

# Declaring War? Outbreak Identification and Early Management

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## Disclosure

- This presentation has been adapted from OAHPP Waterloo Infection Control Network's presentation:  
*'Declaring War? Outbreak Identification and Early Management'*



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## Plan of Attack

- What is an outbreak?
- Surveillance: *Will I know an outbreak if I see one?*
- Spotting the enemy: *The signs and symptoms*
- We are under attack: *Initial battle plans*
- War is declared: *What do we do next?*



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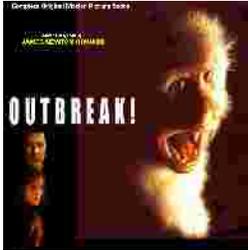
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### What is an outbreak?



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### What is an outbreak?

- The occurrence of cases of an illness that are clearly in excess of what you would normally expect to see
- The number of cases needed to tip you into an "outbreak" will depend on:
  - The disease or infectious agent
  - The population affected
  - Time and place



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### Outbreaks

- **Community outbreaks** (example – Influenza)
  - Illness spreads throughout the vulnerable (non-immune) population
  - Public Health monitors and may apply certain control measures at a community level (such as immunization clinics)
- **Social networks** (example - tuberculosis, sexually transmitted infections)
  - Illness spreads within a social circle, a family or to their contacts
  - Public Health follows up with contacts of cases and may recommend certain medical follow-up or actions be taken



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**Outbreaks (continued)**

- **Institutional outbreaks** (example - respiratory or gastrointestinal)
  - Illness spreads w ithin a closed setting such as LTCH, group home, hospital
  - Staff responsible for monitoring & control measures for patients/residents/clients and fellow staff
  - Certain outbreaks are reportable to Public Health in Ontario
    - *Clostridium difficile* outbreaks in hospitals
    - Gastroenteritis outbreaks in institutions
    - Respiratory infection outbreaks in institutions
  - Gastro- and Respiratory outbreaks may be caused by a number of different micro-organisms




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**Institutional Outbreaks – Running amok in the fort**

- Closed care settings allow for easier transmission of illness:
  - Shared accommodation or living space
  - Shared bathrooms
  - Shared food preparation, food or eating arrangements
  - Shared care-givers
  - Shared equipment
  - Shared food, water and air
- Patients/residents/clients may have altered health status that makes them more vulnerable to infections or complications of infections




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**Why worry so much about homeland security?**

“It’s just a cold ...”

- 2010/2011 Ontario Respiratory Outbreak Season
  - 317 Resident deaths
    - 875 respiratory outbreaks in hospitals, RHs, and LTCFs
    - 432 associated w ith Influenza outbreaks
    - 306 associated w ith all other respiratory outbreaks




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**Surveillance: Will I know an outbreak if I see one?**



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**Surveillance for Institutional Outbreaks**

- Important that caregivers and Infection Control designates are alert to signs and symptoms of new illness in patients/residents and/or staff
- **“Syndromic Surveillance”** refers to looking for a collection of symptoms or conditions that could indicate the start of an outbreak
  - Alerts you to the need for further investigation (laboratory testing to determine the causative organism)
  - Signals the need to implement “additional precautions” to limit potential for more spread
  - May signal need to report a suspect outbreak to your local Public Health Unit



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**Important Surveillance Intelligence to gather**

- **Who** is ill?
- **What** symptoms do they have?
- **Where** are the cases located?
- **When** did the symptoms start?
- **Why?**
- Taking a few moments to find out the information and complete your **linelist** is invaluable in developing a good surveillance report
- Check with **ALL** units and pull together with any information on staff away due to illness



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**Spotting the enemy - The signs and symptoms**

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**Spotting the enemy - Respiratory Surveillance**

- Look for **NEW** onset of **TWO** or more acute respiratory symptoms
  - Sore throats, hoarseness or difficulty swallowing
  - Runny nose or sneezing
  - Stuffy nose or congestion
  - Dry cough
  - Fever/abnormal temperature
  - Tiredness (malaise)
  - Muscle aches (myalgia) or headache
  - Chills or shakes (rigors)

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Form with header information and a large table with multiple columns and rows, likely a surveillance or reporting form. The table contains various fields for data entry, including patient information and clinical observations.

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**We are under Attack**  
**Suspect a *Respiratory Outbreak* if:**

- 2 residents/patients with onset of acute respiratory tract illness within 48 hours
- More than one unit has a case of acute RTI within 48 hours
- Potential Influenza Outbreak
  - One lab confirmed case of influenza
- Additional Droplet/Contact Precautions should be started as soon as symptoms are recognized in a resident/patient




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**Additional Precautions**

- Private room if possible or draw curtain and maintain 2 metre separation
- Resident remains in room
- Transport for essential purposes only
- Disposable or dedicated equipment
- Visitors to use PPE if providing direct care






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**We are under Attack**  
**Suspect a *Gastrointestinal outbreak* if:**

- Two or more persons with similar signs and symptoms (such as nausea, vomiting or diarrhea) in the same geographical area in a 48-hour period
  - No evidence of a non-infectious cause such as laxative use, change in medication, etc.
- Additional contact precautions should be started as soon as symptoms are recognized in a resident/patient




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**Additional Precautions**

- Resident remains in room
- Transport for essential purposes only
- Disposable or dedicated equipment
- Visitors to use PPE if providing direct care
- Cleaning protocols according to organism or direction from Public Health





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**War is declared - What do we do next?**





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**War is declared - What do we do next?**

**ALERT the Allies!**

- Notify Public Health if suspecting a reportable outbreak or food-borne illness
  - it takes coordinated efforts to break the chain of transmission!
- Arrange for laboratory investigation for respiratory or gastro-symptoms
  - Public health units provide kits for LTC in Ontario
  - Can discuss with Public Health which cases to test and to ensure tests are obtained correctly
- An outbreak declaration may be made for the affected area or the entire facility




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### Laboratory Specimen Collection

- Right kits and not expired
- Appropriate staff to collect the sample
- Proper collection
- Proper storage
- Requisition filled in correctly



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### War is declared - What do we do next?

- Refer to your outbreak plan or protocol
  - That plan should give you the rest of your marching orders
  - Public Health Units often have Outbreak Management resources available for facilities to reference
- An outbreak team should be assembled to review the situation and draft any additional plans or actions needed
  - May be by telephone or a quick meeting (keep notes!)



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### War is declared - What do we do next?

- Staff members with symptoms **must not work**
- Ensure appropriate Personal Protective Equipment (PPE) for care-givers, visitors and isolation for symptomatic patients/residents is in place
  - Discontinue isolation when appropriate – will depend on the type of outbreak
- Additional actions such as prophylaxis (preventive drugs), immunization, extra cleaning, staff exclusions may be needed depending on the type of outbreak



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**War is declared - Who needs to know?**

- **Communicate** within your institution (administration, staff)
- **Communicate** with families, regular visitors or programs
- **Notify** any other institution or facility if patients/residents are being transferred



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**Continue to work with the Allies**

- Public Health Unit staff – daily or as needed
- Public Health Laboratories in consultation with Public Health Staff
- Other homes/acute care hospitals
- Regional Infection Control Networks or infection control resources in your area



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**Winning the battle**

- Declaring victory and an end to the skirmish will happen when there is no further evidence of transmission of illness in staff and residents/patients
- This will depend upon the type of organism responsible for the outbreak
- Keep up the moral!



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**Looking for more information?**

- Your local Health Unit outbreak guidelines
- Provincial Outbreak Guidelines
- Ontario Agency for Health Protection and Promotion ([www.ohpp.ca](http://www.ohpp.ca))
  - Laboratory Specimen Collection Guide
  - PIDAC Routine Practices and Additional Precautions



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