

January 3, 2012

Dear Friends and Colleagues:

When preparing to manage an outbreak it is important to consult the following resources:

- PIDAC Best Practice Guidelines, specifically:
  - Surveillance of Health-Care Associated Infections
  - Best Practice for Hand Hygiene
  - Best Practices for Routine Practices and Additional Precautions
  - Best Practices for Environmental Cleaning
- Ministry of Health and Long Term Care Guidelines for Respiratory, Enteric, and *Clostridium difficile* Infection outbreaks

Additionally, the following resources may help you complete a gap analysis of your facility and identify areas for improvement:

- CHICA-Canada Audit Toolkit
- Environmental Cleaning Toolkit
- Just Clean Your Hands Program
- Unit audits

The Outbreak Tips and Tools Checklist is an experience based document that can be used once you have accessed the above resources. This checklist may help you identify what you can do before, during and after an outbreak.

“Spread knowledge, not infection”

- CHICA-Canada

Regards,

Public Health Ontario – Central South



## Outbreak Tips and Tricks Checklist

Item	Yes	No	Follow Up Required/Notes
<b>Before Outbreak</b>			
<b>Surveillance</b>			
Daily surveillance should include: <ul style="list-style-type: none"> <li>• Unit rounds</li> <li>• Chart review for: relevant lab results, new onset symptoms, frequency of bowel movements, new medications</li> <li>• Use of the Bristol Stool Chart strongly recommended for documentation of bowel movements</li> <li>• Attendance at shift report, or brief huddle with Charge Nurse/Designate</li> <li>• Electronic notification system for persons of concern (e.g. fax, phone, email, electronic flags/alerts, pager)</li> </ul>			
Weekly surveillance should include: <ul style="list-style-type: none"> <li>• Cluster identification/investigation per unit</li> <li>• Site-wide investigation for common links/trends/denominators (e.g. transfers, links to tests, patient movement)</li> <li>• Look for marker organisms (e.g. MRSA can be a marker for poor healthcare worker hand hygiene, VRE can be a marker for poor environmental cleaning)</li> <li>• Awareness of community illness and trends</li> <li>• Awareness of other institutional outbreaks/trends</li> </ul>			
Monthly surveillance should include: <ul style="list-style-type: none"> <li>• Sharing of both rates and numbers of cases per organism</li> <li>• Compare monthly data to established benchmarks (same facility size comparators)</li> <li>• Data should be shared with IC Committee, Senior Team, and frontline staff</li> </ul>			

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Quarterly/Annual Surveillance should include: <ul style="list-style-type: none"> <li>• Visual representation of the data with benchmarks (e.g. tables, graphs) and trends (from past 12 months)</li> <li>• Identify seasonal variations/trends and include descriptions of trends on graphs</li> <li>• Acute Care Organization data should be shared with: Board, IC Committee, Quality and Clinical Practice, Risk Management, Management Team</li> <li>• Long Term Care Organization data should be shared with: Board, IC Committee, Resident/Family Councils</li> </ul>			
<b>Cleaning</b>			
Equipment and environment cleaning: <ul style="list-style-type: none"> <li>• How is this done?</li> <li>• When is this done?</li> <li>• Who is responsible for cleaning what?</li> <li>• What product is used?</li> <li>• Is contact time achieved?</li> </ul>			
Quality assurance for equipment and environmental cleaning: <ul style="list-style-type: none"> <li>• Audits of cleaning processes</li> <li>• Cleaning solution dispensing and dilution monitoring</li> <li>• Review staff knowledge of cleaning processes</li> <li>• Communicate changes in practice effectively</li> </ul>			
Additional staff/support may be needed when units have an increase in isolated patients. Develop a threshold number that can be managed with existing resources.			
<b>Outbreak Supplies</b>			
Make sure you have adequate lab supplies on hand for a potential outbreak (e.g. specimen bottles, NP swabs). Check the expiration dates.			
Develop a process to ensure timely results from lab specimens (e.g. when are specimens sent? results received?)			
What is your turn-around-time for results? During an outbreak you may need to make special arrangements to get timely results.			
Identify lab testing methodologies. Is there something better? (e.g. PCR vs. culture/EIA)			
Determine which cleaning product and supplies you will need for different types of outbreaks. Ensure you have a stockpile on hand (e.g. sporicidal cleaner).			
Identify equipment that will be needed to effectively manage an outbreak. Take steps to plan ahead for increase in inventory, rental arrangements (e.g. PPE, linen hampers, commodes).			

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<b>Communication</b>			
<p>Develop a daily communication plan. Identify during an outbreak when you will:</p> <ul style="list-style-type: none"> <li>• Do case finding/rounds</li> <li>• Outbreak meeting</li> <li>• Staff update</li> <li>• External partners update (PH, RICN)</li> <li>• Media update</li> </ul> <p>Create a 24 hour time clock by identifying specific times for each of these activities. Follow this time clock during an outbreak.</p>			
<p>Define lines of communication between healthcare partners.</p> <ul style="list-style-type: none"> <li>• How are transfers and repatriations communicated?</li> <li>• Protocol for direct admissions?</li> <li>• Do you talk with patient registration?</li> </ul>			
<p>Use line listings as part of your routine surveillance, not just during an outbreak. Line listings are:</p> <ul style="list-style-type: none"> <li>• Updated daily</li> <li>• Separate for staff and patient/resident</li> <li>• Completed in a consistent manner</li> <li>• Process defined for when ICP should be notified, when public health should be notified</li> </ul>			
<p>Draft messaging for the following groups and adapt at time of outbreak:</p> <ul style="list-style-type: none"> <li>• Staff, consider department specific (e.g. dietary)</li> <li>• Ill Staff (for manager's use)</li> <li>• Families/Visitors</li> <li>• Volunteers/Clergy</li> <li>• Students, both professional and other (e.g. co-op)</li> <li>• External support services (e.g. animal therapy)</li> <li>• Hospitality (e.g. TV services)</li> <li>• General public (e.g. script for switchboard/greeter)</li> </ul>			
<p>Communicate with senior team and discuss your requirements to manage an outbreak effectively:</p> <ul style="list-style-type: none"> <li>• Discuss outbreak plans and required assistance</li> <li>• Share your time clock</li> <li>• Who will be expected to attend outbreak meetings</li> </ul>			
<p>Senior team members will need to be part of the outbreak communication strategy. Develop a plan beforehand that includes a role for senior team. For example:</p> <ul style="list-style-type: none"> <li>• Daily walk-about</li> <li>• Huddles</li> <li>• Town halls/Open forums</li> <li>• Screen saver messaging</li> <li>• Memos</li> <li>• Pay stub communication</li> <li>• Intranet or other internal communication tools</li> </ul>			

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<b>Outbreak Meetings</b>			
Define who attends the meetings. Attendees should include: <ul style="list-style-type: none"> <li>• Senior team representative</li> <li>• Management from each department</li> <li>• Ad hoc frontline staff</li> <li>• Public health (consider even if not a reportable outbreak)</li> <li>• RICN staff (if you wish)</li> </ul>			
Outbreak meeting time should have been defined in your time clock. Choose a set location for the meetings as well. For example, folks should automatically know the meeting is each day at 1130 in the Boardroom.			
Determine circumstances where more than one daily outbreak meeting would be required (e.g. patient flow issues, multi-site OBs, new developments, lab results, audit results, etc).			
<b>Media</b>			
Anticipate different outbreak circumstances and draft media releases.			
Designate a spokesperson. Chose a person who is credible, transparent and, a good communicator (this is key).			
Communicate with the media on your terms. Identify a time of day when updates will be available.			
In the event of a patient death: <ul style="list-style-type: none"> <li>• Show empathy</li> <li>• Offer condolences for the family</li> <li>• Do not offer a rationale for the death (e.g. advanced age)</li> <li>• Reassure community that measures are in place.</li> </ul>			
Remind staff that many visitors have cell phones with photo and video capability. Staff activities could be documented without their knowledge and shared with media.			
<b>During the Outbreak</b>			
<b>Information Finding</b>			
Keep a detailed timeline of new cases, control measures, and changes in control measures			
Consider creating a visual timeline or Gantt chart (e.g. plot what/when measures were put in place, patient movement)			
Create an epi-curve			
Keep detailed notes and records. Make sure you are keeping track of inquiries and responding efficiently. Consider keeping all notes in one place so you don't lose anything (e.g. an outbreak notebook)			

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<b>Outbreak File</b>			
<p>Start a detailed and organized file to document the progress of the outbreak. File should include:</p> <ul style="list-style-type: none"> <li>• Maps of cases on affected units, line lists (old and new), epi-curve</li> <li>• Lab reports</li> <li>• Communications (media release, communication to staff, etc)</li> <li>• Outbreak meeting minutes</li> <li>• Public health reports and communication</li> <li>• Costs related to outbreak</li> </ul>			
<p>Create separate files for outbreak resources (equipment purchased, vendor info, key contacts, fact sheets)</p>			
<b>Outbreak Leadership</b>			
<p>The outbreak leader needs to be competent, well organized, calm, and decisive.</p>			
<p>Clearly communicate your recommendations and the potential effects of not following these recommendations.</p>			
<p>Recruit additional assistance:</p> <ul style="list-style-type: none"> <li>• Delegate tasks</li> <li>• Find additional help (e.g. volunteer, modified workers)</li> <li>• Departments may need to increase staffing to keep up with demand (e.g. housekeeping)</li> </ul>			
<p>Allow time for planning, thinking, assessing, evaluating, and resting.</p>			
<p>Consider asking external partners to audit your facility and practices (e.g. ICP, RICN, Public Health)</p>			
<p>Set aside time to meet with the frontline staff in affected areas:</p> <ul style="list-style-type: none"> <li>• This meeting should not be combined with an in-service. It is all about them.</li> <li>• Ask open ended questions about the outbreak: cause? what are we missing? how can I help?</li> <li>• Ask staff to think of solutions to problems</li> <li>• Recognize when you need to build relationship with staff before they will be candid with you</li> <li>• If relations are strained consider asking someone else to have this conversation.</li> </ul>			
<b>Flow Patterns</b>			
<p>Set aside time to visit affected units and watch the flow and movement of people and equipment.</p>			
<p>Become aware of all activities that take place in affected areas. Specifically:</p> <ul style="list-style-type: none"> <li>• Patient care assignments</li> <li>• Meal delivery and pick-up</li> <li>• Deliveries (Stores/Medical device reprocessing)</li> </ul>			

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<ul style="list-style-type: none"> <li>• Transfers, on and off unit (stretcher vs. bed)</li> <li>• Tests, on and off unit</li> <li>• Affiliated health professionals</li> <li>• Visitors/Family involvement/behaviors</li> </ul>			
<p>Audit compliance with hand hygiene and PPE policies and procedures. Share results of audits with staff and managers.</p>			
<p>If an outbreak does not come under control, or is very large it may be necessary to restrict or shut-down services. For example:</p> <ul style="list-style-type: none"> <li>• Affected unit admission restrictions</li> <li>• Cancellation of elective surgery</li> <li>• Cancellation/Limitation of out-patient services</li> <li>• Identify under-utilized areas that could be used to decrease burden (esp. for Emergency Department)</li> </ul>			
<p>Controlling traffic to affected areas. Consider:</p> <ul style="list-style-type: none"> <li>• Changing visiting hours*</li> <li>• Controlling access to the unit (e.g. locking unit, or stationing a volunteer/security)</li> </ul> <p>*Do not restrict for palliative. Some visitors help with tasks, take this into consideration.</p>			
<p><b>Project Clean</b></p> <p>A project clean is a systematic process of ensuring <b>everything</b> on an affected unit(s) is cleaned.</p>			
<p>Project clean needs to be completed within a defined time frame to establish a baseline clean (e.g. 30 bed medical unit should be cleaned within 2-4 days*)</p> <p>* Experience, not evidence-based</p>			
<p>Sufficient resources need to be dedicated to the project clean:</p> <ul style="list-style-type: none"> <li>• Designated person responsible for overseeing the clean (e.g. housekeeping supervisor)</li> <li>• Additional staffing may be needed to complete the clean (both housekeeping, and patient care to assist with moving patients out of bed)</li> </ul>			
<p>Person responsible for the project clean should attend the daily bed meeting and provide a status update.</p>			
<p>Staff should receive clear instructions on techniques and process of project clean.</p>			
<p>Clean should be done systematically (e.g. start at one end of the unit and work to the other).</p>			
<p>The project clean should include:</p> <ul style="list-style-type: none"> <li>• Patient rooms, washrooms beds, care equipment, personal equipment (e.g. walkers)</li> <li>• Staff areas and washrooms</li> <li>• Railings</li> <li>• Surfaces</li> <li>• Cubby holes</li> </ul>			
<p>All mattresses should be checked for cracks and replaced if necessary.</p>			

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Blueware should be discarded and/or reprocessed (depending on your product).			
The unit should be de-cluttered to allow for easy cleaning. If you don't need it, get rid of it.			
Linen and waste are handled according to Routine Practices.			
Establish processes for meal tray delivery and pick-up to minimize contamination. Additional, pick-up times may be needed to ensure trays aren't left sitting around.			
Consider restricting access to patient kitchenette, fridges, and ice machines for duration of the outbreak. <ul style="list-style-type: none"> <li>If families bring food/treats that require refrigeration uneaten portions should be discarded.</li> <li>If access to kitchens/ice machines is restricted make provision to meet patient/resident hydration needs.</li> </ul>			
Establish a process for determining what has been cleaned.			
Make sure all equipment and surfaces are cleanable (e.g. no tape).			
<b>Education</b>			
Signage needs to be easily visible, clear, and informative.			
Signage needs to be in the right places (e.g. entrances, elevators, stairwells, rooms).			
Educate Staff: <ul style="list-style-type: none"> <li>In-services (formal and in-formal), make sure to educate alternate shifts</li> <li>Illness/infectious organism and control measures</li> <li>Develop/use quick tip sheets.</li> </ul>			
Educate Patients/Residents/Families on: <ul style="list-style-type: none"> <li>Illness/organism and control measures</li> <li>Use of PPE</li> <li>IPAC basics like hand hygiene, covering your cough/sneeze, not visiting when ill.</li> </ul>			
If staff motivation is waning, consider a pick-me-up (e.g. pep rally, pizza, cake).			
<b>Patient/Resident</b>			
Consider the emotional needs of the isolated patient/resident and the impact of prolonged isolation on health/wellbeing. Isolated patients/residents can leave their room if the following criteria is met: <ul style="list-style-type: none"> <li>Clean hands</li> <li>Clean clothes and equipment</li> <li>Contained drainage</li> <li>Continent or incontinence contained to product</li> <li>Compliant and comprehend instructions (or staff techniques in place to mitigate risk).</li> </ul>			

Item	Yes	No	Follow Up Required/Notes
<b>After the Outbreak</b>			
<b>Paperwork</b>			
Complete the outbreak file: <ul style="list-style-type: none"> <li>• Lab results</li> <li>• Complete line lists and epi-curve</li> <li>• Outstanding Occupational Health claims.</li> </ul>			
Complete summary report. Report should include: <ul style="list-style-type: none"> <li>• Case counts</li> <li>• Symptoms</li> <li>• Persons affected (% patient/resident, % staff)</li> <li>• # of deaths (and status of death review)</li> <li>• Source of outbreak</li> <li>• Mode of transmission</li> <li>• What worked well</li> <li>• Areas for improvement.</li> </ul>			
Share the summary report with the senior team, management team and ask for feedback.			
Share an adapted version with the staff and ask for feedback.			
<b>Celebrate</b>			
Celebrate the staff: <ul style="list-style-type: none"> <li>• End of outbreak reward (e.g. cake, pizza party)</li> <li>• Celebrate key staff who were leaders/positive deviants</li> <li>• Thank you communications from ICP and senior team</li> <li>• End of outbreak media release highlighting the efforts from staff to bring under control.</li> </ul>			
Thank your supporters: <ul style="list-style-type: none"> <li>• Senior team</li> <li>• Management team</li> <li>• External partners (e.g. RICNs, PH, other ICPs).</li> </ul>			
Celebrate yourself, share your experiences with other ICPs: <ul style="list-style-type: none"> <li>• Abstracts/presentations</li> <li>• Meetings/Networking</li> </ul>			
<b>Post-Outbreak Meetings</b>			
If a large or complicated outbreak consider holding post outbreak meetings			
Identify contributing and propagating factors.			
Identify areas for improvement.			
Identify the need for major restricting of current resources: <ul style="list-style-type: none"> <li>• Staffing mix and levels</li> <li>• Number of patients per room</li> <li>• Capital needs (renovations, equipment purchase).</li> </ul>			

Item	Yes	No	Follow Up Required/Notes
Use these discussions to: <ul style="list-style-type: none"> <li>• Revise policies and procedures</li> <li>• Continuous improvement plan</li> <li>• Address ICRT recommendations (if applicable)</li> <li>• Strategic planning goals and objectives to address deficiencies.</li> </ul>			
Share the outcome of these meetings with staff			