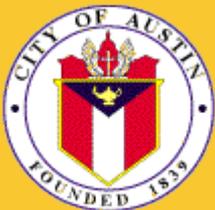


CAUTION

Respiratory Outbreak Management

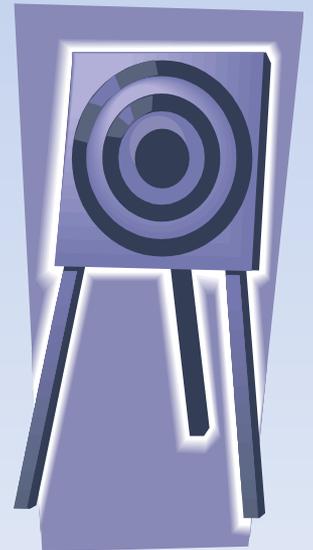
By: Heather Cooks-Sinclair, MS





Objectives

- *Describe the types of information and data that should be acquired during a respiratory outbreak*
- *Describe control measures to put in place during a respiratory outbreak*





Identify the Outbreak

- EMS transports
- Death certificates
- Reports from:
 - Environmental health
 - Facilities
 - Residents
 - Family members
 - Local news
 - Astute clinicians
- Syndromic surveillance





Confirm Outbreak

- What are the symptoms?
- When was the onset?
- Where was the location of the outbreak?
 - What type of facility
 - Is the facility permitted by the city
- How many people are experiencing symptoms?
- Has anyone been transported to a hospital?
 - Names, Date of birth, Where
- Contact the hospital / infection practitioner (IP)
 - Clinical diagnosis and lab testing performed



Contact the Facility

- Speak with either the Medical Director or Director of Nursing
- Confirm information obtained from initial complaint
- Assess the outbreak:
 - Person
 - Place
 - Time
- Create a partnership





Assess: Person, Place & Time

- Place:
 - Type of facility
 - Maximum capacity
 - Current census count
 - Number of employees
 - Contact person
- Time:
 - Earliest onset
 - Any cases with an onset today





Assess: Person, Place & Time

- Person:
 - How many cases
 - Symptoms
 - Have residents and staff been vaccinated?
 - Vaccination status of cases
 - Are they geographically clustered
 - Transports to the ER
 - Ill employees
 - Ill food handlers





Control Measures

- Hand Hygiene and Cough Etiquette
- Exclusion and Isolation
- Environmental Disinfection
 - Sanitize all surfaces as often as possible
 - Chemicals used to sanitize
- Vaccination





Hand Hygiene and Cough Etiquette

- Hand hygiene policy
 - Use of hand sanitizer as an adjunct
- Hand sanitizer available to residents and staff
- Wear a facemask
- Resident education
- Staff in service
- Signs posted





Exclusion and Isolation

- Suspend new admissions, visitors, transfers, etc.
- Post signs alerting visitors, residents, and staff to illnesses
- Have visitors sign in and out of facility
- Send courtesy letter to families of all patients
- Isolate ill, exposed and non-exposed
 - All residents confined to rooms
 - Cancel all group activities and community meals
 - All ill staff excluded from work until 48-72 hours following resolution of symptoms



Environmental Disinfection

- Chemicals used to sanitize:
 - Whenever possible ask to look at the product
 - Is it effective against influenza and other organisms related to respiratory illnesses?
 - Does the label state that it is for health care settings?
 - Is the staff following manufacturer's instructions for:
 - Dilution?
 - Application?
 - Contact time?





Environmental Disinfection

- Sanitize all surfaces as often as possible
 - Initial cleaning of contaminated surfaces performed before disinfection
 - Apply chlorine bleach solution to hard, nonporous, environmental surfaces
 - Frequently disinfect areas of greatest environmental contamination and high-touch surfaces.



Site Visit

- Kitchen inspection
- Obtain facility information
 - Review facility policies and procedures
 - Obtain data for line list
 - Review control measures in place
- Tour of facility
- Recommend additional control measures
- Provide test kits or collect specimens





Data Collection

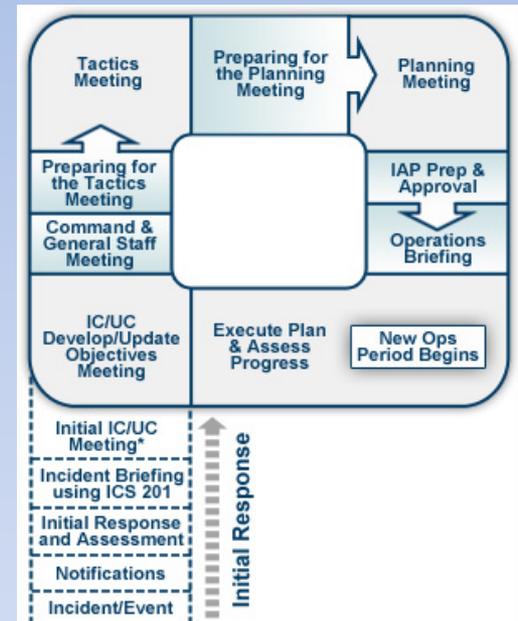
- Develop a working case definition
- Maintain daily contact with facility
 - Active case finding
 - Obtain line list data
 - Develop epi-curve
 - Address challenges
 - Collect specimens
- Contact local hospitals
 - Test performed
 - Specimen collection





Daily Operations Briefing

- How many cases/new cases
- Control measures in place
- Recommendations
- Challenges
- Specimens collected
- Resources needed
- Next steps for the next operational period





Outbreak Conclusion

- Control measures may be lifted and active case finding stopped after 2-3 incubation periods have passed with no new cases
- Send close out operational briefing
 - How many cases
 - Control measures utilized
 - What worked
 - What were the challenges
 - Specimens collected/results
- Outbreak summary
- Close out letter to facility





Outbreak Investigation Summary

- Identify , confirm, and assess an outbreak
- Data collection and confirmation
- Control measures
 - Hand Hygiene
 - Exclusion and Isolation
 - Environmental Disinfection
- Site visit
- Daily operations briefing
- Outbreak conclusion and report





Questions?

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Epidemiologist

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Thank You!



Austin/Travis County Health & Human Services Department

Disease Prevention and Health Promotion Division
Epidemiology and Health Statistics Unit
15 Waller Street, 4th Floor
Austin, TX 78702



Checklist to Confirm Respiratory Outbreak in Long-Term Care Facility

Below is a list of activities that are often conducted when managing an outbreak in a long-term care facility. When implemented, the control measures listed have successfully prevented further illness among the well residents and staff of the facility.

Name of Facility: _____

Address: _____

Phone Number and Contact Name: _____

Corporate Contact Information: _____

Maximum Capacity: _____

Current Census Count (include date of census): _____

Total Number of Employees: _____

Medical Director (name and contact info) _____

A/TCHHSD Lead Staff (include Epidemiology and Health Statistics and Environmental Health Services Staff): _____

QUESTION	RESPONSE	NOTES
ADMINISTRATION		
Is the facility a skilled nursing facility and/or rehabilitation center with clinical staff (i.e. LVN, RN, NP, PA, DO, MD)?	Y N	
Does facility have a Medical Director?	Y N	
Has the facility notified Department of Aging and Disability Services (DADS)?	Y N	
Has the facility notified its corporate headquarters?	Y N	
Does the facility's corporate headquarters have a written policy and/or procedure addressing clusters of respiratory illness?	Y N	
Is the facility's kitchen permitted by Environmental Health Services?	Y N <i>If yes, notify Environmental Health Services supervisor.</i>	
Has A/TCHHSD staff reported the cluster outbreak to the DADS Hotline?	Y N	

Has A/TCHHSD staff completed a site visit? (list date(s))	Y N	
ILLNESSES		
How many patients are ill (include date)?		
When was the first date of onset?		
Did any patient have onset of illness today?	Y N	
What symptoms are the patients experiencing?	<p>Fever</p> <p>Cough</p> <p>Sore Throat</p> <p>Runny or stuffy nose</p> <p>Congestion</p> <p>Muscle aches</p> <p>Fatigue</p> <p>Headache</p> <p>Nausea</p> <p>Vomiting</p> <p>Diarrhea</p>	
Have any ill patients been transported to ER and/or admitted to hospital?	<p>Y N</p> <p><i>If yes, ask for hospital name, date of transport or visit, patient's name and DOB.</i></p>	
Where in the facility do the ill patients live? (note commonalities of locations)		
Have there been any other clusters of illness reported in the facility recently (i.e. GI)?	Y N	
Any clinical staff ill with symptoms similar to patients?	<p>Y N</p> <p><i>If Yes, list name, job title, and onset</i></p>	
Any kitchen staff ill with symptoms similar to patients?	<p>Y N</p> <p><i>If yes, list name, job title and onset</i></p>	

CONTROL MEASURES		
<i>Which of the following control measures listed below have been implemented by facility?</i>		
VACCINATION		
Have residents been vaccinated with the most recent seasonal influenza vaccine?	<p style="text-align: center;">Y N</p> <p style="text-align: center;"><i>If yes, What percent of residents received vaccine?</i></p> <p style="text-align: center;"><i>How many cases have been vaccinated? (Note date and type of vaccination received)</i></p>	
Have staff been vaccinated with the most recent seasonal influenza vaccine?	<p style="text-align: center;">Y N</p> <p style="text-align: center;"><i>What percent of staff received vaccine?</i></p> <p style="text-align: center;"><i>How many staff cases have been vaccinated?</i></p>	
HAND HYGIENE		
Staff practicing strict hand washing and hygiene (washing hands for at least 20 seconds with running water and plain or antiseptic soap)?	<p style="text-align: center;">Y N</p>	
Residents demonstrating strict hand washing hygiene (washing hands for at least 20 seconds with running water and plain or antiseptic soap)?	<p style="text-align: center;">Y N</p>	
Hand sanitizer readily available throughout facility (i.e. nurses' station, visitor sign in, etc.)?	<p style="text-align: center;">Y N</p> <p style="text-align: center;"><i>Brand of sanitizer provided?</i></p> <p style="text-align: center;"><i>% Ethanol of product:</i></p>	
Using hand sanitizing as adjunct in between proper handwashings?	<p style="text-align: center;">Y N</p>	
Posted signs educating visitors, residents, and staff to good hand washing and hygiene?	<p style="text-align: center;">Y N</p>	
EXCLUSION AND ISOLATION		
Suspend new admissions?	<p style="text-align: center;">Y N</p> <p style="text-align: center;"><i>Date of last new admit?</i></p>	
Suspend tours and visits of potential new admissions?	<p style="text-align: center;">Y N</p>	

Suspend transfers of all existing residents outside facility unless medically necessary?	Y N <i>Last transfer?</i>	
Suspend visitors from entering facility?	Y N	
If visitors are permitted, are they cautioned and offered education on the risks, and prevention measures?	Y N	
Posted signs alerting visitors, residents, and staff to illnesses?	Y N	
Visitor sign in and out of facility?	Y N	
Courtesy sent letter to families of all patients?	Y N	
Cancel all group activities?	Y N <i>Canceled as of date: Date scheduled to resume:</i>	
Ill patients confined to rooms?	Y N <i>Effective date:</i>	
Cohorting of ill patients with dedicated staff?	Y N	
Meals eaten in patients' rooms and not dining room?	Y N <i>Canceled as of date: Date scheduled to resume:</i>	
Disposable plates, cups, utensils provided for meals?	Y N	
No bare hand contact with ready-to-eat foods by staff?	Y N	
All ill staff excluded from work until 48-72 hours following resolution of symptoms?	Y N	
Returning ill staff working in only affected areas within the facility?	Y N	
ENVIRONMENTAL DISINFECTION		
Sanitizer/chemical disinfectants (obtain copies of all product instruction sheets/MSDS/Spec sheets for all products used by facility)	<i>Product Brands:</i> <i>Product Names:</i> <i>Active ingredients:</i>	

Commercial product with label claims for health care settings?	Y N	
Does the product list effectiveness against influenza and other respiratory pathogens?	Y N	
Staff following manufacturer's instructions for dilution, application and contact time?	Y N <i>Contact time:</i> <i>Is the container labeled appropriately?</i> <i>Dilution ratio:</i> <i>Date prepared:</i>	
Initial cleaning of contaminated surfaces performed before disinfection?	Y N	
Sanitize all surfaces as often as possible?	Y N <i>How often?</i>	
Is facility applying chlorine bleach solution to hard, nonporous, environmental surfaces whenever possible?	Y N	
Attention given to likely areas of greatest environmental contamination i.e. bathrooms and high-touch surfaces (e.g. door knobs, buttons, switches, and hand rails)?	Y N	
CLINICAL SPECIMENS		
Specimen collected *as early within the investigation as possible? <i>*Ideally specimens should be collected during the acute phase of illness. When this is not possible, specimens collected later in illness or after resolution might still provide a diagnosis.</i>	Y N <i>Collection Date:</i> <i>Submitted to DSHS?</i> <i>Specimen from Resident?</i> <i>Specimen from food handler?</i> <i>Specimen from staff?</i> <i>Onset date?</i>	



Austin/Travis County Health & Human Services Department

Disease Prevention and Health Promotion
Epidemiology and Health Statistics Unit
15 Waller Street
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Control Measures for In-Patient Care Facilities Experiencing an Increased Number of Patients with Respiratory Illness

Below is a list of general control measures that have been implemented in area in-patient care facilities during a cluster of respiratory illness. The decision to implement these control measures lies with the facility affected. When implemented, these measures have successfully prevented further illness among the well residents and staff of the facility.

- Have symptomatic residents stay in their own rooms as much as possible, including restricting them from common activities, and have their meals served in their rooms when possible.
- Limit the number of large group activities in the facility and consider serving all meals in resident rooms when the outbreak is widespread (involving multiple units of the facility).
- Avoid new admissions or transfers to wards with symptomatic residents.
- Limit visitation and exclude ill persons from visiting the facility via posted notices. Consider restricting visitation by children during community outbreaks of influenza.
- Monitor personnel absenteeism due to respiratory symptoms and exclude those with influenza-like symptoms from work until at least 24 hours after they no longer have a fever.
- Restrict personnel movement from areas of the facility having illness to areas not affected by the outbreak.
- Administer the current season's influenza vaccine to unvaccinated residents and health care personnel according to current vaccination recommendations.
- Sanitize all surfaces (doorknobs, railings, tabletops) as often as possible, at least twice a day using bleach solution or other disinfectant approved for influenza and other respiratory illnesses.
- Make alcohol-based sanitizer readily available throughout facility.
- Stress hand washing to all staff and residents.
- Housekeeping staff cleaning after ill patients should use universal precautions including a face mask.
- Post a sign on the front door alerting people to the symptoms patients are experiencing.
- Send courtesy letter to families of all patients.
- When new cases are identified, please capture the requested information on the Line List and Epi-Curve tools provided.
- Implement Standard and Droplet Precautions for all residents with suspected or confirmed cases. (see other side)

CDC's guidance titled Prevention Strategies for Seasonal Influenza in Healthcare Settings contains details on the prevention strategies for all health care settings. The Health Department encourages implementing the following recommendations:

Standard Precautions are intended to be applied to the care of all patients in all health care settings, regardless of the suspected or confirmed presence of an infectious agent. Implementation of Standard Precautions constitutes the primary strategy for the prevention of healthcare-associated transmission of infectious agents among patients and health care personnel.

Examples of standard precautions include:

- Wearing gloves if hand contact with respiratory secretions or potentially contaminated surfaces is anticipated.
- Wearing a gown if soiling of clothes with a resident's respiratory secretions is anticipated.
- Changing gloves and gowns after each resident encounter and performing hand hygiene.
- Perform hand hygiene before and after touching the resident, after touching the resident's environment, or after touching the resident's respiratory secretions, whether or not gloves are worn. Gloves do not replace the need for performing hand hygiene.

Droplet Precautions are intended to prevent transmission of pathogens spread through close respiratory or mucous membrane contact with respiratory secretions. Droplet Precautions should be implemented for residents with suspected or confirmed influenza for 7 days after illness onset or until 24 hours after the resolution of fever and respiratory symptoms, whichever is longer, while a resident is in a health care facility.

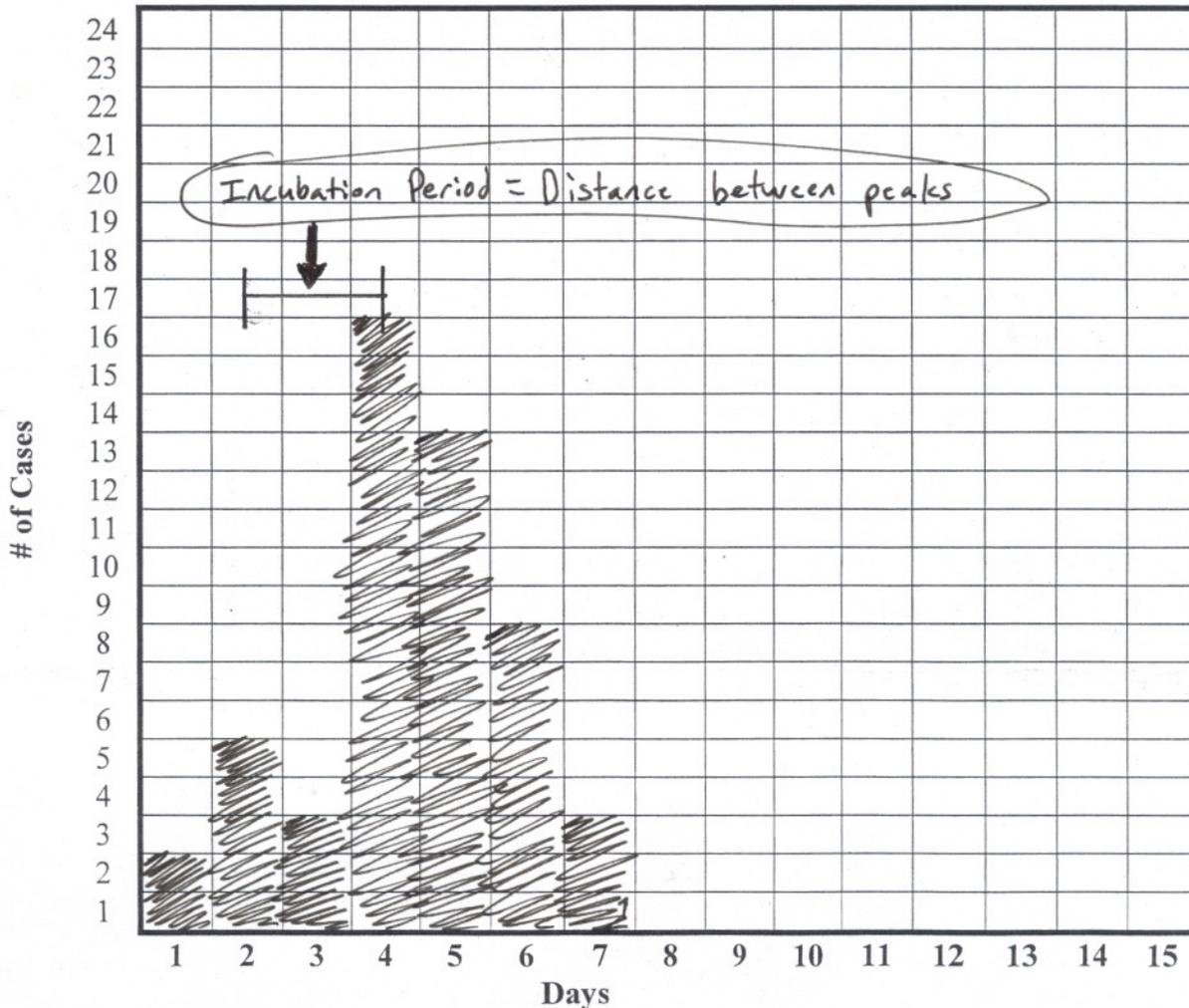
Examples of Droplet Precautions include:

- Placing ill residents in a private room. If a private room is not available, place (cohort) residents suspected of having influenza residents with one another.
- Wear a facemask (e.g., surgical or procedure mask) upon entering the resident's room. Remove the facemask when leaving the resident's room and dispose of the facemask in a waste container.
- If resident movement or transport is necessary, have the resident wear a facemask (e.g., surgical or procedure mask), if possible.
- Communicate information about patients with suspected, probable, or confirmed influenza to appropriate personnel before transferring them to other departments.

EPI CURVE JOB AID

- Use this form to track the progress of a potential outbreak and assess ongoing transmission
- Track incubation on the graph by measuring the distance between the peaks

DAY	Residents	Staff	Family	Other	Total
1					2
2	 				5
3	-				3
4	 				16
5		 			13
6	 	=			8
7	-	-			3
8	-	-	-	-	0
9	-	-	-	-	0
10					
11					
12					
13					
14					



EPI CURVE JOB AID

- Use this form to track the progress of a potential outbreak and assess ongoing transmission
- Track incubation on the graph by measuring the distance between the peaks

DAY	Residents	Staff	Family	Other	Total
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					

