quarantine for those who were exposed to the illness but are not yet symptomatic. A camp used these when a camper was diagnosed with pertussis; that camper was isolated from others. Then, with assistance from the camp’s medical professionals, at-risk campers & staff – those with inadequate immunization and who were in close proximity to the ill camper – were identified and quarantined for a period of time.

Physical distancing, on the other hand, is more broadly practiced across a population. For example, it was initiated when a camp had a norovirus outbreak. Several people had become ill over the course of a few hours. Before knowing what caused the problem, the camp initiated “space precautions”(aka: physical distancing) by directing everyone to stay at least arm’s length apart. They broke norovirus’ chain-of-communicability within the next 72 hours, a striking success story.

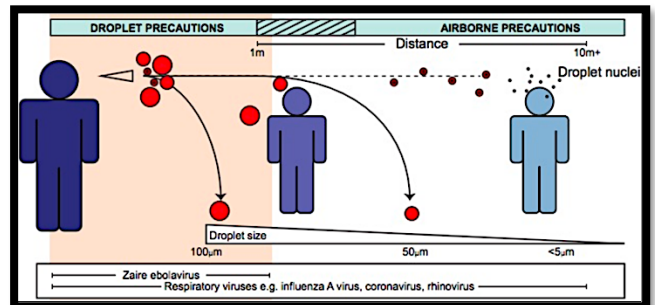


Figure 2. The size of a droplet coupled with the distance between infected and non-infected people makes a difference in exposure rates.



Get Campers to Maintain Physical Distance

Some believe that physical distancing is easy to implement; simply tell people to stay “X” distance from others. But our Camp Community deals with children and youth. These “high touch,” social beings are used to spontaneous hugs, huddling close to complete a project, and periodically wrapping themselves around the shoulders, waist or kneecaps of their favorite camp person. Getting them to stay away from one another often demands creativity, hence “space precautions.” Having campers dress as astronauts or periodically asking counselors to stop the group’s activity and have everyone extend both their arms to make sure no one is in their personal space – their Hot Zone – are examples of such creative effort.

Camp Hot Spots for Inadequate Physical Space

Along with getting people to protect their personal space, camp professionals should be aware of facility or program areas that challenge physical distancing. These include:

- Camp dining hall: We pack ‘em in like sardines! Campers & staff often sit closer to others in our camp dining spaces than in any other setting, including home and school. So consider options. Have people fill their plates inside but eat outside. Stagger meal times to increase physical space. Set up a tent or two when weather prevents eating *al fresco*. Break people into smaller groups and cook over campfires.
- Beds in cabins: Whether using single beds or bunks, getting and keeping a minimum of six feet between sleeping heads is challenging – unless one off-sets “heads on beds” with “feet at the ends.” Those using bunks ought to implement that up & down as well as side-to-side. Note the head and foot graphics used by a counselor in Figure 2. It complements the catchy jingle, “Sneeze on the toes, not on the nose.”
- Sleeping in tents: In the words of a camp nurse, “They cram into those tents during over-nights and everyone comes back with someone’s cold. Why can’t they sleep head-to-toe there too?” When routine sleeping spaces get replaced by a unique setting – like tents – remind supervising staff to work for “the greatest distance between sleeping heads.”
- Activity spaces & activities themselves: Some of these foster sitting or working too close to others, especially when that “other” is infectious. If it’s one person who’s infectious with an illness like a cold or sore throat, direct Health Center staff to talk with that person and appropriate counselors. Ask that they maintain a protective zone around the infectious person. But when an entire camp is at-risk for something like norovirus, everyone needs to “spread out.”



Figure 3. An enterprising counselor labeled camper bunks so kids always knew at what end to place their heads and feet.

- Campfires & other special programs: Campfires are often traditional and special experiences for many campers and staff. So, too, are other special days. We often bring campers and staff in close proximity for these events and, sometimes, emotions erupt that trigger spontaneous hugs, encouraging cheers, or consolation-triggering tears. Maintaining personal space is challenging let alone increasing that to be protective for droplet or aerosolized microbes! These examples argue most eloquently for keeping camper and staff susceptibility potentials low; well-rested, adequately hydrated and nutritionally supported humans at least have potential to “fight off” harmful organisms.
- Bathrooms: Take a good look at the camp bathrooms. Are they large enough to prevent over-crowding especially during high-use times? While there, check more than physical distancing protections. For example, are soap dispensers adequately filled? Are paper towels available? Is fresh air freely circulating rather than only the air already in the bathroom? Have toilets, sinks, and shower/bath areas been appropriately and recently sanitized? Is the bathroom’s trash routinely emptied and big enough to prevent spill-over?

Suppression: Part of Physical Distancing

Certainly utilize physical distancing to actively support your next outbreak but also consider the wisdom of continued distancing until suppression of the illness occurs. That’s a consideration for the current COVID-19 response, one that’s gaining momentum from epidemiologists analyzing pandemic data from China, Italy and South Korea (Soucheray, 2020). Soucheray stated:

“ . . . [suppression] tries to reverse the pandemic through extreme physical distancing measures and home quarantines of cases and their families, achieving an R_0 – or reproduction number – of less than 1.” (pg 1)

To suppress COVID-19, physical distancing will be needed for a long time, perhaps 18 months, or until a vaccine is available. To those who’ve only known peaceable times, let alone a pandemic’s threat, this seems almost unthinkable let alone doable.

We need to change our thinking and be ready for an even more different tomorrow.

Social Distancing Resources Related to COVID-19

CDC defines “Social Distancing”

“ . . . remaining out of congregate settings, avoiding mass gatherings, and maintaining distance (approximately 6 feet or 2 meters) from others when possible.”

Retrieved 7 March 2020 from

<https://www.cdc.gov/coronavirus/2019-ncov/php/risk-assessment.html>

Pearce, K (2020) “What is Social Distancing and How Can it Slow the Spread of COVID-19?”

Retrieved 17 March 2020 from <https://hub.jhu.edu/2020/03/13/what-is-social-distancing/>.

"Social distancing is a public health practice that aims to prevent sick people from coming in close contact with healthy people in order to reduce opportunities for disease transmission. It can include large-scale measures like canceling group events or closing public spaces, as well as individual decisions such as avoiding crowds.

"With COVID-19, the goal of social distancing right now is to slow down the outbreak in order to reduce the chance of infection among [high-risk populations](#) and to reduce the burden on health care systems and workers. Experts describe this as "flattening the curve," which generally refers to the potential success of social distancing measures to prevent surges in illness that could overwhelm health care systems."

[Brosseau, L. \(2020\). "Commentary: COVID-19 transmission messages should hinge on science."](#)

Retrieved 20 March 2020 from <http://www.cidrap.umn.edu/news-perspective/2020/03/commentary-covid-19-transmission-messages-should-hinge-science>

"Mixed messages about COVID-19 transmission

To date there is no direct research-based evidence describing exactly how SARS-CoV-2 is transmitted. Many sources say that COVID-19 is transmitted only by droplets and contact, but guidance from leading public health groups on transmission routes are inconsistent and conflicting.

"(Droplet transmission is usually defined as "respiratory droplets carrying infectious pathogens [that] transmit infection when they travel directly from the respiratory tract of the infectious individual to susceptible mucosal surfaces of the recipient, generally over short distances, necessitating facial protection."³ Close contact involves hand transfer of surface contamination to mouth, nose or eyes, hand washing and gloves being common controls.)

"The WHO says, "Based on the available evidence, the COVID-19 virus is transmitted between people through close contact and droplets, not by airborne transmission."⁴ The WHO derived its COVID-19 guidance from its MERS guidance,⁵ China's experience with COVID-19, and WHO experience with SARS and MERS.⁶

"(Airborne transmission is defined as "dissemination of either airborne droplet nuclei or small particles in the respirable size range containing infectious agents that remain infective over time and distance."⁷ An important requirement of airborne transmission is that it can occur only at a long distance from the source, according to the CDC.⁸)

"In risk communication guidelines for healthcare, however, the WHO states, "COVID-19 appears to spread most easily through close contact with an infected person. When someone who has COVID-19 coughs or sneezes, small droplets are released and, if you are too close, you can breathe in the virus" (emphasis added).⁹ But wait: Inhalation is not part of the traditional definition of droplet transmission.

"For healthcare organizations, the CDC recommends airborne, in addition to standard (contact) and droplet precautions, for the care of COVID-19 suspected or confirmed patients.¹⁰

For the general public, the CDC describes SARS-CoV-2 transmission as primarily by droplets from coughs or sneezes, which "land in the mouths or noses of people who are nearby or possibly inhaled into the lungs" (emphasis added).¹¹ But, again, inhalation is a new addition to the traditional definition of droplets. In contrast to its recommendations for healthcare, the CDC makes no mention of airborne transmission in public settings.

"The CDC admits some possibility that COVID-19 may be transferred by hands to mouth, nose, or eyes from contaminated surfaces, but notes that "this is not thought to be the main way the virus spreads."¹¹

"The Chinese Center for Disease Control and Prevention, which has dealt with by far more COVID-19 cases than any other agency, says that COVID-19 transmission occurs primarily by respiratory droplets and close contact, with the "possibility of aerosol transmission in a relatively closed environment for a long time exposure to high concentrations of aerosols."¹²

Table Top Training: Outbreak at Camp

Directions

Five mock communicable disease outbreak scenarios are provided. Select one (or more) for your Response Team to work through. Use the included “Outbreak Response Guide” (it follows the scenarios) to help the team work through aspects of the outbreak. Doing so helps (a) stress-test your Response Plan, (b) builds collaboration among the team, and (c) helps them understand how different outbreaks color or influence their actions.

It's OK to Adapt Scenarios to Fit Your Camp Profile.

STEP ONE: In what State is your Camp located? _____
This may influence some actions when dealing with the outbreak.

STEP TWO: Select your outbreak.

NOROVIRUS OUTBREAK

You're at a co-ed, resident camp. The 80 campers are ages 9-14. They're doing a two-week camp session. This is Monday of the second week. The campers will go home on Saturday. There's one nurse (RN) at camp supported by a counselor who comes to help each afternoon.

Yesterday morning the nurse admitted a 10-year old boy because he was throwing up and running a slightly elevated fever (100.5 °F). By supper, two more boys were admitted with similar symptoms. Then this morning, four more campers – two boys and two girls – were admitted. The campers are still throwing up and one of boys from yesterday now has diarrhea. Four more campers and a counselor just walked in; they have symptoms like the others. What's going on Food poisoning? A water problem? The nurse is quite busy and alerts the camp director.

The nurse and camp director need to know what they're dealing with so they contact the camp's supervising MD. The director also gets in touch with the State to test water and food sources, something suspicious because of the gastro-intestinal symptoms. Your physician stops at camp after his clinic hours. It doesn't take him long to diagnosis a norovirus. Meanwhile, eight more sick campers and staff have come in.



MEASLES OUTBREAK

You've been enjoying your time at your performing arts camp for teens, a four-week resident program. There's 150 campers and 60 staff who have come from all 50 States and several countries. It's quite a program! Your camp nurse and her helper, a nursing student, are working in the Health Center. Both are brand-new to camp nursing and are getting along well. Things are moving smoothly.

It's now the end of the second week. You (camp director) and head counselor have finished evening program and are heading to the office to go over tomorrow's schedule. Things are starting to quiet down for the night when the door opens and in walks the nurse with a camper. "Look at this rash. It's all over her face and her front and back. It's even starting to show up on her arms. She hasn't been feeling well all day and noticed the rash when she went to shower this evening. Her eyes are red. Maybe she has pink eye but I don't think so. That rash bothers me."



You look at the maculopapular rash (see photo). The California 13-yr old's temperature is 100.2°F. She complains about coughing "more than normal" and says, "I'd really like to just lay down." Your alert shifts to high about the same time as the nurse. There's been more measles among California kids, this girl's home State, and her Health History form indicates that she has not been immunized for measles. Her parents feared autism. This looks like measles – at least you think so – but you've never seen the "real thing." So you and the nurse agree to admit the girl for the night and then you use the internet to find some pictures and information. Yup, this looks like it. You call your camp's supervising physician. The MD confirms your suspicion.

□ IMPETIGO OUTBREAK

You're enjoying the day campers. The youngest are 4 yrs old while the oldest are 12. This is the 7th week of summer so everyone's deeply into camp activities. There are 150 kids in the program with some 70 counselors; it's a busy place. The pool has been super busy because of the summer's hot, humid weather – perfect summer weather! Two RNs work in your day camp's Health Center.



On the way to lunch, you see and overhear a counselor stop and ask the nurse to check Nancy's rash. "It's around her nose, at the side of her mouth and there's some on her arm. She kept scratching it during Arts 'n Crafts. That's how I noticed. She said she told her Mom but they haven't done anything. Nancy says the rash has been there a few days. It looks like poison ivy to me. Anyhow, will you check her out?"

The nurse agrees to examine 9-yr old Nancy at the Health Center after lunch and finds yellow-crusting lesions just where the counselor said they'd be – and on her legs, especially where she'd been scratching her mosquito bites. They have been there "a few days." Nancy's also been busy sharing a lot of things with other campers: costumes in drama, towels at the pool, climbing harnesses at the wall. She also talked about helping counselors spread sunscreen on the little kids and, sometimes, her friends' back. It's not poison ivy; it's impetigo. The nurse just told you.

□ PERTUSSIS OUTBREAK

You're talking with your camp nurse in the Health Center when a counselor from the oldest boys' cabin comes in on his way to breakfast. He says that a couple of his 13-15 year old boys, who are starting their third week of a four-week camp stay, have a really bad cough that's getting worse. It's even waking people up at night. He asked the boys to talk with the nurse but they haven't. "They tell me it's just a bad cold. I know colds last a while but this seems to be getting worse, especially the cough. Check 'em out, will you? Some of us are having a hard time sleeping."



The boys come to the Health Center after breakfast. Gary reports coming to camp with "a cold" that's gotten steadily worse, at least the coughing has. "I get these coughing fits, you know – like 10, 15 hard coughs in a row. I can hardly breathe what that happens! My energy isn't good either. I can do stuff but not like I'm used to." His temperature is OK but you pick up some inspiratory crackles (rales). His buddy, Steve, shows essentially the same profile but his symptoms started later. He sleeps in the bunk below Gary. And then Steve starts to cough. He's coughing hard and can hardly catch his breath. The nurse remembers hearing about paroxysmal coughing. Could these kids have whooping cough (pertussis)? She checks their Health History Forms. Gary was immunized as a baby but hasn't had an updated immunization since then. Steve never has been immunized. The nurse admits the boys and reports the pertussis potential to you, a diagnosis that's soon confirmed by a physician.

□ PRESUMPTIVE RABIES EXPOSURE

Your resident camp is gathering for lunch. People have come into the dining hall and are finding places when the Nature Counselor arrives cupping his hands around something. He goes to a group of campers and shows them his find, allowing at least four campers to touch and handle the treasure: a bat. Other campers are waiting their turn to hold the critter while the Nature Counselor continues to coach their bare-handed handling. Three more campers hold the animal before you get to the group; one of those campers is from Argentina.



You know your Department of Health considers this a presumptive exposure to rabies for those who came in contact with (touched) the bat. To make matters worse, the counselor says that he found the bat in his cabin where he, another counselor and 12 boys sleep. The two counselors "heard and saw the bat flying around last night" but they couldn't catch it, something he accomplished when he search the cabin more thoroughly this morning. This is Tuesday, early in the campers' third week of their 4-week session. What are your next steps?

STEP THREE

You've selected your outbreak and know the State in which your camp is located. Have your Response Team answer the questions posed in the Guide (next page) using your Response Plan to guide responses. In particular, note:

- Area(s) where the Plan is particularly helpful or needs modification, at least for this outbreak.
- Items that may have been neglected during the planning process.
- Areas that have important connections or overlap.

Outbreak Response Guide

Question	Your Response
A. How is this illness passed from person to person and what risk-reduction strategies should the camp be using to minimize transmission?	
B. What is the illness's incubation period? Given this, do you expect more campers and/or staff to come down with it? Why or why not?	
C. How long is a person usually ill from this diagnosis? How does time ill compare to time the person is contagious?	
D. List the symptoms & signs that indicate a person has or is coming down with the illness. What should general counseling staff do if/when they see these signs or hear someone discuss their symptoms?	
E. Given this outbreak, would your Health Center staff know what to do and how to care for a person with the illness? Who coaches and oversees this?	
F. At what point is the ill person no longer communicable (cannot pass the illness to others)? What barring does this have on camp practices?	
G. Describe a complication or special concern associated with this illness. Recommend a way to minimize that risk.	
H. Is this a reportable illness to the State's Dept of Health? If so, who reports it?	
I. Since the outbreak is occurring now, list at least three strategies the camp could implement to minimize/prevent others from getting the illness.	
J. List at least three strategies the camp could implement to minimize – if not prevent – this from happening in the future.	
K. What should parents of ill campers be told? By who? How	

often? Via what route (e.g. phone; email)?	
L. What should parents of campers who are <u>not</u> ill be told? By whom, how often & via what route?	
M. Even though there's an outbreak, camp has to continue for the healthy campers and staff. <ul style="list-style-type: none"> List at least two supports (help) the camp nurse can be given so the nurse can meet routine camp need while also addressing outbreak needs. Explain your rationale for each suggested support. What adaptations might the camp schedule need because of the outbreak? 	
N. What impact does the illness have for the camp's food service?	
O. What impact does this illness have for the sewage system?	
P. What camp activities might need to be suspended or adapted because of the outbreak?	
Q. Some staff roles are critical to the camp's ability to operate. List three of these and describe the impact if the people in charge of those areas get the illness.	
R. Name at least one stakeholder in the outcome of this illness (how the camp deals with it), describe the nature of that stakeholder's concern, and the camp's response.	
S. What screening and/or staff training can be implemented to minimize the potential for this to occur in the future or, if it does, to have minimal impact?	
T. Given this outbreak, what else should be considered by the Response Team?	

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