



24th Annual Chicago Infection Control Conference

September 18, 2019

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Dr. Fricchione has disclosed that there is no actual or potential conflict of interest in regards to this presentation

The planners, editors, faculty and reviewers of this activity have no relevant financial relationships to disclose. This presentation was created without any commercial support.

Learning Objectives

At the conclusion of this course participants will be able to:

- Describe how Chicago Department of Public Health is exploring the root causes of health disparities among those living in Chicago.
- Identify public health resources to contact for reportable disease conditions, obtain specialized treatments, or engage for antibiotic stewardship assessments through the Chicago Department of Public Health.
- Describe surveillance and response efforts around emerging and re-emerging infections including Legionnaires' disease, measles, and preparedness regarding the Ebola situation in the DRC.
- Identify mechanisms of surveillance for acute responses (such as emerging lung diseases in those with vaping history) and how to report these suspected cases to public health.

To obtain credit you must:

- **Complete an electronic evaluation**
- **After completing the evaluation you can generate your certificate immediately.**

In support of improving patient care, Rush University Medical Center is accredited by the American Nurses Credentialing Center (ANCC), the Accreditation Council for Pharmacy Education (ACPE), and the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing education for the healthcare team.

Rush University Medical Center designates this live activity for a maximum of 6.0 AMA PRA Category 1 Credit(s)[™]. Physicians should claim only credit commensurate with the extent of their participation in the activity.

ANCC Credit Designation – Nurses

The maximum number of hours awarded for this CE activity is 6.0 contact hours.

This activity is being presented without bias and without commercial support.

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When Contagion Strikes: Lessons from a Federal Pandemic Influenza Exercise



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1918 Influenza Pandemic

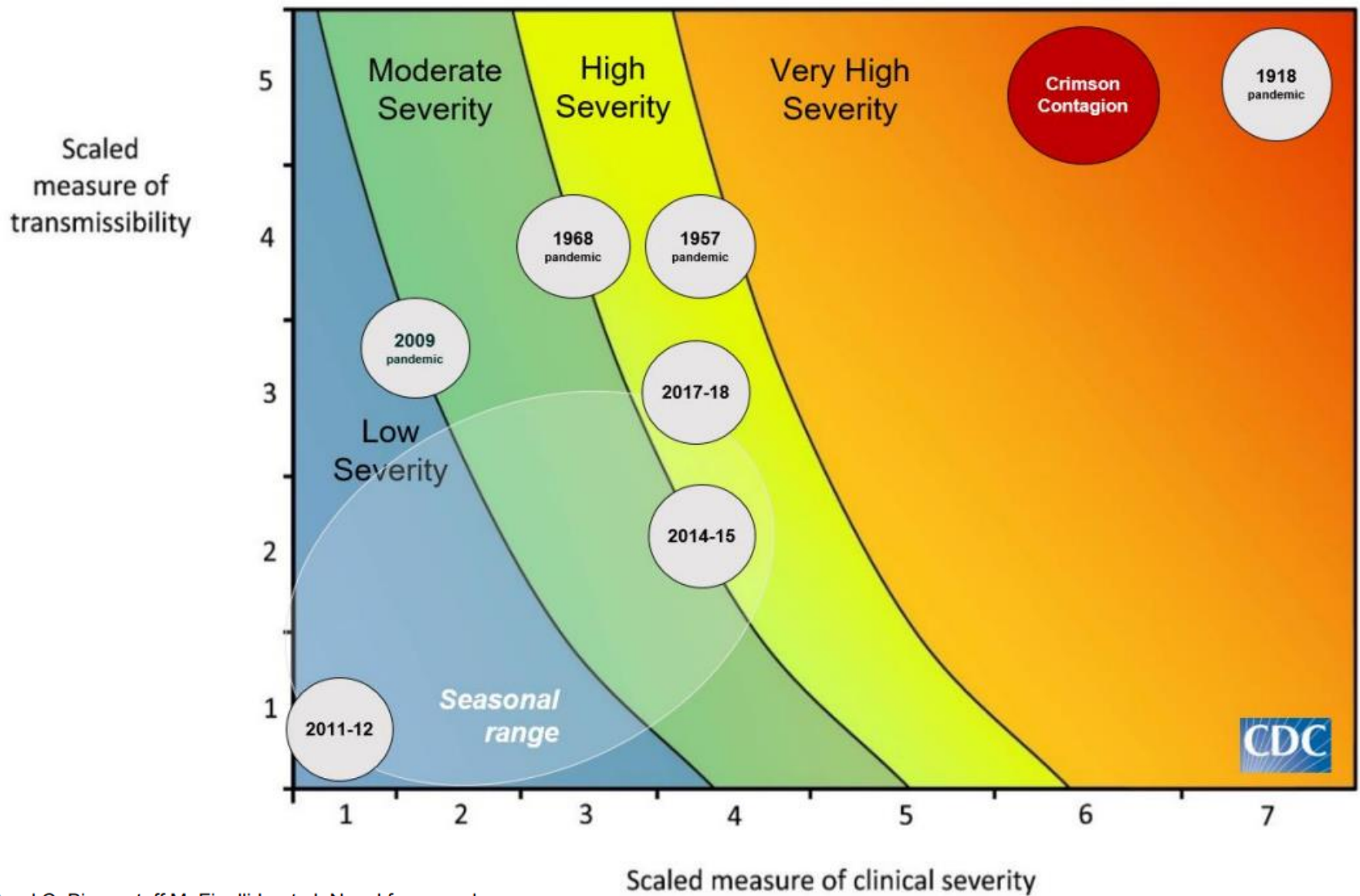
INFLUENZA
FREQUENTLY COMPLICATED WITH
PNEUMONIA
IS PREVALENT AT THIS TIME THROUGHOUT AMERICA.
THIS THEATRE IS CO-OPERATING WITH THE DEPARTMENT OF HEALTH.
YOU MUST DO THE SAME
IF YOU HAVE A COLD AND ARE COUGHING AND
SNEEZING, DO NOT ENTER THIS THEATRE
GO HOME AND GO TO BED UNTIL YOU ARE WELL.

Coughing, Sneezing or Spitting Will Not Be Permitted In The Theatre. In case you must cough or sneeze, do so in your own handkerchief, and if the coughing or sneezing persists, leave the theatre at once.

This Theatre has agreed to cooperate with the Department Of Health in disseminating the truth about Influenza, and thus serve a great educational purpose.

HELP US TO KEEP CHICAGO THE HEALTHIEST CITY IN THE WORLD
JOHN DILL ROBERTSON
COMMISSIONER OF HEALTH

- Deadliest in modern history
 - Infected 500 million people worldwide—about one-third of the planet's population
 - Killed est. 20-50 million people
- In Chicago, until 250 cases reported, patients ordered to Cook County Hospital; then to isolate at home
 - Police stopped sneezers or coughers without handkerchiefs.
 - No smoking on transit.

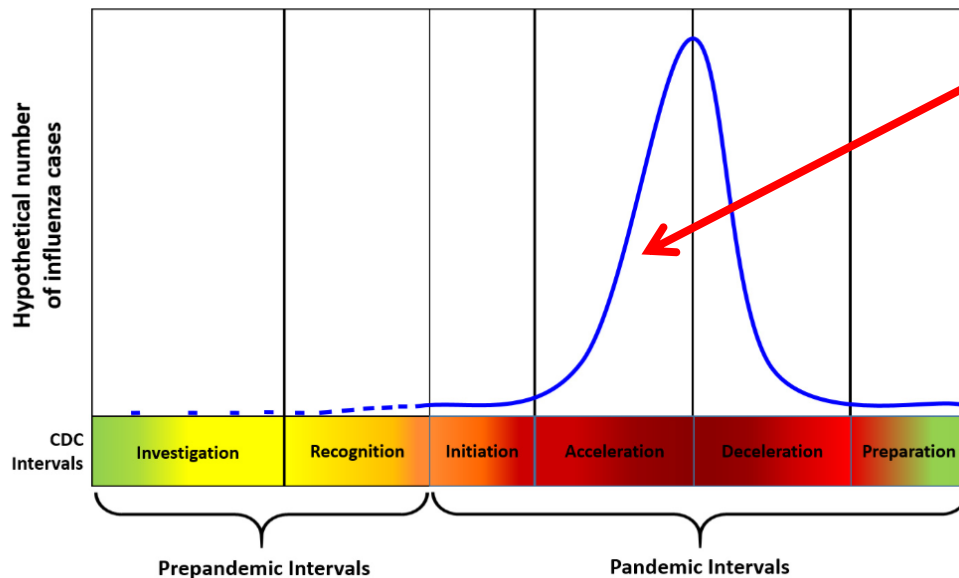


Reed C, Biggerstaff M, Finelli L, et al. Novel framework for assessing epidemiologic effects of influenza epidemics and pandemics. *Emerg Infect Dis*. 2013;19(1):85–91. doi:10.3201/eid1901.120124,

2019 Crimson Contagion Full-Scale Exercise

- Based on a novel influenza A (H7N9) virus antigenically distinct (not matched) to stockpiled H7N9 vaccines available in the Strategic National Stockpile.
- Multiple Chicago Departments and Sister agencies, 17 states and multiple Federal agencies participated.

Figure 1. Preparedness and response framework for novel influenza A virus pandemics: CDC intervals



- Started 47 days into response.
- HHS Secretary had already declared a national public health emergency.
- Stockpiled H7N9 vaccine to be used as a priming dose for persons at high risk of flu complications.

Index case:

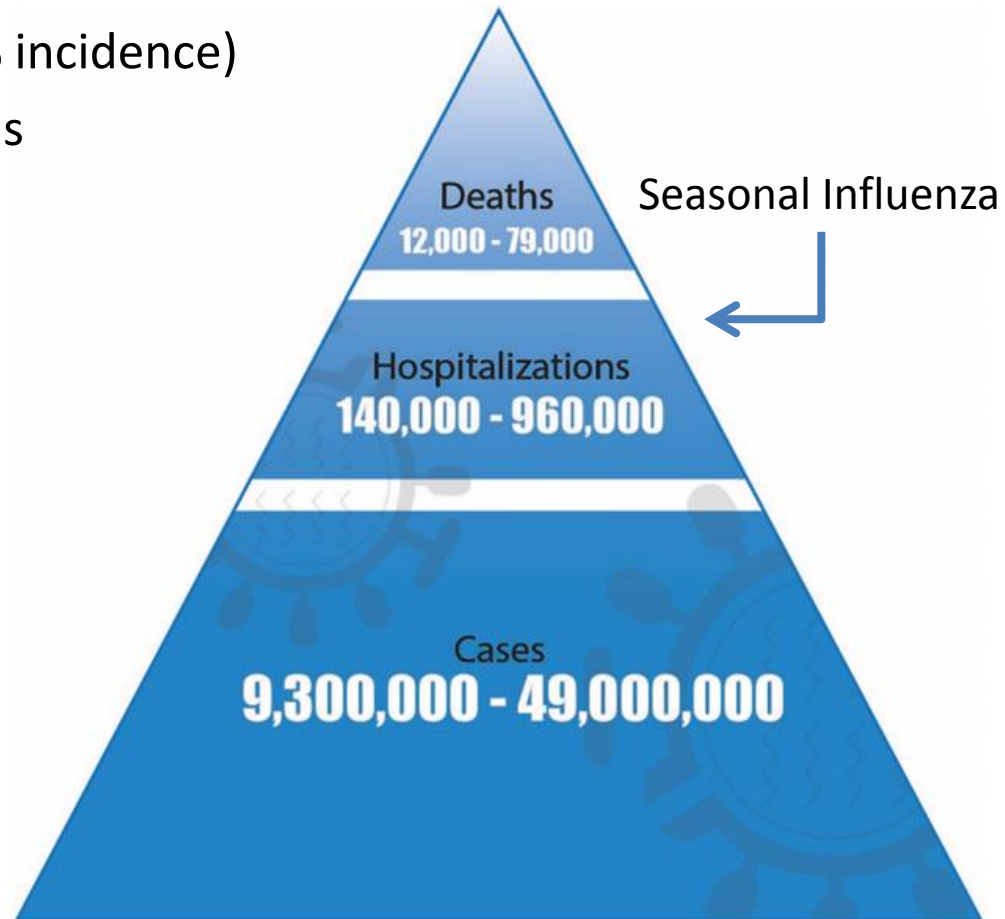
“Severe Influenza-like Illness (ILI) in June”



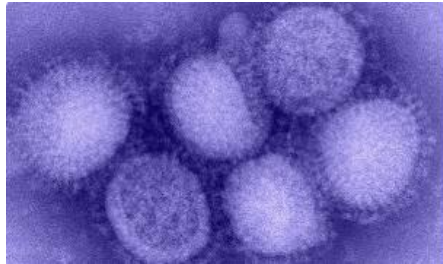
- 52yo male returned traveler from China, presented to an urgent care in Chicago with fever, headache and cough. Sent home with azithromycin but admitted to the hospital the following day with severe pneumonia.
- BioFire FilmArray Respiratory Panel:
 - **positive for influenza A** and parainfluenza virus 3;
 - **negative for A(H1)pdm,09, A(H1), A(H3)** and influenza B.
- CDPH / IDPH coordinate Influenza A positive, non-subtypeable specimen shipment to CDC for further typing → identification of first **novel (A)H7N9** case in US.

Forecasted Exercise H7N9 Disease Burden

- NATIONAL
 - 110 million illnesses (34% incidence)
 - 7.7 million hospitalizations
 - 586,000 deaths
- ILLINOIS
 - 4,600,000 illnesses
 - 321,000 hospitalizations
 - 24,000 deaths
- CHICAGO (during exercise)
 - 430,000 illnesses
 - 23,000 hospitalizations
 - 2,000 deaths



Pandemic Influenza Exercise Objectives



- Examine city administrative and fiscal actions required to initiate and sustain coordinated pandemic response.
- Examine available coordination mechanisms between HHS/CDC, IDPH and CDPH to develop: priority groups, incident specific messaging, medication protocols.
- Examine Political, Economic, Social and Health impacts associated to the implementation of Non-Pharmaceutical Interventions (NPI).
- **Examine CDPH/IDPH influenza surveillance systems and cluster detection software tools to track influenza transmission and burden of disease by community area.**

Core Capabilities

- Emergency Operations Coordination
- Information Sharing and Warning
- Healthcare and Medical Response Coordination



The screenshot shows the Battle Rhythm interface for an incident titled "2019_Crimson Contagion (H7N9)" on Friday, August 16th, 2019, at 09:01:09. The interface displays a timeline of activities:

Time	Activity	Contact Information
09:00 <i>1 minutes passed</i>	Command Briefing	PHEOC: 712.770.5505/ 957828
11:30 <i>in 2h 28m</i>	Update SitRep by 1145	WebEOC
12:00 <i>in 2h 58m</i>	Command Briefing	UPDATED: PHEOC: (712) 451-1059 / 517319
12:15 <i>in 3h 13m</i>	Hospitals Situational Awareness Briefing	Room A: 712-770-5505/ 627-070
13:00 <i>in 3h 58m</i>	State health public information officers call	Room B: Dial by your location: +1 646 876 9923 US (New York) / +1 669 900 6833 US (San Jose)



Public Health
Emergency
Operations
Center (PHEOC)

Core Capabilities

- Medical Material Distribution
- Healthcare and Medical Response Coordination
- Medical Surge
- Continuity of Health Care Service Delivery



Fatality Management with MERC system



Core Capabilities

- Medical Material Distribution
- Medical Surge
- Medical Countermeasures

Pandemic Influenza Vaccine Targeting Checklist
 Planning Activities for State and Local Health Departments

Review key federal guidance documents

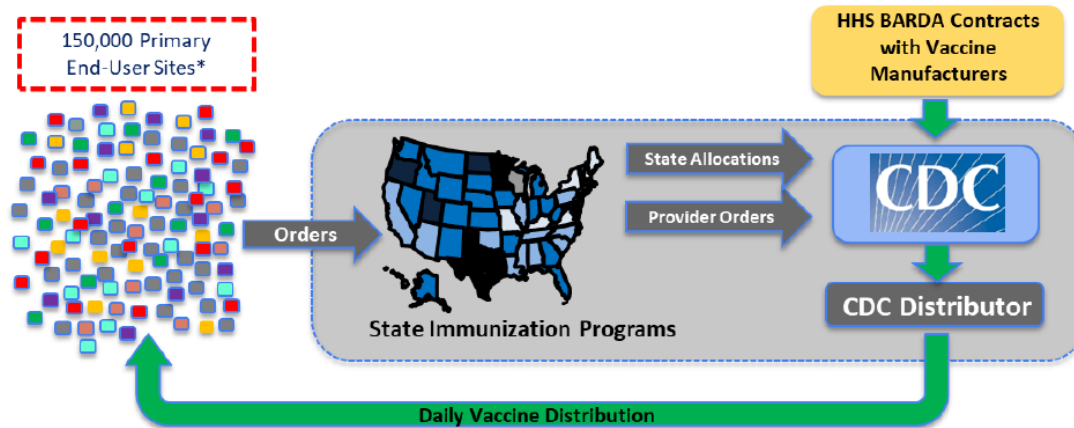
In Progress	Completed	Date Completed	Activity
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Review with key emergency management partners: <ul style="list-style-type: none"> 2018 Interim Updated Planning Guidance on Allocating and Targeting Pandemic Influenza Vaccine During an Influenza Pandemic https://www.cdc.gov/flu/pandemic-resources/pdf/2018-Influenza-Guidance.pdf Critical Infrastructure Sectors https://www.dhs.gov/critical-infrastructure-sectors



Exercise PPE delivery

Event Snapshot Report Ended Drill: PPE Inventory Event Snapshot: 08/14/2019 16:00 Central Standard Time Event Start: 14 Aug 2019 10:30, Event End: 14 Aug 2019 16:00(ENDED QUIETLY)									
Procurement Process	PPE	Supplies	Disposable Gloves	Disposable Gowns	Ebola/HClD PPE bags	Face Shields	Goggles	N95 Respirator Masks	Comment
Yes	Yes	Yes	57248	3278	45	700	11	735	These numbers reflect the items in the hospital central supply storage; additional items are located on nursing units. This does NOT reflect items included in the disaster cache. These numbers reflect the items in the hospital central supply storage; additional items are located on nursing units. This does NOT reflect items included in the disaster cache. These numbers reflect the items in the hospital central supply storage; additional items are located on nursing units. This does NOT reflect items included in the disaster cache.
No	No	No	5000	500	20	100	100	500	
Yes	No	No	4000	900	45	600	307	995	
No Status	No Status	No Status	--	--	--	--	--	--	
Yes	No	No	8000	2000	60	800	100	4000	Soap is expired in these kits

Priming Dose Vaccine POD planning



H7N9 Exercise Tier 1 Priming Dose Request

Tier 1 Group	Data Source	Estimated Base	Modifier	Doses Requested
Essential city services personnel	City of Chicago Staff Emergency Preparedness	33,692	Total COC Staff x 2.5 for Family of Staff per CDPH Policy	84,230
Public Health Personnel				
Emergency Medical Services				
Law enforcement				
Fire Services				
Critical Healthcare	PHEP, Hospital preparedness Program query	141,117	8000 additional Pharmacists estimated	149,117
Pregnant Women	Chicago Health Atlas	36,184	Rough Annual Birth rate X 75%	27,138
Infants and Toddlers	Census Data	95,155	Age 6 mo - 36 mo	95,155
Total Doses				355,640
Doses Requested				360,000

Core Capabilities

- Information Sharing and Warning



Exercise briefing calls for state/local/federal partner situational awareness and public messaging



Press Release

August 13th, 2019

Media Contact:

Elena Ivanova
elena.ivanova@cityofchicago.org

Chicago Continues to Battle the H7N9 Pandemic

CHICAGO – Mayor Lori Lightfoot and the Chicago Department of Public Health (CDPH) continue to work hard to contain the spread of the H7N9 virus and maximize the resources available to mitigate the emergency. The President of the United States declared a National Emergency on Monday in response to the 2019 H7N9 Influenza Pandemic, and the City of Chicago on Tuesday requested a local disaster declaration.

“We need to come together as a city, take care of our neighbors and take all necessary precautions to help prevent the further spread,” said Mayor Lori Lightfoot. “We continue to work very closely with our partners from the federal government and the State of Illinois, as well as Chicago hospitals in response to this pandemic.”

CDPH is coordinating with hospital systems across the city in accordance with federal recommendations to slow the spread of the disease. In addition, CDPH has sought additional resources from federal partners, including pharmaceuticals, medical equipment and personal protective equipment.

“Do not underestimate the potential seriousness of the H7N9 virus, and keep in mind that all ages are susceptible,” said CDPH Acting Commissioner Allison Arwady, M.D. “It is paramount to seek medical care immediately because antiviral drugs work best when antiviral treatment is started as soon as possible after illness begins.”

Chicago has been the hardest hit city in the United States with 1,200 confirmed cases as of August 13th, 2019. CDPH estimates that the 2019 H7N9 virus has already caused at least 210,451 illnesses, 15,645 hospitalizations and 1,370 deaths in Chicago.

The U.S. government is mobilizing a national pandemic influenza vaccination program that will be rolled out in phases. Until the H7N9 vaccine is available, residents are encouraged to take the following actions to protect themselves and their families:

- If you are well, try to avoid close contact with sick people. Avoid touching your eyes, nose and mouth. Germs spread this way. Avoid large public gatherings whenever you can. Clean and disinfect surfaces and objects that may be contaminated with influenza viruses.
- People with flu symptoms should seek medical care for evaluation as soon as possible for potential antiviral treatment.

CRIMCON_EXERCISEBANNER



EXERCISE EXERCISE EXERCISE



EXERCISE INEDSS INFO

****THIS IS AN EXERCISE****

IDPH has indicated that the I-NEDSS system is unavailable until further notice. It is expected to go back online by the end of day, Friday, August 16th. When it goes back online, notification will be made.

In addition, reporting requirements for H7N9 are changing. Effective 08/13/2019, H7N9 ICU admissions and H7N9 deaths are reportable through a REDCap [Exercise/Exercise Case Report](#). Hospital IPs may use this link to enter cases, or fax the information to their local health department.

****THIS IS AN EXERCISE****

CC EXERCISE: HEALTH ALERTS

EXERCISE Health Alert 1: VFC PROVIDER SURVEY

EXERCISE Health Alert 2: Updated Guidance for Personal Protective Equipment (PPE) for H7N9

EXERCISE Health Alert 3: Updated Guidance on Pandemic Influenza (H7N9) Antiviral Treatment

EXERCISE Health Alert 4: Pneumococcal Vaccine Guidance

EXERCISE Health Alert 5: IDPH Catastrophic Incident Response Annex Activated

CC EXERCISE: REFERENCE

EXERCISE: IDPH Catastrophic Incident Response Annex

EXERCISE: Allocating and Targeting Pandemic Influenza Vaccine

EXERCISE: Glance Resource Guide Vaccine Administration And Storage And Handling

EXERCISE: Inhaled Zanamivir (RELENZA®) for Treatment or Chemoprophylaxis of Influenza during a Pandemic

EXERCISE: Oseltamivir for Treatment or Chemoprophylaxis of Influenza during a Pandemic

EXERCISE: Mixing Instructions and Kitting for Pandemic Influenza Vaccine (H7N9 and A503)

EXERCISE: MMWR Recommendations And Reports Volume, 66 Issue

EXERCISE: Pneumococcal ACIP Vaccine Recommendations

EXERCISE EXERCISE EXERCISE

Chicago Department of Public Health



Health Alert



City of Chicago
Lori E. Lightfoot, Mayor

www.chicagohan.org

Chicago Department of Public Health
Allison Arwady, MD MPH, Acting Commissioner

August 14, 2019

Updated Guidance on Pandemic Influenza A(H7N9) Antiviral Treatment

SUMMARY AND ACTION ITEMS

- CDC recommends antiviral treatment as soon as possible for all outpatients and hospitalized patients with suspected or confirmed pandemic A(H7N9) virus infection.
- This guidance updates previously released guidance on "Use of Antiviral Medications for the Treatment of Human Infections with Pandemic Influenza A(H7N9) Virus": <https://www.cdc.gov/urdo/exercise-only/files/mccrg-Antiviral-use-guidance.pdf>.

Background: Antiviral treatment may be initiated on the basis of clinical judgment and should follow current CDC recommendations. Certain populations may be at higher risk for influenza complications such as children <5 years of age, adults ≥65 years of age, pregnant women, persons of any age with immunosuppression, chronic pulmonary, cardiovascular, renal, hepatic, hematological, metabolic disorders, or neurologic and neurodevelopmental conditions, morbid obesity, American Indians or Alaskan Natives. Although all children aged younger than 5 years are considered at higher risk for influenza complications, the highest risk is for those aged younger than 2 years, with the highest hospitalization and death rates among infants aged younger than 6 months.

During this emergency involving pandemic influenza, oseltamivir may be recommended for the following indications and populations:

- Treatment of pediatric and adult patients of all ages with acute uncomplicated influenza, including those who have been symptomatic for more than 48 hours
- Treatment of pediatric and adult patients of all ages who have complicated illness and/or require hospitalization
- Chemoprophylaxis of patients aged 3 months and older*

In the current phase of the pandemic and with the high level of severity associated with 2019 H7N9 influenza (A) infection, **early recognition of illness and prompt initiation of treatment is emphasized and recommended rather than antiviral chemoprophylaxis after suspected exposures.** Persons with risk factors for influenza complications who are household or close contacts of confirmed or suspected cases, and healthcare personnel who have occupational exposures, should be counseled about the early signs and symptoms of influenza, and advised to immediately contact their healthcare provider for evaluation and early treatment if clinical signs or symptoms develop. This guidance may change as additional information is available. Currently, antiviral chemoprophylaxis with oseltamivir is only recommended for the control of institutional outbreaks, such as in nursing homes and long-term care facilities that house large numbers of persons at high-risk of influenza complications.

CDC is in regular contact with influenza antiviral drug manufacturers regarding supply. Please visit the CDC antiviral drug supply page for more information: <https://www.cdc.gov/flu/professionals/antivirals/supply.htm>. In addition, the U.S. Food and Drug Administration (FDA) releases information on the availability of influenza antiviral drugs. For current availability of antivirals, please refer to: <https://www.fda.gov/Drugs/DrugSafety/InformationbyDrugClass/ucm100228.htm>.

ACTION STEPS:

- 1) Please familiarize yourself with the guidance linked below "Oseltamivir for Treatment or Chemoprophylaxis of Influenza during a Pandemic EMERGENCY USE INSTRUCTIONS FOR HEALTHCARE PROVIDERS": <https://www.cdc.gov/urdo/exercise-only/files/mccrg-Oseltamivir-Factsheet-HCps.pdf>
- 2) In addition to enhanced Oseltamivir guidance above, review dosing and indications for inhaled Zanamivir, IV

EXERCISE EXERCISE EXERCISE

Chicago Department of Public Health



Health Alert



City of Chicago
Lori E. Lightfoot, Mayor

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Chicago Department of Public Health
Allison Arwady, MD MPH, Acting Commissioner

August 14, 2019

Updated Guidance on Personal Protective Equipment (PPE) for H7N9

SUMMARY AND ACTION ITEMS

- Severe PPE shortages are expected amidst the 2019 H7N9 influenza pandemic.
- This guidance updates previously released PPE guidance for inpatient settings: <https://www.cdc.gov/urdo/exercise-only/files/mccrg-Infection-Control-HC-Facilities.pdf>

Background: CDC estimates approximately 1.7 – 3.5 billion N95s may be needed to protect U.S. healthcare workers during the (NOTIONAL) 2019 H7N9 influenza pandemic, but only about 100 million are expected to be available. With only 1% of demand expected to be available, conservation measures will be essential. Even with additional production, needs will not be met. Initial conservation measures should include utilization of administrative policies (such as cohorting ill patients in influenza wards) and engineering controls (such as optimizing ventilation). Alternatives to N95s should be utilized, such as elastomeric half-mask respirators and powered air-purifying respirators (PARPs), where feasible. Utilization of N95 respirators and other respiratory protective devices (RPDs) should be modified, as needed, to include extended use and reuse, when acceptable as recommended in infection control guidance. During this pandemic response, RPDs should be prioritized for personnel based on risk of exposure and complications of infection. When numbers of available N95 respirators and other equivalent devices still do not meet demand, despite taking these measures, CDC proposes prioritization of remaining respirators using risk categorization tiers.

PRIORITY GROUPS: Tier 1 includes groups that serve important societal needs, including those healthcare personnel providing direct care to patients with influenza and EMS, Fire, Police personnel who have direct and close contact (within 3 feet) with persons likely to be ill with influenza.

Tier 2 includes pharmacists, mortuary services personnel, critical infrastructure personnel and critical community support service personnel that support vulnerable populations such as the elderly, persons living alone, and families complying with voluntary quarantine when a family member is ill.

ACTION STEPS:

- 1) Please familiarize yourself with the guidance linked below "Interim Guidance for Infection Control Within Healthcare Settings When Caring for Confirmed Cases, Probable Cases, and Cases Under Investigation for Infection with the 2019 H7N9 Pandemic Virus": <https://www.cdc.gov/urdo/exercise-only/files/mccrg-Infection-Control-HC-Facilities.pdf>.
- 2) Train staff on reuse of N95 respirators described here: <https://www.cdc.gov/niosh/topics/hcwcontrols/recommendedguidanceextuse.html>

CONTACT: CDPH Emergency Operations Center, 312-742-3569, CDPHPHEOC@cityofchicago.org

EXERCISE EXERCISE EXERCISE

Chicago Department of Public Health



Health Alert



City of Chicago
Lori E. Lightfoot, Mayor

www.chicagohan.org

Chicago Department of Public Health
Allison Arwady, MD MPH, Acting Commissioner

August 15, 2019

IDPH Catastrophic Incident Response Annex Activated

SUMMARY AND ACTION ITEMS

- Please refer to the [IDPH Catastrophic Incident Response Annex](#) to begin discussions in your health care systems to address legal and ethical issues related to allocation of scarce resources.

Background: Effective immediately, IDPH is activating the [Catastrophic Incident Response \(CIR\) Annex](#) due to acceleration of influenza A (H7N9) pandemic disease activity and incapacitation of the health care delivery system, including lack of a H7N9-matched vaccine, anticipated phased roll out of priming dose vaccine, severe shortage of personal protective equipment (PPE), and increased absenteeism of healthcare workers. Please refer to the IDPH Catastrophic Incident Response Annex (March 2018) to begin discussions in your health care systems related to implementation of Crisis Standards of Care (such as extending use/reuse of supplies, efficient utilization of limited staff, setting up alternate care sites/temporary medical treatment sites). Local health departments, hospitals, and the general health care delivery system should use the CIR Annex as guidance for implementing appropriate mitigation strategies and tactics, and guiding discussion on legal and ethical issues related to allocation of scarce resources. *The Annex is to be used as guidance; at this time there is no current mandate for implementation.* Please socialize this Annex with your colleagues, including clinicians, and disseminate within your health care system as applicable.

ACTION STEPS:

- Please familiarize yourself with the IDPH Catastrophic Incident Response Annex [\[http://www.dph.illinois.gov/sites/default/files/publications/catastrophic-incident-response-annex-052218.pdf\]](http://www.dph.illinois.gov/sites/default/files/publications/catastrophic-incident-response-annex-052218.pdf)
- Please socialize the Annex with your colleagues, including clinicians, and disseminate within your health care system as applicable.

CONTACT: CDPH Emergency Operations Center, 312-742-3569, CDPHPEOC@cityofchicago.org

EXERCISE EXERCISE EXERCISE

Medical Decision Making

- Scarce resources
- Crisis standards of care
- State/Local collaboration

Inventory Management System

CURRENT PROGRAM

---RSS - Whiskey

Change Program

HOME ADMINISTRATION INVENTORY SHIPMENTS SEARCH REPORTS

Due In Inventory

Order #	Created Date	PO#	Product Name	Manufacturer	Units	
7566	8/15/2019	SNS Ventilator Assets 08152019	ventilator, pulmonetic, CareFusion (LTV1200 Series)	Carefusion Solutions	1	<button>Receive</button>

Core Capabilities

- Public Health Laboratory
- Surveillance and Epidemiology Investigation

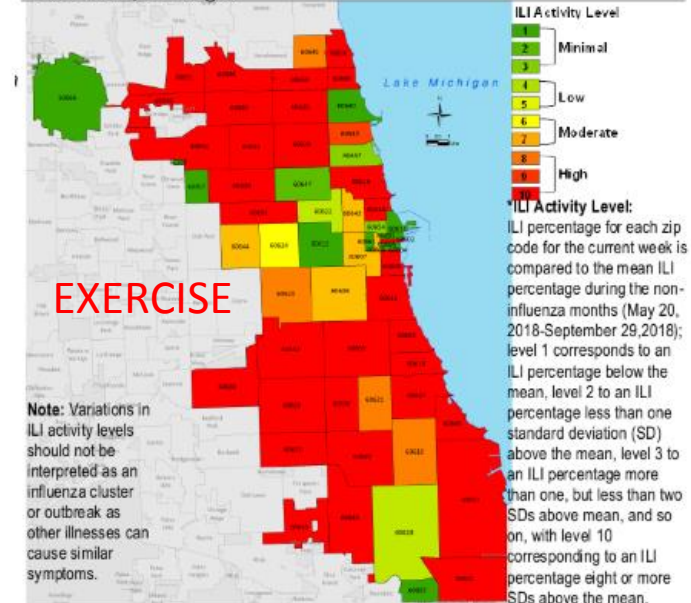


Westside CDC Surveillance and Immunization team

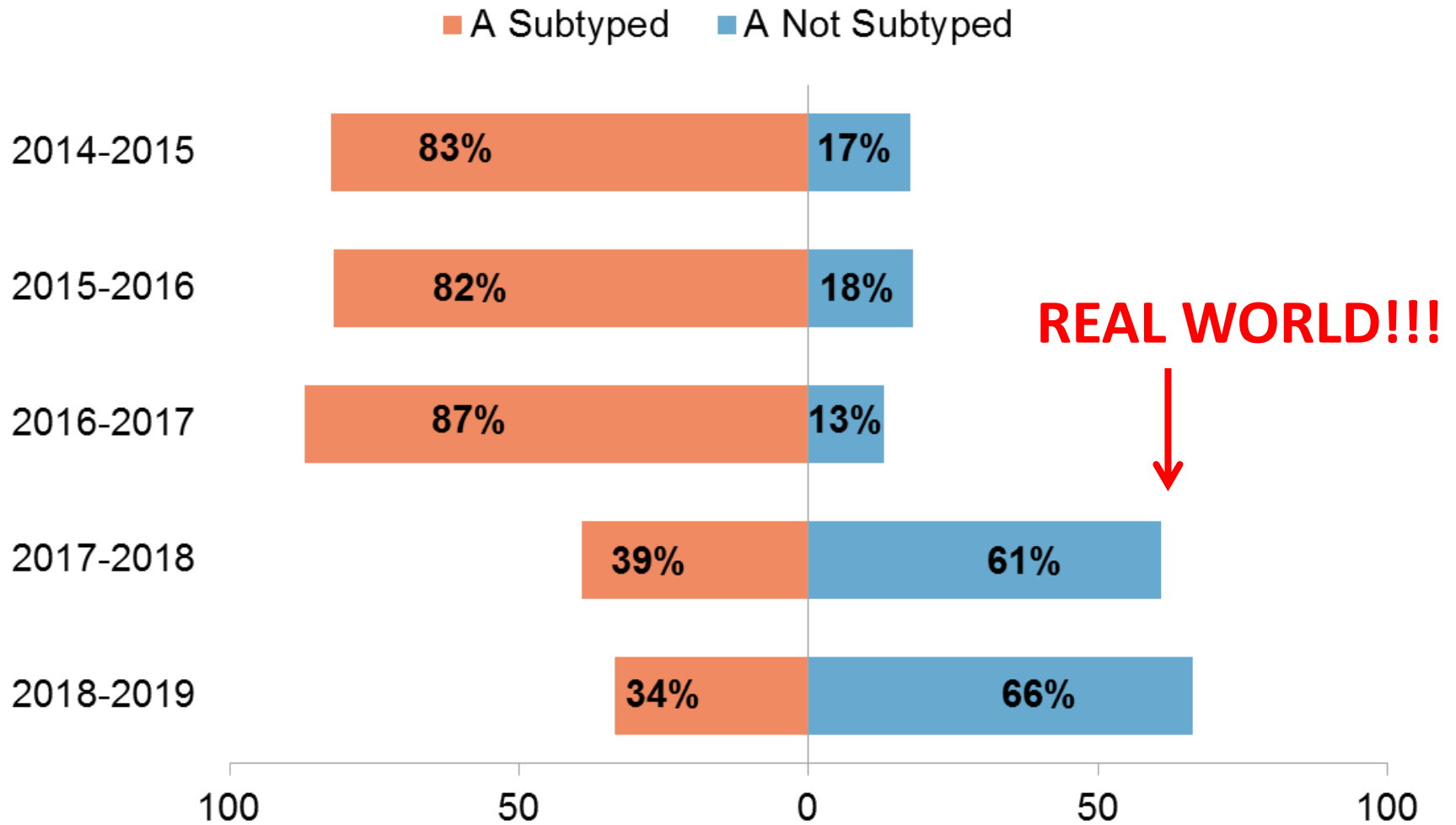
Figure 1. Number of influenza A (H7N9) cases reported for Chicago residents, June-August, 2019.



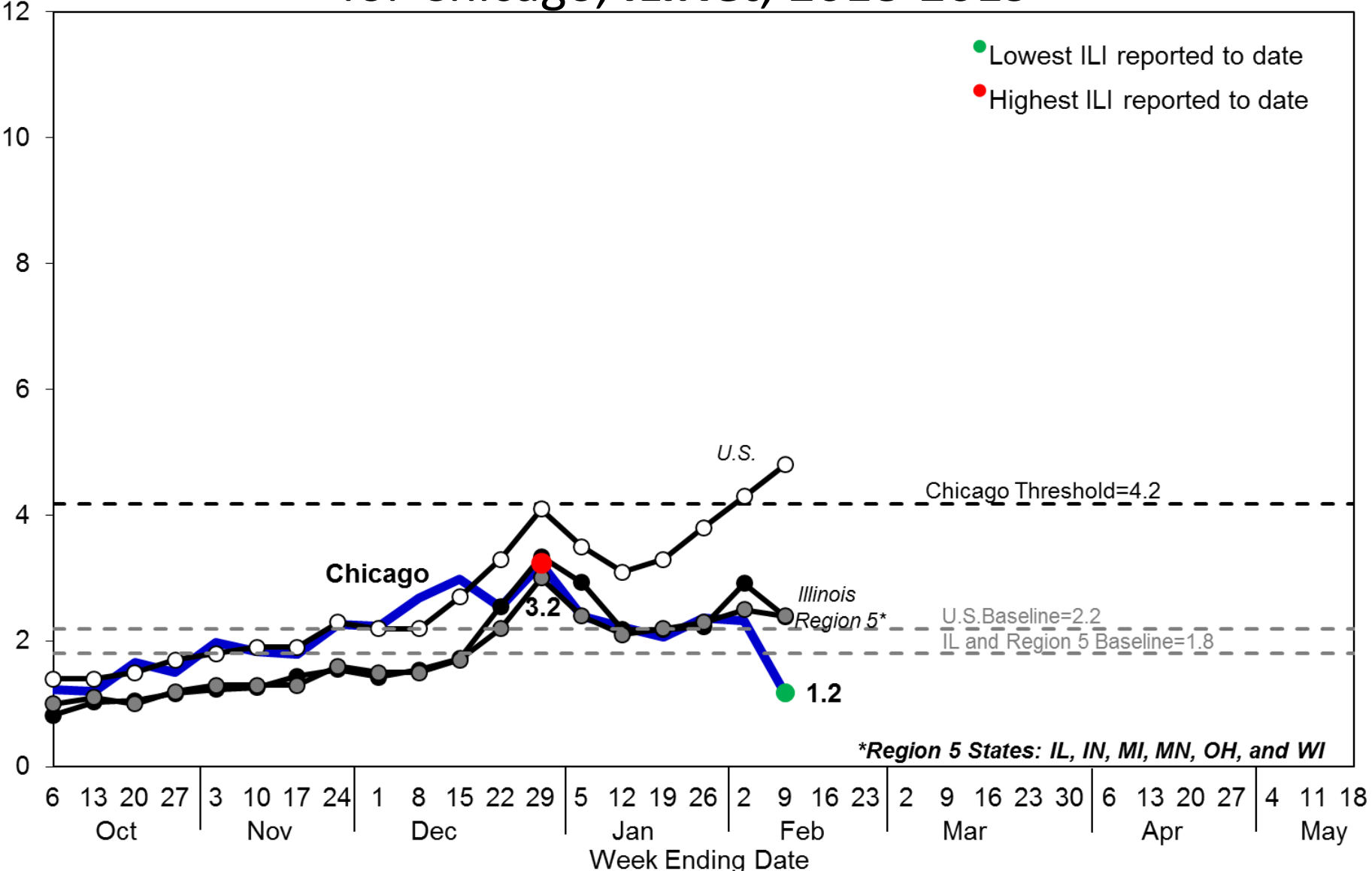
Figure 6. Influenza-like Illness (ILI) activity level by patient zip code determined by chief complaint data submitted to ESSENCE, Chicago.



Percent of Positive Influenza A Specimens Subtyped Cumulative for Weeks 40 - 6



Percent of **outpatient** visits due to influenza-like illness for Chicago, ILINet, 2018-2019





Summary

Cases of laboratory confirmed influenza A (H7N9) virus infections continue to increase in Chicago and across the U.S. Over 13,000 cases have been reported so far in the U.S. CDC estimates that 1.4 million illnesses have occurred, 129,000 hospitalizations, and over 9,000 deaths. Chicago is the most affected city with the number of reported influenza A (H7N9) cases increasing daily; however, reported laboratory-confirmed cases are an underestimate of the true burden of disease.

Current Influenza A (H7N9) Cases Reported

On August 14, 2019 (week 33), 138 cases of influenza A (H7N9) were reported, this is the highest daily reported case count since the first case was detected in Chicago (Figure 1).

Among the 138 cases, one was tested for influenza; which was positive for A (H7N9), the remaining were presumptive positive; 27 (19%) were hospitalized with the highest percentage among those 5-19 years of age (48%); one pediatric death was reported. Selected attributes are summarized in Table 1.

Illness Severity and Complications

Among the 62 (45%) cases with reported underlying medical condition, the most common reported condition was hypertension (37%) followed by diabetes (23%); 14 (11%) cases had pneumonia reported and two were treated with antivirals (Table 1). For reported cases, the cumulative incidence rates continues to be highest among those 0-4 years of age (122 per 100,000) and 5-19 years of age (81 per 100,000) (Figure 2).

Influenza A (H7N9) Cases Reported to Date

Since June 2019, 1,060 cases of influenza A (H7N9) were reported; 436 (41%) were tested for influenza, all were positive for A (H7N9). Selected attributes are summarized in Table 2.

Table 2. Selected attributes of reported influenza A (H7N9) cases for Chicago residents, June 25-August 14, 2019.

Age	#	%	Complications*	#	%
0-4	216	20	Pneumonia	98	10
5-19	394	37	Co-Infection	49	5
20-49	252	24	Intubated	22	2
50-64	131	12	Deaths	20	2
65+	67	6	Pediatric Deaths	10	50
Sex			Med. Conditions*		
Male	536	51	Lung Disease	153	29
Female	524	49	Cardiac Disease	88	17
Treatment/Vacc.					
Vaccinated	494	47	Diabetes	89	18
Antiviral Treatment	18	2	Hypertension	223	43

*among cases with reported information

Figure 1. Number of influenza A (H7N9) cases reported for Chicago residents, June-August, 2019.

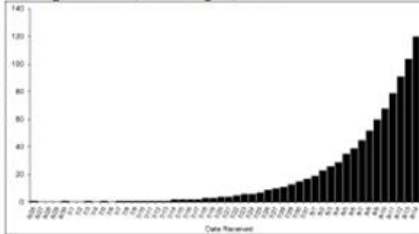
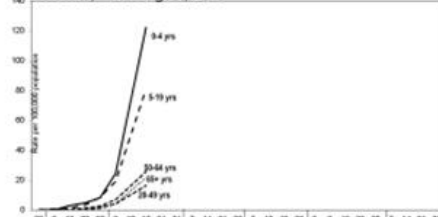


Table 1. Reported complications and co-morbidities among Influenza A (H7N9) cases for Chicago residents, August 14, 2019.

Age	#	%	Complications*	#	%
0-4	17	12	Pneumonia	14	11
5-19	60	43	Co-Infection	5	4
20-49	35	25	Intubated	2	2
50-64	16	12	Deaths	1	<1
65+	10	6	Pediatric Deaths	1	100
Sex			Med. Conditions*		
Male	62	45	Lung Disease	18	29
Female	76	55	Cardiac Disease	7	11
Treatment/Vacc.					
Vaccinated	68	49	Diabetes	14	23
Antiviral Treatment	2	1	Hypertension	23	37

Figure 2. Influenza A (H7N9) cumulative incidence rate (per 100,000) by age group among reported cases for Chicago residents, June-August, 2019.



EXERCISE EXERCISE EXERCISE

laboratory Surveillance*

of August 11-17, 2019, 1,275 of the 3,500 specimens tested for influenza were positive; the 384 positive for influenza A (H7N9) that were IDPH Laboratory (Figure 4).

2019, 4,194 of 12,936 (32%) specimens tested have been positive; 3,840 typed as influenza A (H7N9). 364 were presumptive for influenza A (H7N9).

Surveillance data estimates are based on historical data from past seasons and Crimson Contagion ground truth

Chicago Department of Public Health has received data on test results from Chicago laboratories performing influenza A data are received on a weekly basis throughout the year normal circulating virus strains. Since 2009, an average of 100 tests per season have been tested for influenza (and other) by participating laboratories, with the highest number of tests tested in the 2018-2019 season. In the event of an epidemic, CDPH would continue to utilize these data to monitor transmission and co-circulating strains.

Emergency Department Illness Surveillance*

Week of August 11-17, 2019, 8.0% of all emergency department (ED) visits in Chicago were due to influenza-like illness (ILI). During seasonal epidemics, less than one percent of ED visits are due to influenza-like illness. Outpatient clinics are also reporting normal ILI percentages for this time period.

Figure 5 presents the percentage of emergency department visits due to influenza-like illness by patient zip code. For the week of August 11-17, 2019, 51 of 59 (86%) zip codes had ILI percentages in the moderate to high categories; the highest was 15.2% with a range of 0-15% (Figure 6).

Illness percentage estimates are based on historical data from influenza seasons and Crimson Contagion ground truth

CDPH has required all hospitals in Illinois to submit syndromic data to the ESSENCE system. Currently, all hospitals in Chicago emergency department data to ESSENCE and nearly three weeks of data are available for analysis. CDPH has utilized these data to monitor influenza-like illness (ILI) in Chicago by zip code. In the event of an epidemic, CDPH would continue to utilize these data to monitor ILI by zip code to detect any high levels occurring in certain areas of the city that may require additional intervention. CDPH will continue to monitor ILI by age group to detect any changes in the ILI data. The ESSENCE system also contains information on whether a patient was admitted to a hospital so theoretically CDPH would be able to use hospitalizations for ED ILI visits, to be used as a proxy for ILI.

Information

The Chicago Department of Public Health (IDPH) has issued recommendations for influenza testing and reporting recommendations. Suspected novel and variant influenza which includes influenza A (H7N9), pediatric-associated deaths, influenza-associated ICU hospitalizations, and outbreaks of influenza-like illness in a congregate setting should all be reported to CDPH. Healthcare facilities can report cases to the Chicago Department of Public Health via the Illinois National Electronic Disease Surveillance System (NEISS).

Figure 4. Percent of specimens testing positive (by RT-PCR) for influenza A (H7N9), Chicago, June-December.

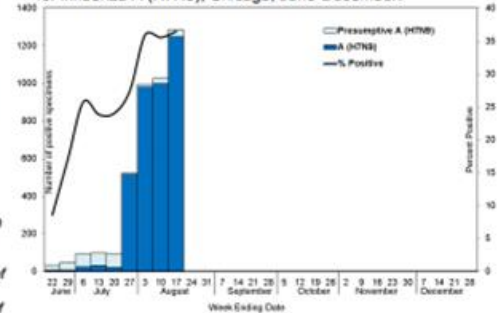


Figure 5. Percent of emergency department visits attributed to influenza-like illness for Chicago zip codes based on chief complaint data submitted to ESSENCE, Chicago, June-December.

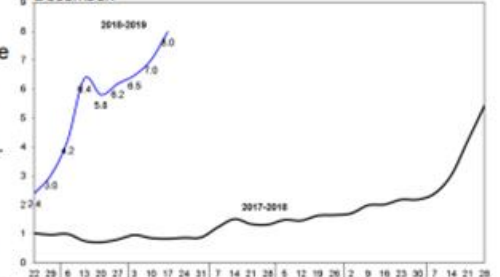
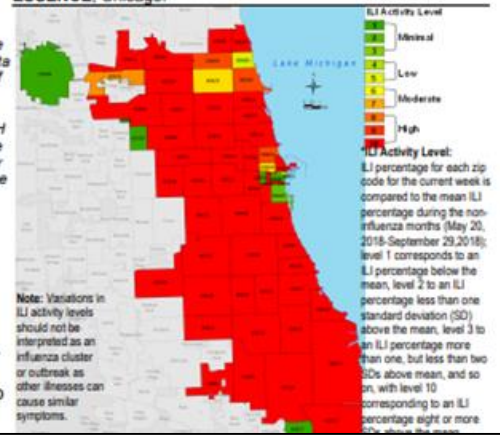
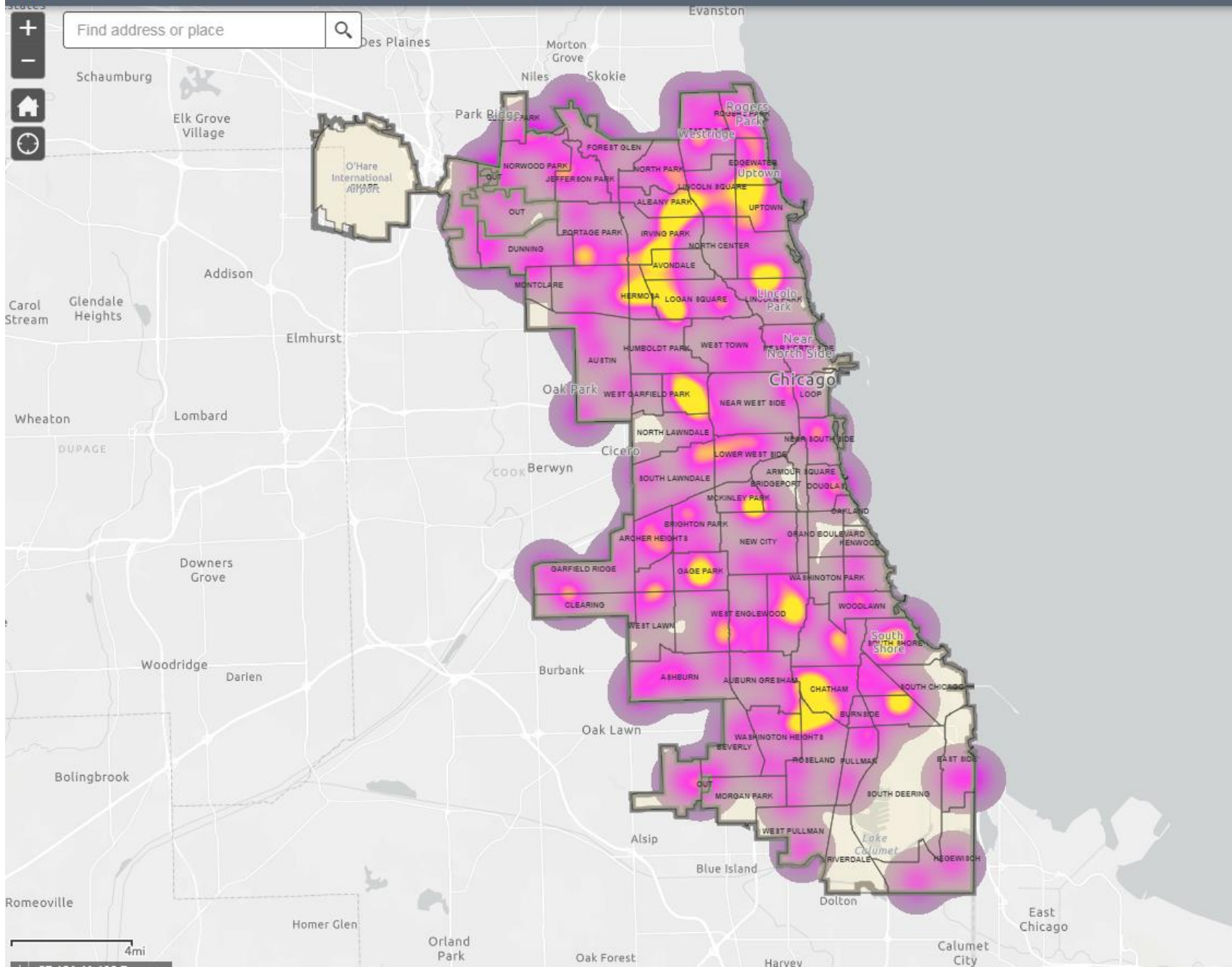


Figure 6. Influenza-like illness (ILI) activity level by patient zip code determined by chief complaint data submitted to ESSENCE, Chicago.



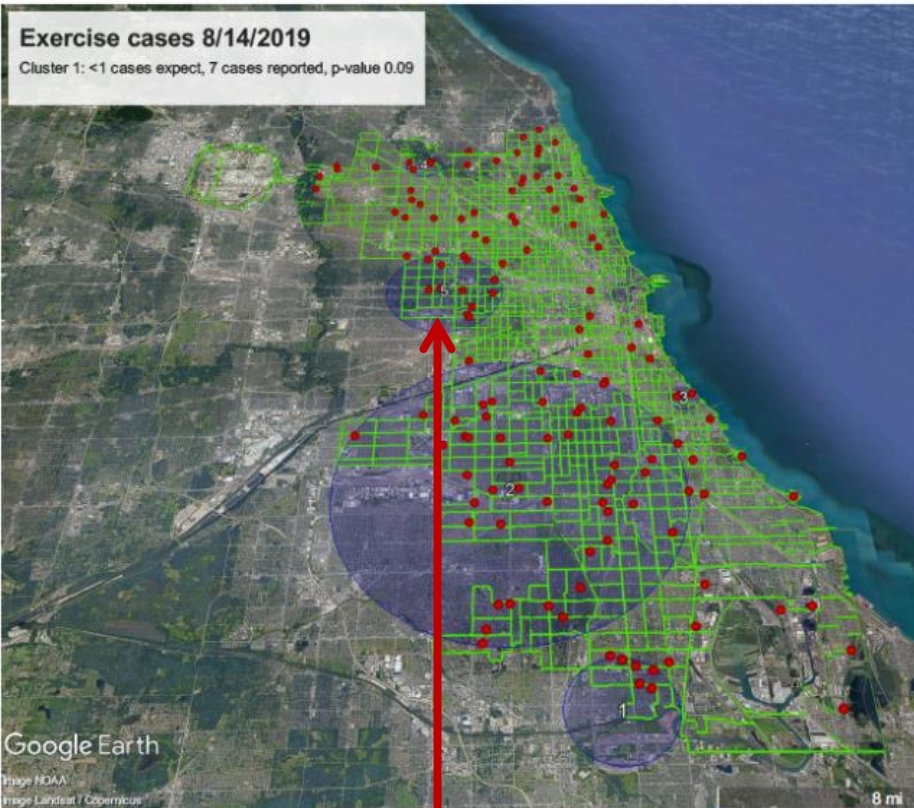


Exercise cases 8/14/2019

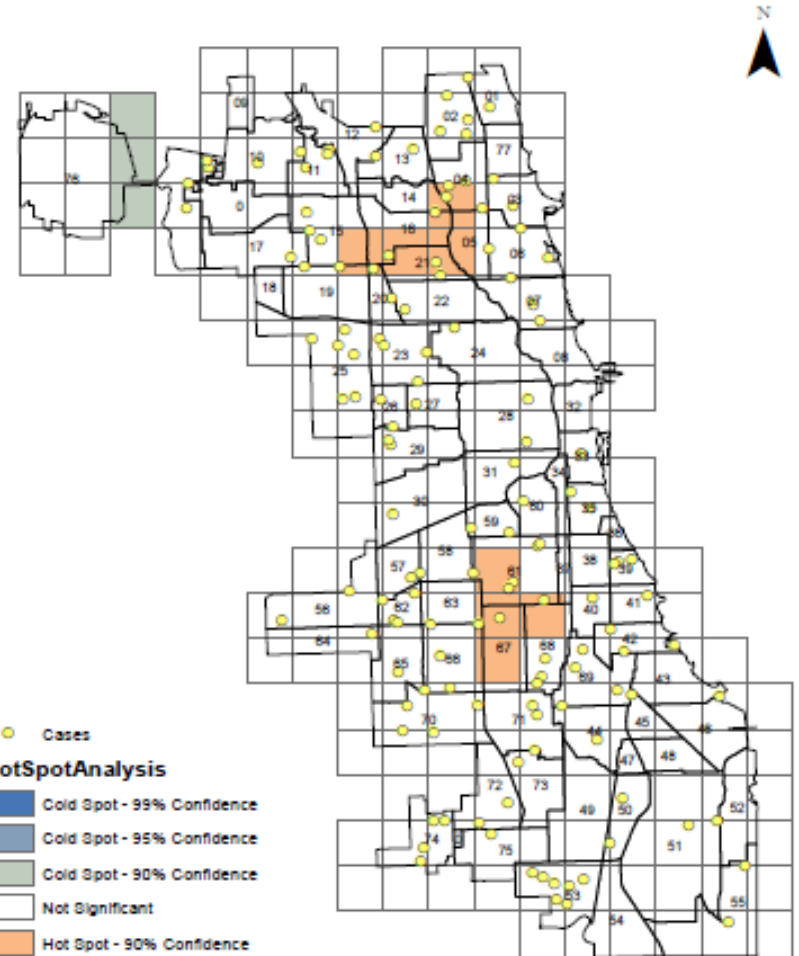
Cluster 1: <1 cases expect, 7 cases reported, p-value 0.09

Legend

● Cases



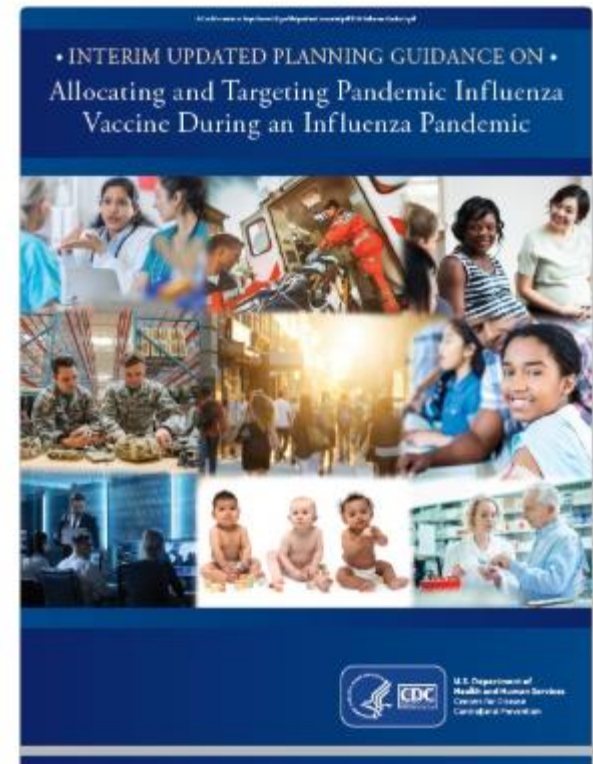
EXERCISE: H7N9 Clusters Among Chicago Residents on 8/14/2019



Cluster Detection and Mapping

Explored REDCap + Immunization Registry Capabilities

- First Responder Absenteeism
 - Validated our ability to track first responder illness rates in REDCap, remote Sx monitoring
 - Utilized 3 hospitals to enter unique patients into the system over 4-days of exercise play
- Built Vaccines For Children (VFC) provider REDCap survey to assess high risk (Tier 1) population for vaccine ordering
- Built REDCap employee vaccination record to track critical personnel vaccination coverage
- Explored I-CARE use in outbreak settings



City Agency Community Mitigation Meeting

August 16, 2019





NEWS RELEASE

FOR IMMEDIATE RELEASE

August 15, 2019

CONTACTS:

Adrienne Lefevre Adrienne.Lefevre@illinois.gov

Elena Ivanova Elena.Ivanova@cityofchicago.org

EXERCISE EXERCISE EXERCISE **Guidance for K-12 School Delays & Closures**

Further direction for private and public school delays and/or closures

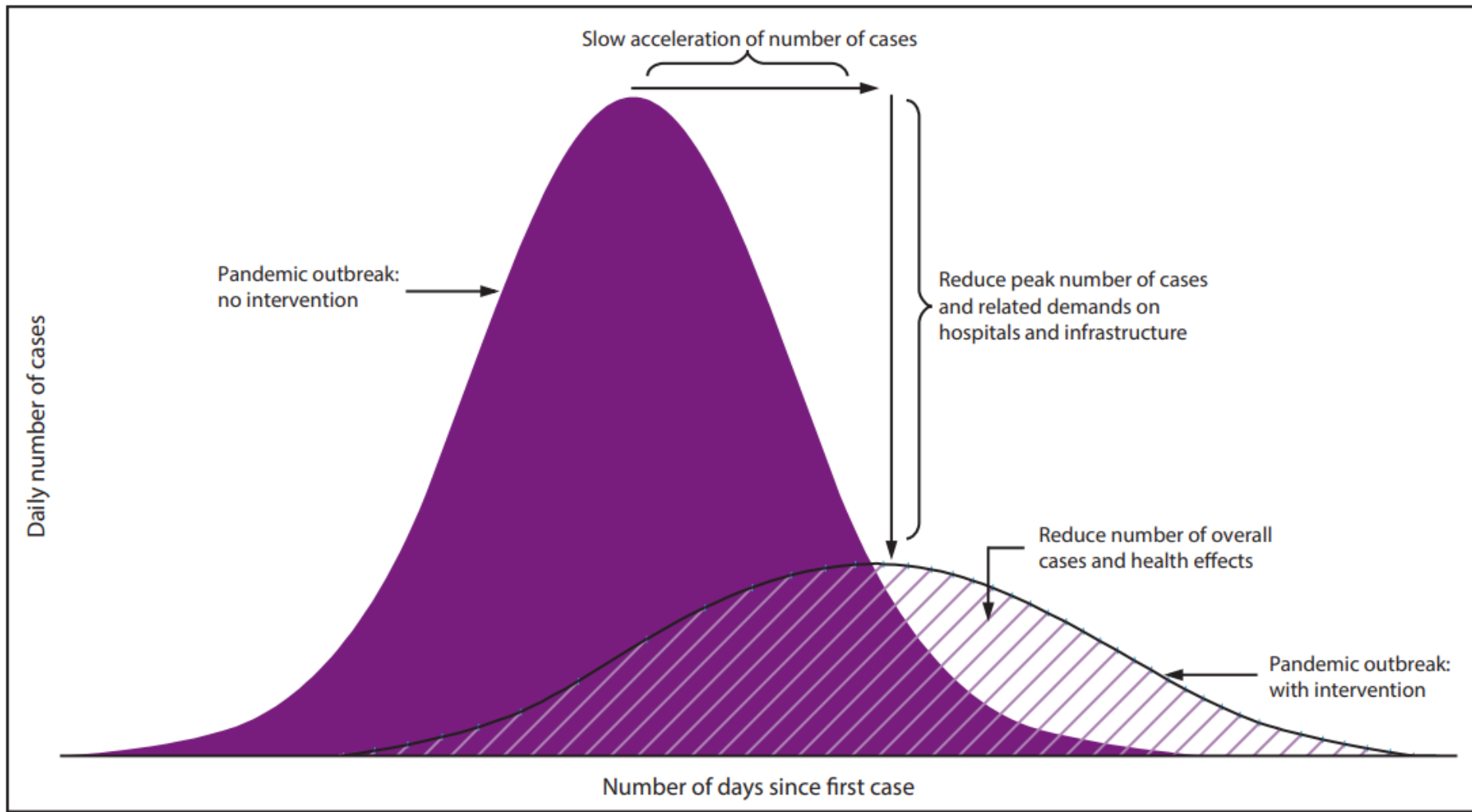
SPRINGFIELD – The Illinois Department of Public Health (IDPH), in conjunction with subject matter experts, Governor JB Pritzker’s office, the Chicago Department of Public Health (CDPH), and other pertinent sister agencies, has developed official guidance for Illinois school delays and closures in response to the 2019 H7N9 influenza pandemic.

IDPH advises that *all* private, charter, and public schools (K-12) delay opening for a minimum of two weeks, or up to six weeks, per the Centers for Disease Control and Prevention recommendations. K-12 schools that have already opened for the season should temporarily close for the duration of the delayed opening(s). Higher learning institutions, such as colleges or universities, technical schools, and other school-based settings should carefully consider delays/closures, in consultation with the local health department.

Community Mitigation Guidelines to Prevent Pandemic Influenza — United States, 2017



FIGURE 1. Goals of community mitigation for pandemic influenza



Source: Adapted from: CDC. Interim pre-pandemic planning guidance: community strategy for pandemic influenza mitigation in the United States—early, targeted, layered use of nonpharmaceutical interventions. Atlanta, GA: US Department of Health and Human Services, CDC; 2007. <https://stacks.cdc.gov/view/cdc/11425>.

Non-pharmaceutical Interventions (NPIs)

EVERYDAY PREVENTIVE ACTIONS

Everyone should always practice good personal health habits to help prevent flu.



Stay home when you are sick. Stay home for at least 24 hours after you no longer have a fever or signs of a fever without the use of fever-reducing medicines.



Cover your coughs and sneezes with a tissue.



Wash your hands often with soap and water for at least 20 seconds. Use at least a 60% alcohol-based hand sanitizer if soap and water are not available.



Clean frequently touched surfaces and objects.

NPIs RESERVED FOR A FLU PANDEMIC

*Everyone should be prepared to take these additional actions, if recommended by public health officials.**

For everyone:



Avoid close contact with others.
Keep a distance of at least 3 feet.



Stay home if someone in your house is sick.

For sick persons:



Create a separate room for sick household members.



Use a facemask, at home or out in public.



Avoid sharing personal items.

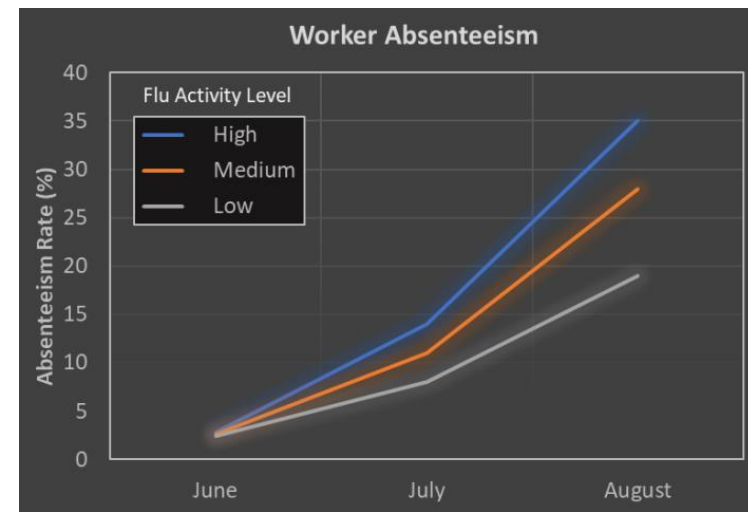


Postpone or cancel your attendance at large events.

*These additional actions might be recommended for severe, very severe, or extreme flu pandemics.

Worker Absenteeism

- Workers stay home because
 - They are sick
 - They are caring for an ill family member
 - No other options for childcare
 - They are afraid of flu
- Exercise estimates of 35% absenteeism
- May spike at 40% or higher during the peak
 - Chicago: >480,000/1.2 million workers absent





City agencies surveyed on acceptability of certain non-pharmaceutical interventions (NPIs) and plans in place for high worker absenteeism, school closure.

	Higher Education		CDPH			CPS	CFD	Parks	HHS	Average	Overall	Higher Ed	CDPH
	CCC	DePaul	Commiss.	Med Dir	Policy								
1. To what extent will the recommendation for school/childcare facility closures or dismissals be acceptable for your organization?	3	3	4	4	4	3	4	4		3.63	3	4.00	
2. To what extent will the recommendation for higher education closures or dismissals be acceptable for your organization?	3	3	4	4	4		4			3.67	3	4.00	
3. To what extent will the recommendation for the cancelation of mass gatherings be acceptable for your organization?	4	3	4	4	4	3	3		3	3.50	3.5	4.00	
4. To what extent will the recommendation for social distancing in schools be acceptable for your organization?	1	3	4	4	2	3	3	2		2.75	2	3.33	
5. To what extent will the recommendation for social distancing in the workplace be acceptable for your organization?	1	3	4	4	2	3	4	2	4	3.00	2	3.33	
6. To what extent will the recommendation for social distancing in mass gatherings be acceptable for your organization?	4	3	4	4	2	3	3	1		3.00	3.5	3.33	

1= Not Acceptable, 2=Acceptable with Major Reservations, 3= Acceptable with Minor Reservations, 4=Acceptable

Post-Crimson Contagion Thoughts for your Facility...

- What is the relationship with your hospital incident command structure like?
- What plans are in place for high worker absenteeism?
- What alternate care site plans are in place?
- Do staff at your organization understand crisis standards of care?
- Do you participate in sentinel influenza surveillance?
 - Email Enrique.Ramirez@cityofchicago.org if interested
- What seasonal influenza NPI education could be modified in a pandemic?

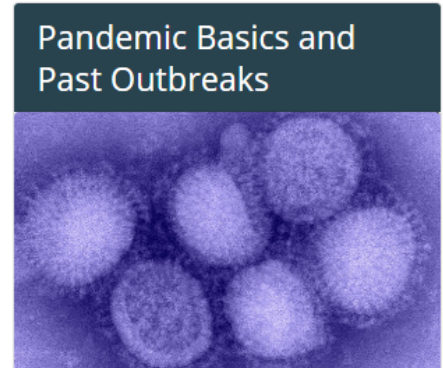
Influenza (Flu)

- [Pandemic Influenza](#)
- [Pandemic Basics](#) +
- [Past Pandemics](#) +
- [National Pandemic Strategy](#) +
- [Monitoring for Influenza Viruses](#) +
- [Planning and Preparedness Resources](#) +
- [What CDC Does](#) +
- [Archived Documents](#) +

Pandemic Influenza

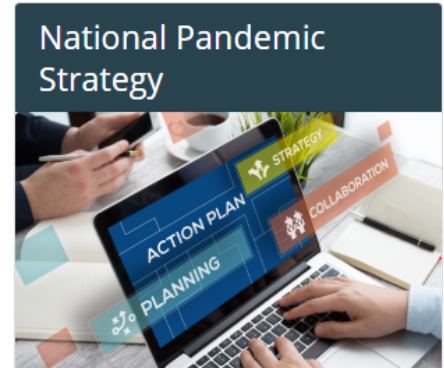
[Español](#)

An influenza pandemic is a global outbreak of a new influenza A virus. Pandemics happen when new (novel) influenza A viruses emerge which are able to infect people easily and spread from person to person in an efficient and sustained way. The United States is NOT currently experiencing an influenza pandemic. [CDC influenza programs protect](#) [1.1 MB, 2 pages, 508] the United States from seasonal influenza and an influenza pandemic, which occurs when a new flu virus emerges that can infect people and spread globally.



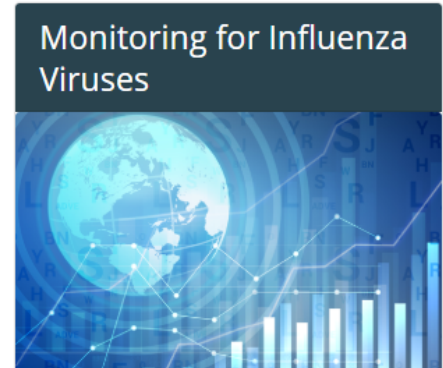
Pandemic Basics and Past Outbreaks

- [Seasonal Flu vs Pandemic Flu](#)
- [Questions and Answers](#)



National Pandemic Strategy

- [Pandemic Intervals Framework](#)
- [Influenza Risk Assessment Tool](#)



Monitoring for Influenza Viruses

- [Current Situation](#)
- [Viruses of Special Concern](#)

Get Email Updates

To receive email updates about this page, enter your email

Resources

- CDC Pandemic Influenza: <https://www.cdc.gov/flu/pandemic-resources/index.htm>
- 2017 CDC Community Mitigation Guidelines to Prevent Pandemic Influenza: <https://www.cdc.gov/mmwr/volumes/66/rr/pdfs/rr6601.pdf>
- Illinois Catastrophic Incident Response Annex: <http://www.dph.illinois.gov/sites/default/files/publications/catastrophic-incident-response-annex-052218.pdf>
- Influenza NPI resources:
 - School checklist: <https://www.cdc.gov/nonpharmaceutical-interventions/pdf/pan-flu-checklist-k-12-school-administrators-item2.pdf>
 - Childcare program checklist: <https://www.cdc.gov/nonpharmaceutical-interventions/pdf/pan-flu-checklist-childcare-program-administrators-item3.pdf>
 - Workplace checklist: <https://www.cdc.gov/nonpharmaceutical-interventions/pdf/pan-flu-checklist-workplace-administrators-item1.pdf>
 - Household checklist: <https://www.cdc.gov/nonpharmaceutical-interventions/pdf/gr-pan-flu-ind-house.pdf>
 - Large public event: <https://www.cdc.gov/nonpharmaceutical-interventions/pdf/protect-yourself-from-flu-public-event-item4.pdf>
- Chicago Flu Updates: https://www.chicago.gov/city/en/depts/cdph/supp_info/health-protection/current_flu_situationinchicago2011.html
- IDPH Influenza surveillance: <http://www.dph.illinois.gov/topics-services/diseases-and-conditions/influenza/influenza-surveillance>
- Chicago Healthcare System Coalition for Preparedness and Response: <https://chscpr.org/governance/>

Acknowledgements

Participating Organizations

City of Chicago (Public)
Chicago Department of Public Health (CDPH)
Chicago Department of Water Management (DWM)
Chicago Department of Family and Support Services (DFFS)
Chicago Department of Fleet and Facility Management (2FM)
Chicago Department of Law (DOL)
Chicago Fire Department (CFD)
Chicago Police Department (CPD)
Chicago Office of Emergency Management and Communications (OEMC)
Chicago Mayor's Office (MO)
Chicago Park District (PARKS)
Cook County Medical Examiner's Office (CCME)
City of Chicago (Private)
Chicago Public Schools (CPS)
City Colleges of Chicago (CCC)
DePaul University
Chicago Healthcare Coalition (CHSCP)
Chicago Public Private Task Force (PPTF)
Education Sector: SCOPE
Financial Sector: Chicago FIRST
Financial Sector: CME Group
Housing Sector: Building Owners and Managers (BOMA)
Housing Sector: Chicago Apartment Association (CAA)
Real Estate Sector: Illinois Medical District (IMD)
Retail Sector: Chicago Loop Alliance
Tourism Sector: Chicago Cultural Properties (Museums)
Tourism Sector: Chicago Hospitality, Entertainment and Tourism (HEaT)
Tourism Sector: Magnificent Mile Assn
Tourism Sector: Titan Security
Transportation Sector: Avis/Budget/Hertz
(Local) Federal Government
United States Department of Health and Human Services (HHS - Region V)
Department of Veteran's Affairs (VA)

Participating Organizations

Region XI Hospitals
Advocate Illinois Masonic Medical Center
Advocate Trinity Hospital
AMITA Health Resurrection Medical Center
AMITA Health Saint Joseph Hospital
AMITA Health Saints Mary & Elizabeth Medical Center
Ann & Robert H. Lurie Children's Hospital of Chicago
Community First Medical Center
Holy Cross Hospital
Jackson Park Hospital & Medical Center
Jesse Brown VA Medical Center
John H. Stroger Jr. Hospital of Cook County
La Rabida Children's Hospital
Loretto Hospital
Mercy Hospital & Medical Center
Methodist Hospital of Chicago
Mount Sinai Hospital
Northwestern Memorial Hospital
Norwegian American Hospital
Provident Hospital of Cook County
Roseland Community Hospital
Rush University Medical Center
Saint Bernard Hospital
Shriners Hospital for Children-Chicago
South Shore Hospital
Swedish Covenant Hospital
Thorek Memorial Hospital & Medical Center
University of Chicago Medicine
University of Illinois Hospital & Health Sciences System
Weiss Memorial Hospital



Questions?

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