Influenza Update 2018-19 Season

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Outline

I. 2017-18 Flu Season Surveillance Summary

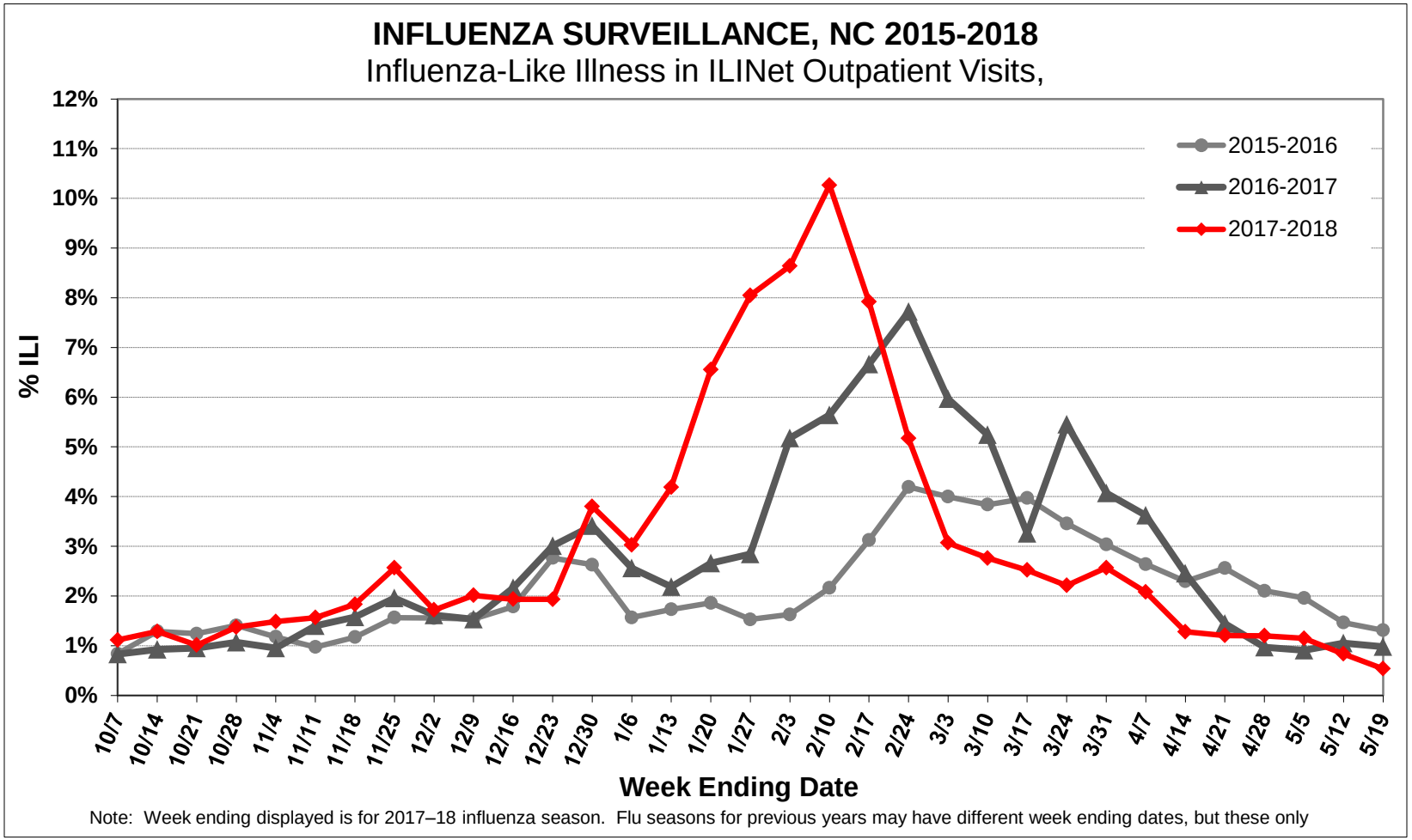
II. 2018-19 Influenza Vaccine Updates

III. Flu reporting…

IV. Interim Guidance for Flu Outbreaks in Long-term Care Facilities

2017-18 Flu Season Summary

- In NC, went above baseline activity at the end of December 2017
- Flu A(H3) was the predominant strain



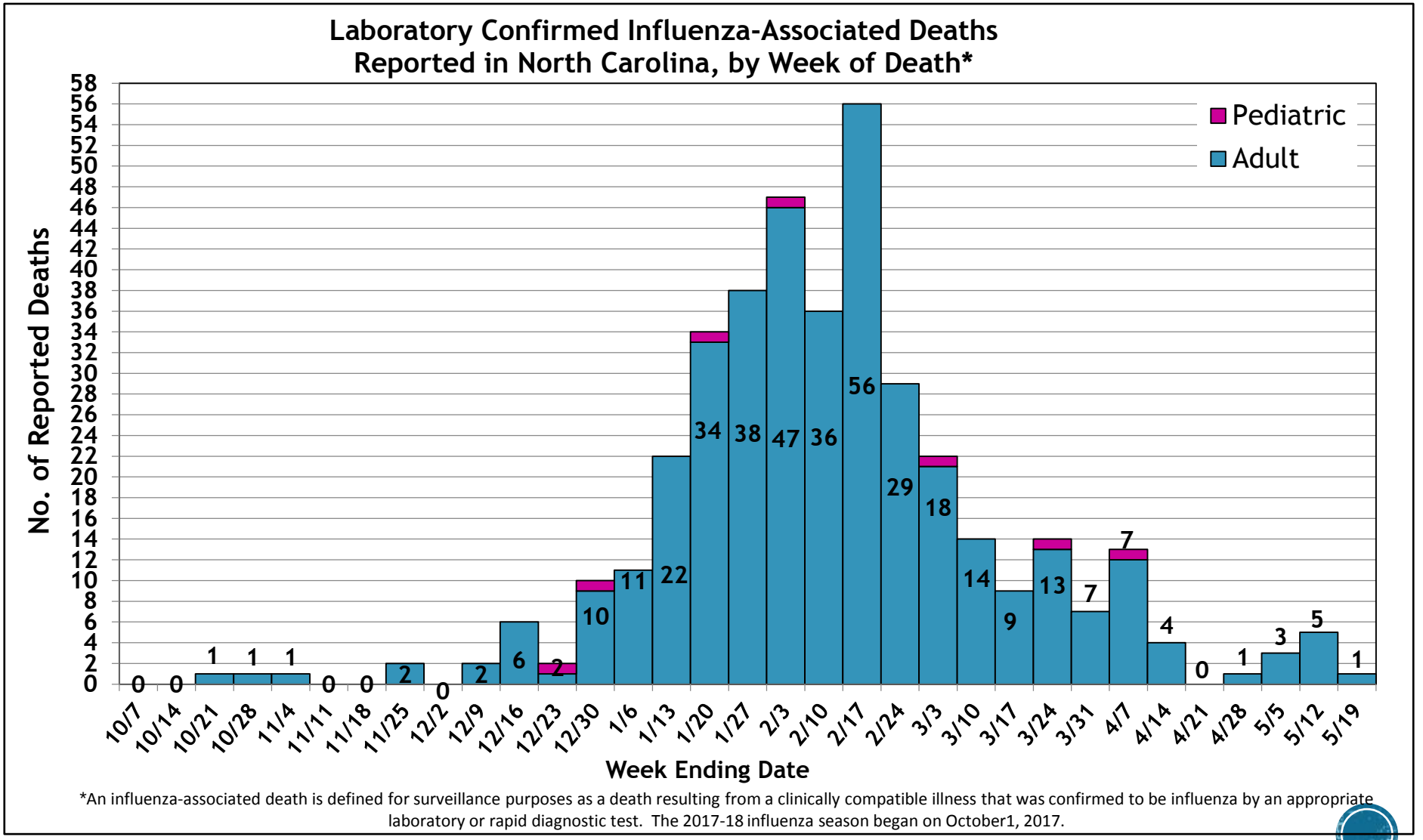
Flu activity indicators were notable for the sheer volume and intensity of flu that occurred in most of the country at the same time.

- Nationally, hospitalization rates (all ages) were the highest ever recorded!
- The cumulative (all ages) hospitalization rate is 106.6/100,000 for the 2017-18 season.
- In NC, the highest %ILI seen in outpatient settings since reporting began!

2017-18 Flu Deaths

- **391** total deaths reported
- 221(57%) Females; 170 (43%) Males
- 7 pediatric deaths
- 211 were influenza type A
  - 46 (22%) were Flu A(H3)
- 101 were influenza type B
- Vaccine status was known for 243 cases
  - 166 (42%) were vaccinated
  - 225 (58%) were unvaccinated or unknown

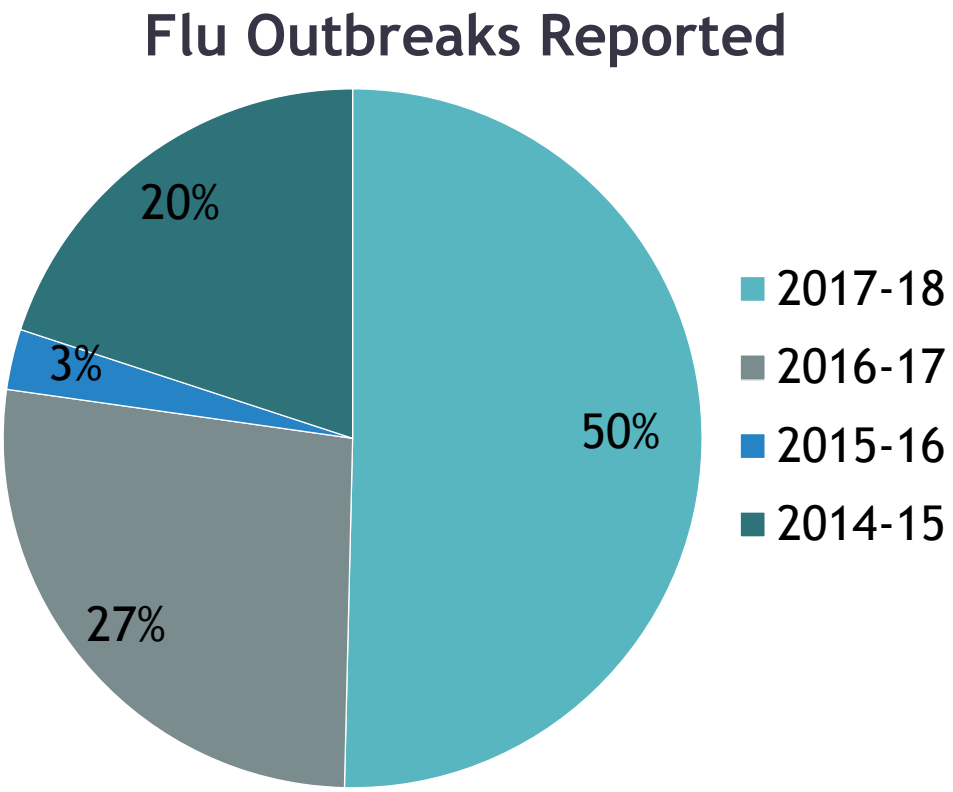
Flu-associated death by week, 2017-18



*An influenza-associated death is defined for surveillance purposes as a death resulting from a clinically compatible illness that was confirmed to be influenza by an appropriate laboratory or rapid diagnostic test. The 2017-18 influenza season began on October1, 2017.

Influenza outbreaks reported over the last 4 seasons-

2014-15: H3N2 predominant season
2015-16: H1N1 & B predominant season
2016-17: H3N2 predominant season
2017-18: H3N2 predominant season



2017-18 Flu Vaccine Coverage

As of November 2017 (early season data) nationally-

- Approximately 38% of all persons 6 months and older received flu vaccine.
- Flu vaccination coverage among adults increased as age increased.
  - Highest among adults ≥65 years (56.6%) and lowest among adults 18–49 years (30.6%). (similar to past seasons)
- Early estimates for 2017 indicated higher percentage of adults were vaccinated at a pharmacy/store compared to last season.
- Vaccine effectiveness, from mid-season, was 36% against Flu A & B types.

Influenza Vaccine: 2018-19 Components

Trivalent Vaccine contains:

- A/Michigan/45/2015 (H1N1)pdm09-like virus
- A/Singapore/INFIMH-16-0019/2016 A(H3N2)-like virus*
- B/Colorado/06/2017-like (Victoria lineage) virus*

Quadrivalent Vaccine contains:

- B/Phuket/3073/2013-like (Yamagata lineage) virus

*indicates updated strains for 2018-19

Influenza Vaccine: New in 2018-19 Season

- ACIP reccommends, providers may choose to administer any licensed, age-appropriate influenza vaccine (IIV, recombinant influenza vaccine [RIV], or LAIV4). Intranasally administered live attenuated influenza vaccine (LAIV) is now an option for those it is appropriate for.
- Two regulatory actions updated are-
  - FDA approved expanded age indication for Afluria quadrivalent (IIV4), previously was for ≥18 years is now licensed for ages ≥5 years.
  - FDA approved expanded age indication for Fluarix quadrivalent (IIV4), previously was for ≥3 years is now licensed for ages >6 months of age

Current flu activity

- Some countries are seeing Flu A(H1N1) activity and some countries are seeing Flu A(H3)…
- In the last two weeks we have heard of an uptick in flu activity and seeing some activity in NC Detect statewide
- We have seen very few positives Flu A and Flu B from testing results
- Parainfluenza activity was seen in early July
- Rhinovirus activity was slightly up in mid-August and is up a little again

2018-19 Flu Season: Influenza Surveillance

For the first time we will be viewing ILI outpatient data with syndromic surveillance data, what does this mean for LHDs?

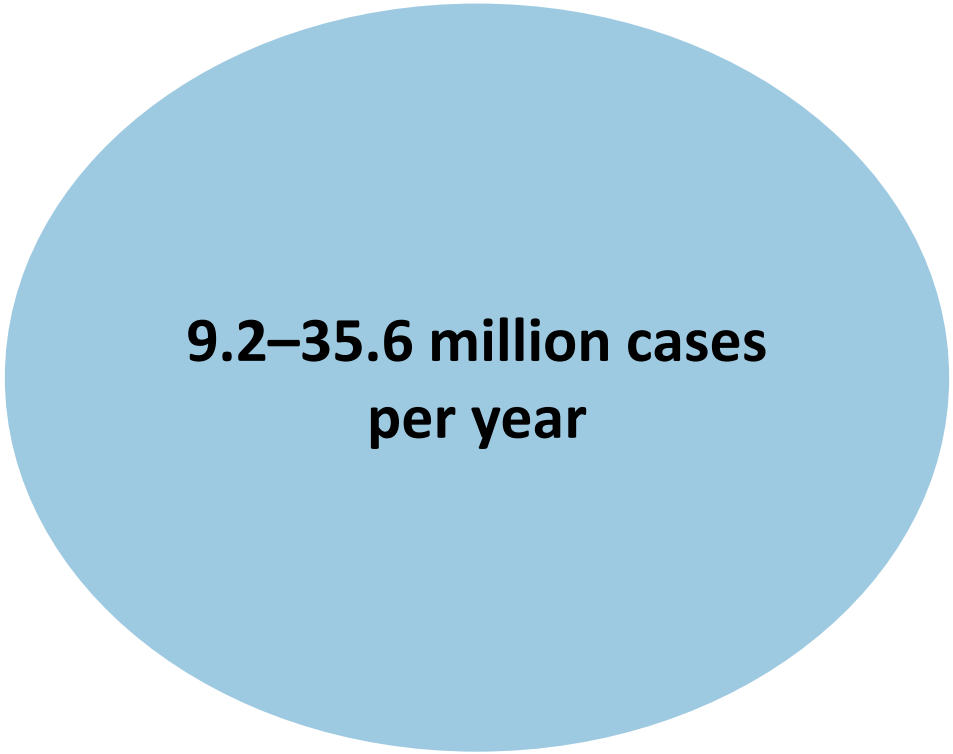
- New baselines will be calculated
- There will be more sites enrolled in the sentinel program
  - 70 sentinel providers & 126 EDs may be combined
- Data will be more clear, giving a better picture of what flu activity is coming

Is Flu Reportable?

FLU POSITIVES ARE **NOT** REPORTABLE IN NC!

- **Flu deaths are reportable**
- Flu outbreaks are reportable
- Novel flu cases are reportable

Annual burden of flu in the United States, 2010 - 2016



https://www.cdc.gov/flu/about/disease/burden.htm

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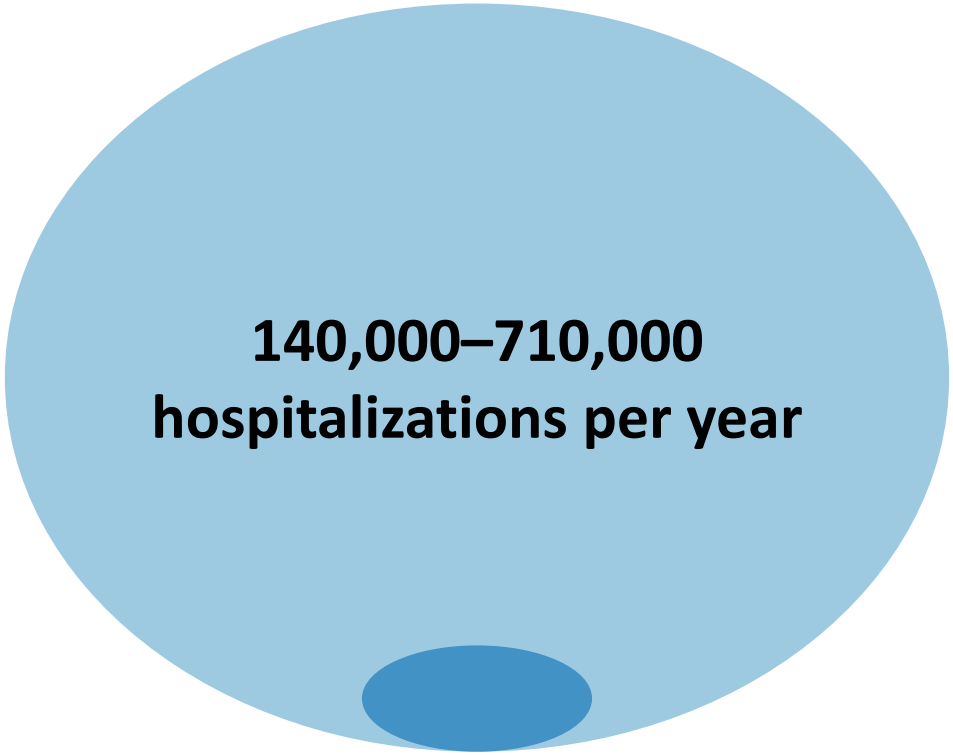

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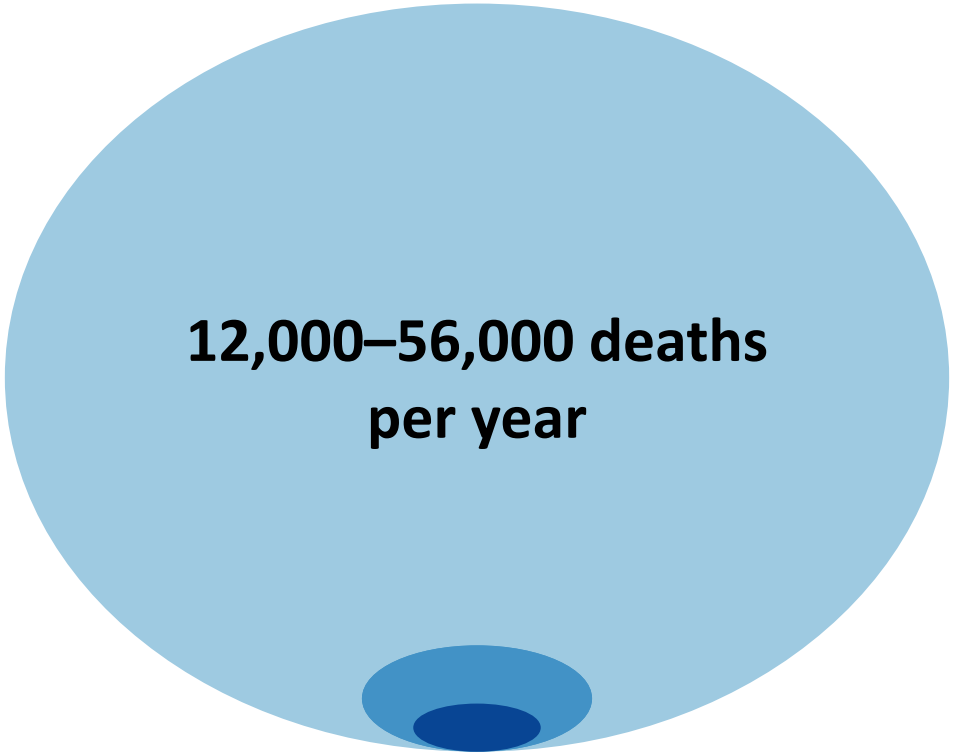

https://www.cdc.gov/flu/about/disease/burden.htm

Flu deaths are reportable in NC

Clinical description:

An influenza-associated death (pediatric and adult) is defined for surveillance purposes as a death resulting from a clinically compatible illness that was confirmed to be influenza (either seasonal or pandemic) by an appropriate laboratory or rapid diagnostic test.

There should be no period of complete recovery between the illness and death.

Flu deaths are reportable in NC

A death should **NOT** be reported if:

1. There is no laboratory confirmation of influenza virus infection.
2. The influenza illness is followed by full recovery to baseline health status prior to death.
3. After review and consultation there is an alternative agreed upon cause of death.

NC EDSS Reporting

When reporting flu associated deaths in NCEDSS please note the following is entered:

- ✓ Name of case
- ✓ Date of Birth
- ✓ **Date of Death**
- ✓ **Labs**- rapid, PCR, or culture
- ✓ Vaccine status
- ✓ Any underlying conditions
- ✓ Reporting source
- ✓ Treatment

Reporting to NC EDSS

Influenza-associated deaths are under-reported

	All events, n (%)	2014–15 season, n (%)	2015–16 season, n (%)	2016–17 season, n (%)
Reporting source	**n = 587**	**n = 218**	**n = 61**	**n = 218**
Public Health Epidemiologist	**320 (57)**	**112 (53)**	**38 (67)**	**107 (52)**
Provider	**219 (39)**	**83 (39)**	**19 (33)**	**93 (45)**
Vital Records	**24 (4)**	**16 (8)**	**0**	**7 (3)**

Is Flu Reportable?

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- **Flu outbreaks are reportable**
- Novel flu cases are reportable

Flu outbreaks are reportable in NC

- Can occur in long term care facilities, skilled nursing, acute care, schools, daycare, etc.
- Ask for a line list with- onset date, symptoms, number of ill patients and staff, and any testing results
- Use flu outbreak worksheet

INFLUENZA OUTBREAK WORKSHEET-INITIAL NOTIFICATION

INFLUENZA OUTBREAK: If there is one laboratory-confirmed influenza positive case along with other cases of respiratory infection in a unit of a long-term care facility, an influenza outbreak might be occurring.

DISEASE: Influenza	CALL TAKEN BY:
CALL DATE:	CALL TIME:

CALLER INFO

NAME:	PHONE:
TITLE:	COUNTY:

FACILITY INFO

FACILITY NAME:

FACILITY TYPE:

FIRST RESIDENT SYMPTOM ONSET DATE:

LAST RESIDENT SYMPTOM ONSET DATE:

# of ill residents: _____	Total # of residents: _____
# of ill staff: _____	Total # of staff: _____

CLINICAL INFO

Symptoms:	Fever	Cough	Sore throat	Body aches
Other:				

% of residents vaccinated: _____

No. of cases hospitalized: _____

No. of deaths associated this outbreak: _____

TREATMENT NOTES

TESTING

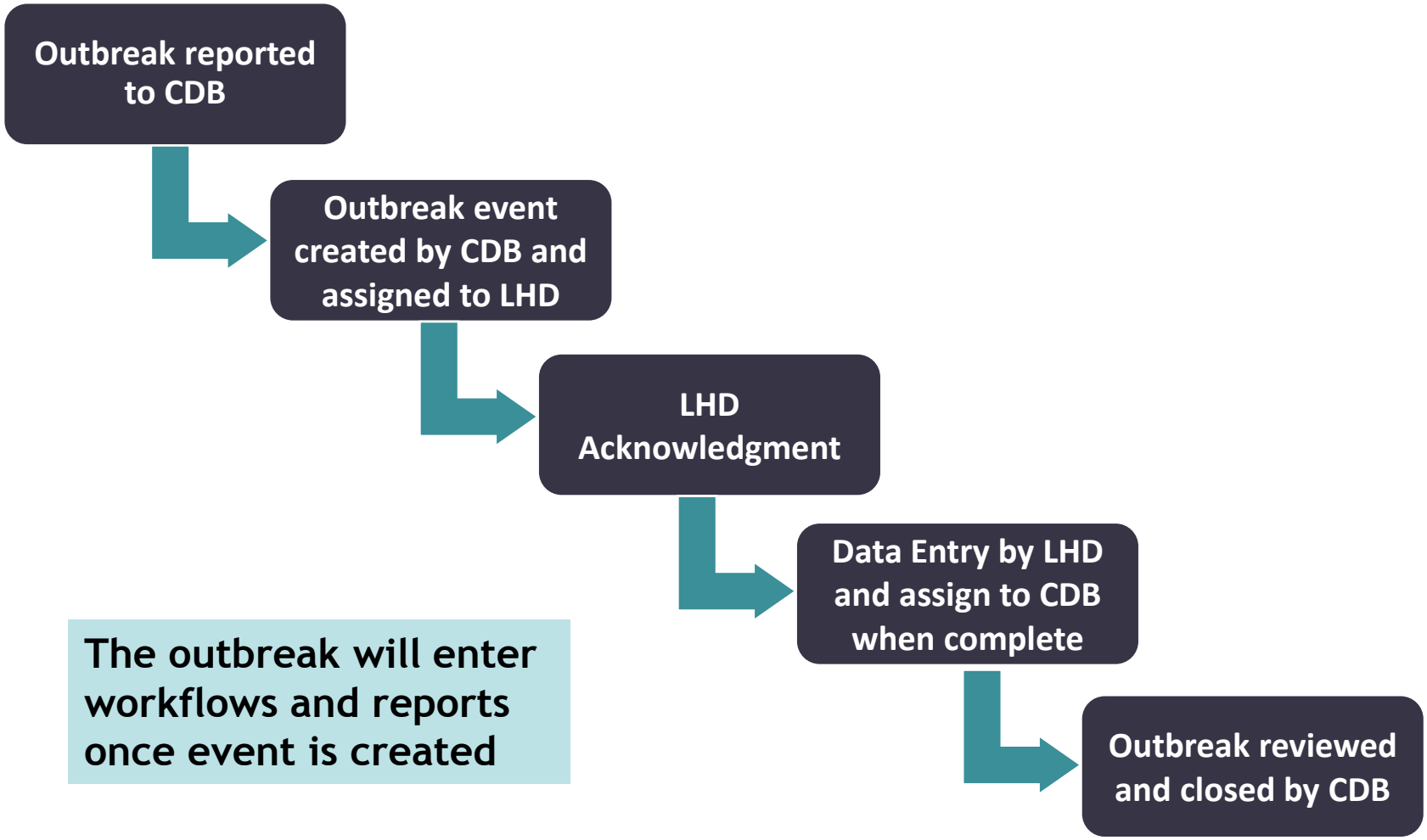
CASE	DATE	TYPE: ☐Rapid ☐PCR ☐Other ☐Unknown	RESULTS
1		TYPE: ☐Rapid ☐PCR ☐Other ☐Unknown	
2		TYPE: ☐Rapid ☐PCR ☐Other ☐Unknown	
3		TYPE: ☐Rapid ☐PCR ☐Other ☐Unknown	

NOTES

Flu Outbreaks in "School" Settings

- School can be represented as elementary, high school, college/university, or childcare centers
- LHDs cannot close/shut down schools!
- Ask the school nurse or data person if absenteeism is above baseline for that time of year
  - Can use a 3 year average
  - Should compare same time of year
- Note any unusual presentations
- Cleaning guidance- https://www.cdc.gov/flu/school/cleaning.htm

NC EDSS Outbreak Reporting Summary



The outbreak will enter workflows and reports once event is created

NC EDSS Influenza Outbreaks

What minimum data is needed to close influenza outbreaks?

- Administrative:
  - Primary Owning jurisdiction, final outbreak information (primary illness, date outbreak declared over). Investigation trail should be assigned to state
- Reporting
  - Outbreak reporter information (usually the facility where the outbreak occurred), LHD notifications, CDB notifications
- Response
  - Date investigation started, Lead investigator, outbreak response information, outbreak investigation information (especially control measures)
- Results
  - All outbreak summary info
  - Counts: at least total # ill, hospitalized, and died. Try to find out how many residents in facility and how many vaccinated before outbreak
  - Setting
  - Lab methods- at least one case should be lab confirmed and entered in the outbreak

Is Flu Reportable?

FLU POSITIVES ARE **NOT** REPORTABLE IN NC!

- Flu deaths are reportable
- Flu outbreaks are reportable
- **Novel flu cases are reportable**

What is Novel Flu?

- There are many different influenza A viruses
- Some are found in humans and others in animals such as birds and swine.
- State lab of public health (SLPH) can test for the novel strains upon request and approval from CDB.

Novel Flu: Highly-Pathogenic Avian Influenza (HPAI)

- Highly pathogenic avian influenza (HPAI) infections have been reported in U.S. domestic poultry (backyard and commercial flocks), and wild birds
- These viruses are thought to have the potential to infect people and cause severe illness. To date no human avian influenza infections have been documented in the U.S.
- An exposed person is defined as a person with contact in the past 10 days to infected **sick or dead birds**, or infected flocks.
- Exposed persons should monitor themselves for new illness for 10 days after the last known exposure. The presence of fever and respiratory symptoms (e.g., cough, sore throat, shortness of breath, difficulty breathing) should be assessed daily

https://www.cdc.gov/flu/avianflu/guidance-exposed-persons.htm

HPAI: Local Health Department Roles

1. Investigation
   a. Identify community members exposed to HPAI
2. Monitoring and management of exposed persons
   a. Community members
   b. Responders from their county (if any) after the event
3. Communication
   a. Public
   b. Providers

CD NURSE TOOLKIT for HPAI

- Symptom monitoring log
- Monitoring instructions for exposed people
- Provider memo on HPAI
- Line list shell
- HPAI contact questionnaire

http://epi.publichealth.nc.gov/cd/lhds/manuals/cd/other_diseases.html

Novel Flu: H3N2/H1N2 Variant

- Influenza viruses that normally circulate in pigs are called "variant" viruses when they are found in people.
- Influenza **A H3N2v** viruses were first detected in people in July 2011
- In 2018, nationally there have been 13 cases reported; 1 A(H3N2)v and 12 A(H1N2)v
- These variant viruses have mostly been associated with prolonged exposure to pigs at agricultural fairs
- Majority do not result in person-person spread, good to investigate and limit further exposure

https://www.cdc.gov/flu/swineflu/h3n2v-cases.htm

Interim Guidance for Influenza Outbreak Management in Long-term Care Facilities

Summarized from-

http://www.cdc.gov/flu/professionals/infectioncontrol/ltc-facility-guidance.htm

Interim Guidance for Influenza Outbreak Management in LTCF

Preventing transmission of influenza viruses and other infectious agents within health care settings, including in long-term care facilities, requires a multi-faceted approach that includes the following:

1. Vaccination
2. Testing
3. Infection Control
4. Antiviral Treatment
5. Antiviral Chemoprophylaxis

LTCF Guidance: Vaccination

- Influenza vaccination should be provided routinely to all residents and health care workers of long-term care facilities.
- Higher vaccination levels among personnel have been associated with a lower risk of health care facility-associated influenza cases.

Vaccination FAQs

- Q: Facility states seeing flu in residents that were previously vaccinated. Should we re-vaccinate?
- A: No, there is no ‘booster’ or re-vaccinate option for those that got the seasonal vaccine within the current season. People over 65 years can choose to get the high-dose vaccine.

- Q: For staff that refuse getting a flu vaccine, do they have to wear masks or be removed from work?
- A: Mask policy is up to the facility. Cannot exclude individuals from work for not being vaccinated.

LTCF Guidance: Testing

If there is one laboratory-confirmed influenza positive case along with other cases of respiratory infection in a unit of a long-term care facility, an influenza outbreak **may** be occurring.

In order of priority, the following influenza tests are recommended: RT-PCR > immunofluorescence > rapid influenza diagnostic tests

LTCF Guidance: Testing

- Once a single lab-confirmed case has been identified and an outbreak is established, conduct surveillance until at least 1 week after the last confirmed case

Test for flu if-

- ✓ Ill persons in previously unaffected units
- ✓ Persons who develop acute respiratory illness more then 72 hours after starting antiviral chemoprophylaxsis
- ✓ Long-term care residents that are medically fragile that manifest atypical signs & symptoms

LTCF Guidance: Infection Control

- Implement daily active surveillance for respiratory illness among ill residents, health care personnel and visitors.

- Implement **Standard** and **Droplet** Precautions for all residents with suspected or confirmed influenza
  - Standard Precautions – http://www.cdc.gov/hicpac/2007IP/2007ip_part3.html#a
  - Droplet Precautions – http://www.cdc.gov/hicpac/2007IP/2007ip_part4.html#5

Infection Control – FAQs

- Q: How long should we implement droplet precautions for residents with influenza?

- A: Implement for 7 days after illness onset or until 24 hours after the resolution of fever and respiratory symptoms, whichever is longer.

LTCF Guidance: Antiviral treatment

Administer influenza antiviral treatment and chemoprophylaxis to residents and health care personnel according to current recommendations.

- Treatment should not wait for laboratory confirmation of influenza.
- Best started within first 2 days of symptoms
- The recommended dosing and duration of antiviral treatment is twice daily for 5 days

LTCF Guidance: Antiviral chemoprophylaxis

- All eligible residents in the entire long-term care facility (not just currently impacted wards) should receive antiviral chemoprophylaxis as soon as an influenza outbreak is determined.
- Antiviral chemoprophylaxis is recommended for all non-ill residents, regardless of their influenza vaccination status, in long-term care facilities that are experiencing outbreaks.
- CDC recommends antiviral chemoprophylaxis for a minimum of 2 weeks, and continuing for at least 7 days after the last known case was identified.
  - i.e. From the date of the first symptom onset chemoprophylaxis should be given for 2 weeks, during the outbreak or this time if a new case is identified then continue for 7 days after this

Chemoprophylaxis FAQs

- Q: Should we consider prophylaxis for entire facility when only one unit/wing is having the outbreak?
- A: If residents are cohorted and staff does not go from ill patients to well patients, then just one part of the facility can be given the prophylaxis dosing

- Q: Antiviral chemoprophylaxis can be considered or offered to unvaccinated personnel who provide care to persons at high risk of complications?
- A: It may be considered if the outbreak is caused by a strain that is not well matched by the vaccine, or for whom the vaccine is contraindicated.

LTCF Guidance: Additional Measures to Consider

- 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
- Avoid new admissions or transfers to wards with symptomatic residents.
- Limit visitation and exclude ill persons from visiting the facility via posted notices.

LTCF Guidance: Additional Measures to Consider

- 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 as per current vaccination recommendations.

Additional Flu FAQs

- Q: Can we send specimens to the state lab?
- A: Yes, as part of an outbreak you can send specimens.

- Q: What if a death occurs during an outbreak?
- A: Notify the Epi on call, and enter the event in NCEDSS. Try to obtain a specimen for testing at the state lab.

NC DEPARTMENT OF
HEALTH AND
HUMAN SERVICES

Questions?
Comments?