CHICAGO

COVID-19
Chicago Long Term Care Roundtable

07-25-2024

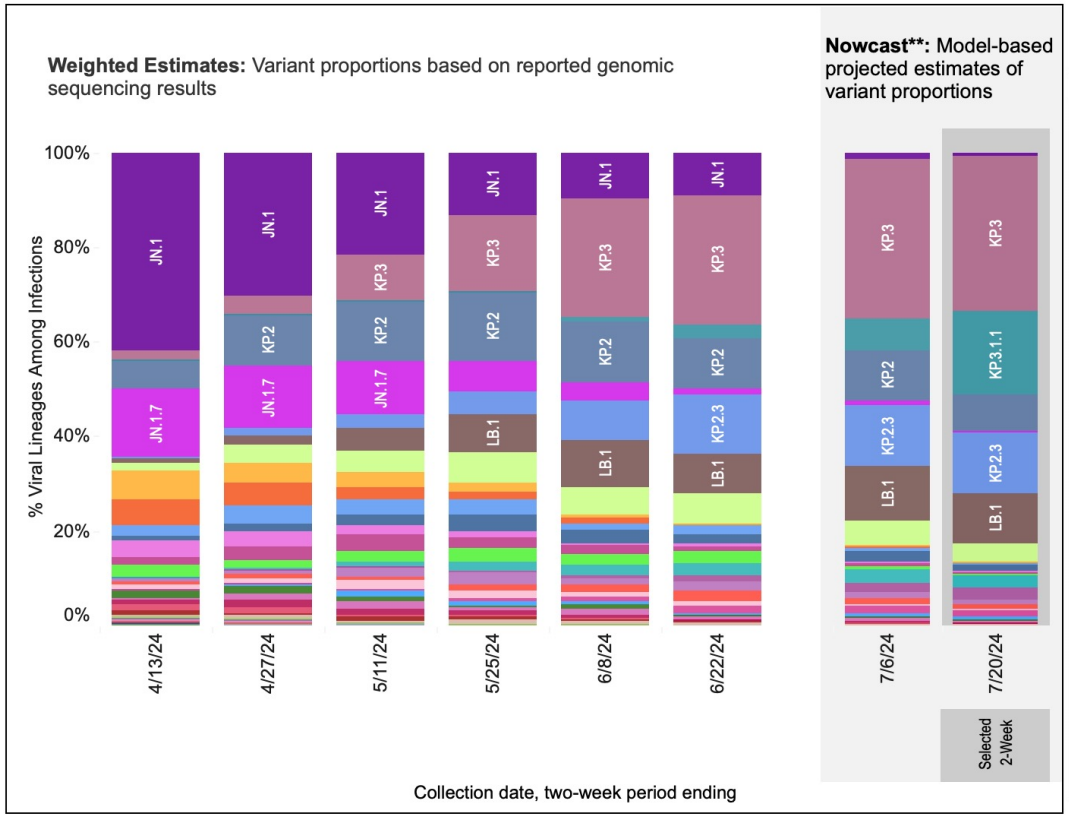
Agenda

- COVID-19 Epidemiology and Updates
- Infection Prevention and Control of Waterborne Pathogens: *Legionella* and *Elizabethkingia*
- CMS LTC Self-Assessment
- Chlorine Water Testing Kits
- Questions & Answers

COVID-19 Variant Proportions

Weighted and Nowcast Estimates in United States for 2-Week Periods in 3/31/2024 – 7/20/2024

Hover over (or tap in mobile) any lineage of interest to see the amount of uncertainty in that lineage's estimate.



Nowcast Estimates in United States for 7/7/2024 – 7/20/2024

USA

WHO label	Lineage #	%Total	95%PI
Omicron	KP.3	32.9%	27.1-39.3%
	KP.3.1.1	17.7%	8.3-32.9%
	KP.2.3	12.8%	8.0-19.8%
	LB.1	10.5%	8.5-12.9%
	KP.2	7.6%	5.5-10.3%
	KP.1.1	3.8%	2.6-5.5%
	LP.1	2.7%	0.8-7.7%
	KP.1.1.3	2.6%	1.6-4.4%
	LF.3.1	1.7%	0.5-4.7%
	JN.1.16.1	1.5%	1.1-2.2%
	KS.1	0.9%	0.6-1.5%
	KP.4.1	0.9%	0.4-2.1%
	XDV.1	0.7%	0.3-1.5%
	JN.1	0.6%	0.3-1.2%
	KW.1.1	0.5%	0.3-0.9%
	JN.1.11.1	0.5%	0.3-0.7%
	KP.1.2	0.4%	0.2-0.9%
	JN.1.7	0.4%	0.3-0.6%
	JN.1.16	0.4%	0.2-0.7%
	JN.1.18	0.3%	0.2-0.6%
	JN.1.13.1	0.1%	0.1-0.2%
	KQ.1	0.1%	0.0-0.2%
	JN.1.8.1	0.0%	0.0-0.1%
	JN.1.32	0.0%	0.0-0.1%
	XDP	0.0%	0.0-0.1%
	JN.1.4.3	0.0%	0.0-0.1%
	KV.2	0.0%	0.0-0.0%
	BA.2	0.0%	0.0-0.0%

** These data include Nowcast estimates, which are modeled projections that may differ from weighted estimates generated at later dates
# Enumerated lineages are US VOC and lineages circulating above 1% nationally in at least one 2-week period. "Other" represents the aggregation of lineages which are circulating <1% nationally during all 2-week periods displayed. While all lineages are tracke by CDC, those named lineages not enumerated in this graphic are aggregated with their parent lineages, based on Pango lineage definitions, described in more detail here: https://web.archive.org/web/20240116214031/https://www.pango.network/the-pango-nomenclature-system/statement-of-nomenclature-rules.

Source: https://covid.cdc.gov/covid-data-tracker/#variant-proportions

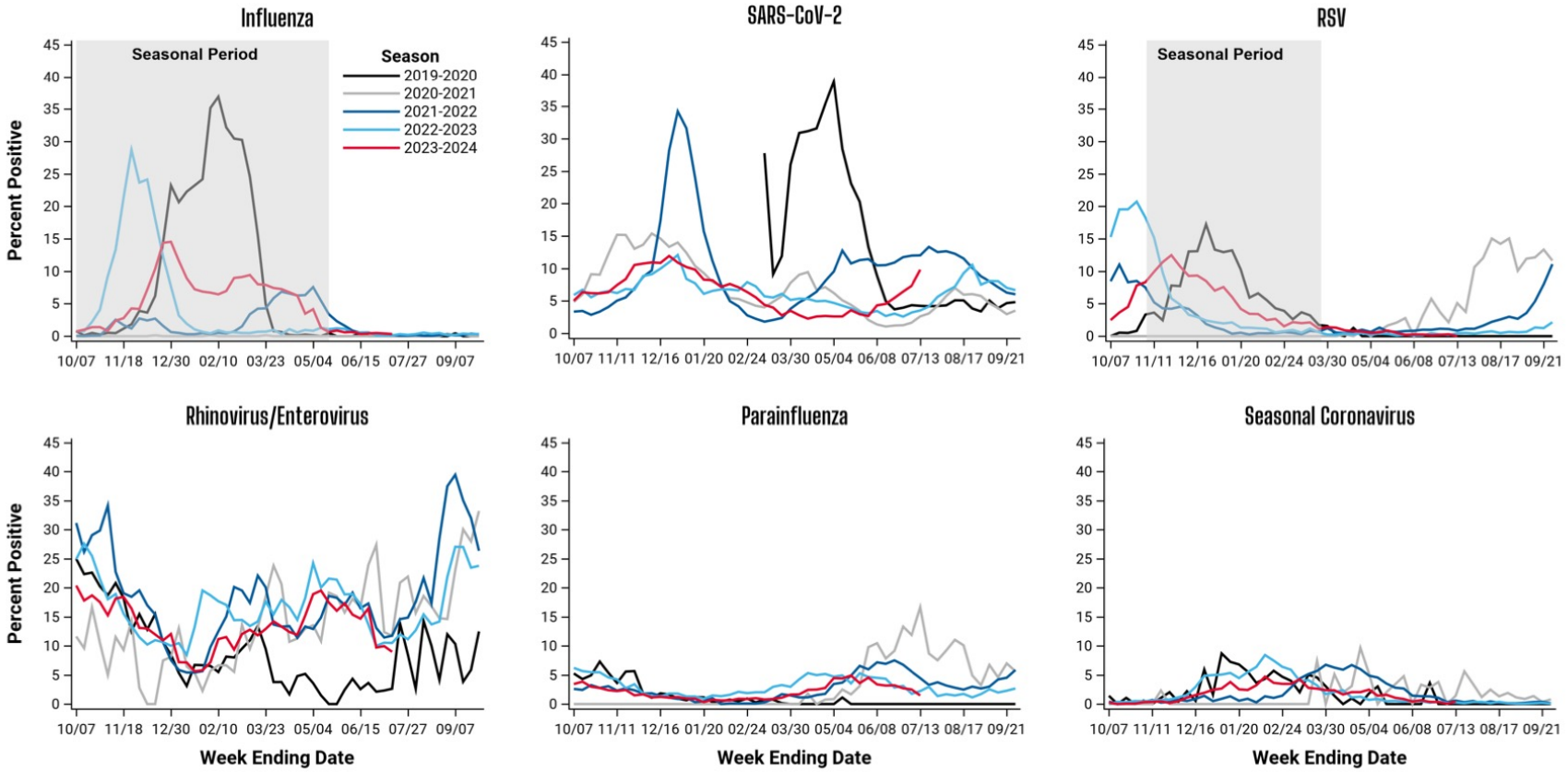
Chicago Respiratory Virus Surveillance Report – Current Week & Cumulative

	Week Ending July 13, 2024		Since October 1, 2023	
Respiratory Pathogen	# Tested	% Positive	# Tested	% Positive
Influenza*	2,152	0.3	189,454	5.9
RSV*	1,436	0.0	127,868	4.4
SARS-CoV-2*	1,436	9.8	139,856	6.7
Parainfluenza	1,418	1.5	73,457	2.0
Rhinovirus/Enterovirus	623	9.0	40,899	13.2
Adenovirus	623	1.8	40,887	3.2
Human Metapneumovirus	623	1.0	41,160	2.8
Seasonal Coronaviruses†	1,418	0.4	73,207	1.8

*Represents both dualplex and multiplex PCR data. All other data represents only multiplex panels that include the specified pathogens;† Four seasonal coronavirus strains include 229E, NL63, OC43, and HKU1.

Source: Chicago Respiratory Virus Weekly Surveillance Report

Chicago Respiratory Virus Surveillance Report – Seasonal Trends



Source: Chicago Respiratory Virus Weekly Surveillance Report

Updated COVID Reporting Reminder

- With the recent changes in reporting requirements, only COVID outbreaks (*CDPH definition*: **2+ cases within 14 days**) are reportable

- You no longer need to report single COVID-19 cases to us unless there are additional cases within a 14-day period

- Example 1: First case 6/1/24 and next case 6/23/24
  - NO REPORTING REQUIRED; >14 days between cases

- Example 2: First case 6/1/24 and next case 6/10/24
  - Report to CDPH using new reporting form

Infection Prevention and Control of Waterborne Pathogens: *Elizabethkingia* and *Legionella*

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Legionella

- *Legionella* is a genus of gram-negative bacilli bacteria that includes over 58 species
  - 25 species are human pathogens.
- They cause Legionnaires' disease and Pontiac fever
- *Legionella pneumophila* causes 90% of cases.
  - *L. longbeachae*, *L. feeleii*, *L. micdadei*, and *L. anisa* account for most of the rest.
- In the wild, *Legionella* live in natural freshwater environments, infecting single-celled protozoa such as amoebae.

CDC (2024) About Legionnaires' Disease. Retrieved From: https://www.cdc.gov/legionella/about/history.html
CDC (2016) Legionnaires; Disease. Retrieved From: https://www.cdc.gov/legionella/downloads/fs-legionnaires.pdf
WHO (2007) Legionella and the Prevention of Legionellosis. Retrieved From: https://iris.who.int/bitstream/handle/10665/43233/9241562978_eng.pdf?sequence=1&isAllowed=y

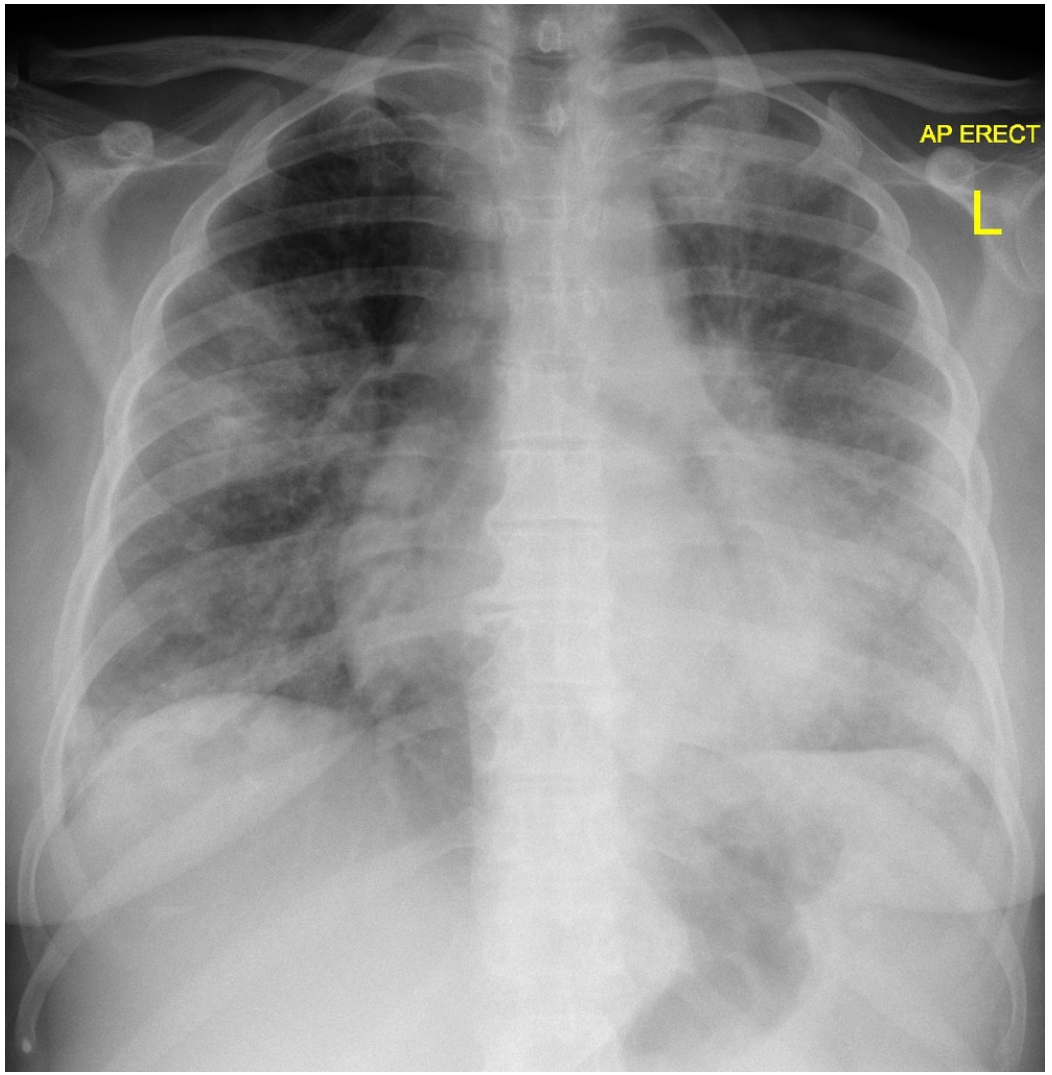
Legionella Transmission

- Person-to-person transmission of *Legionella* has never been *confirmed*.
- Rather, it spreads through contact with environmental reservoirs.
- *Legionella* infections are contracted by inhaling water droplets that contain the bacteria.
- In some cases, aspiration of contaminated water or ice can also cause disease.

CDC (2024) About Legionnaires' Disease. Retrieved From: https://www.cdc.gov/legionella/about/history.html
CDC (2016) Legionnaires; Disease. Retrieved From: https://www.cdc.gov/legionella/downloads/fs-legionnaires.pdf
WHO (2007) Legionella and the Prevention of Legionellosis. Retrieved From: https://iris.who.int/bitstream/handle/10665/43233/9241562978_eng.pdf?sequence=1&isAllowed=y

Legionnaires' Disease

- Is a form of severe bacterial pneumonia.
- Has an incubation period of 2-10 days (potentially up to 16)
- Legionnaires' disease is fatal in 10% of cases.
  - Mortality rate may be as high as 60-80% in vulnerable populations.
  - Early identification and timely access to appropriate treatment are key to reducing mortality.



CDC (2016) Legionnaires; Disease. Retrieved From: https://www.cdc.gov/legionella/downloads/fs-legionnaires.pdf
WHO (2007) Legionella and the Prevention of Legionellosis. Retrieved From: https://iris.who.int/bitstream/handle/10665/43233/9241562978_eng.pdf?sequence=1&isAllowed=y

Legionnaires' Disease: Symptoms

- Early symptoms generally resemble influenza:
  - Fever, headache, malaise, and cough.

- Over the next few days, symptoms become progressively more severe:
  - Cough, may become productive (50%). 33% of these will have blood-streaked phlegm/hemoptysis.
  - Shortness of breath, chest pain,
  - Confusion,
  - GI symptoms (e.g. nausea, vomiting, diarrhea) are also possible.

- Death from Legionnaires' disease occurs by progressive pneumonia with respiratory failure,
  - Shock and organ failure may also occur.
  - Rare, but serious complications of the central nervous systems may occur.

WHO (2022) Legionellosis. Retrieved from: https://www.who.int/news-room/fact-sheets/detail/legionellosis
CDC (2024) About Legionnaires' Disease. Retrieved From: https://www.cdc.gov/legionella/about/history.html
CDC (2016) Legionnaires; Disease. Retrieved From: https://www.cdc.gov/legionella/downloads/fs-legionnaires.pdf
MDH (2024) Pontiac Fever. Retrieved From: https://www.health.state.mn.us/diseases/legionellosis/pontiac.pdf

Epidemiology of Legionnaires' Disease

- In the US, Legionnaire's Disease is most common in Midwestern states,
- Seasonality of Legionnaires' disease:
  - More cases are reported in late summer to early fall, when the weather is hot and humid.
- 75%-80% of cases occur in persons over the age of 50.
- The majority of case (60-70%) are in males.
- Studies have suggested that Legionnaires' disease cases may be significantly under-reported (by 1.8-2.7x).

WHO (2022) Legionellosis. Retrieved from: https://www.who.int/news-room/fact-sheets/detail/legionellosis
CDC (2024) About Legionnaires' Disease. Retrieved From: https://www.cdc.gov/legionella/about/history.html
Alarcon Falconi TM, Cruz MS, Naumova EN. The shift in seasonality of legionellosis in the USA. Epidemiol Infect. 2018 Oct;146(14):1824-1833. doi: 10.1017/S0950268818002182. Epub 2018 Aug 13. PMID: 30099976; PMCID: PMC6135660.

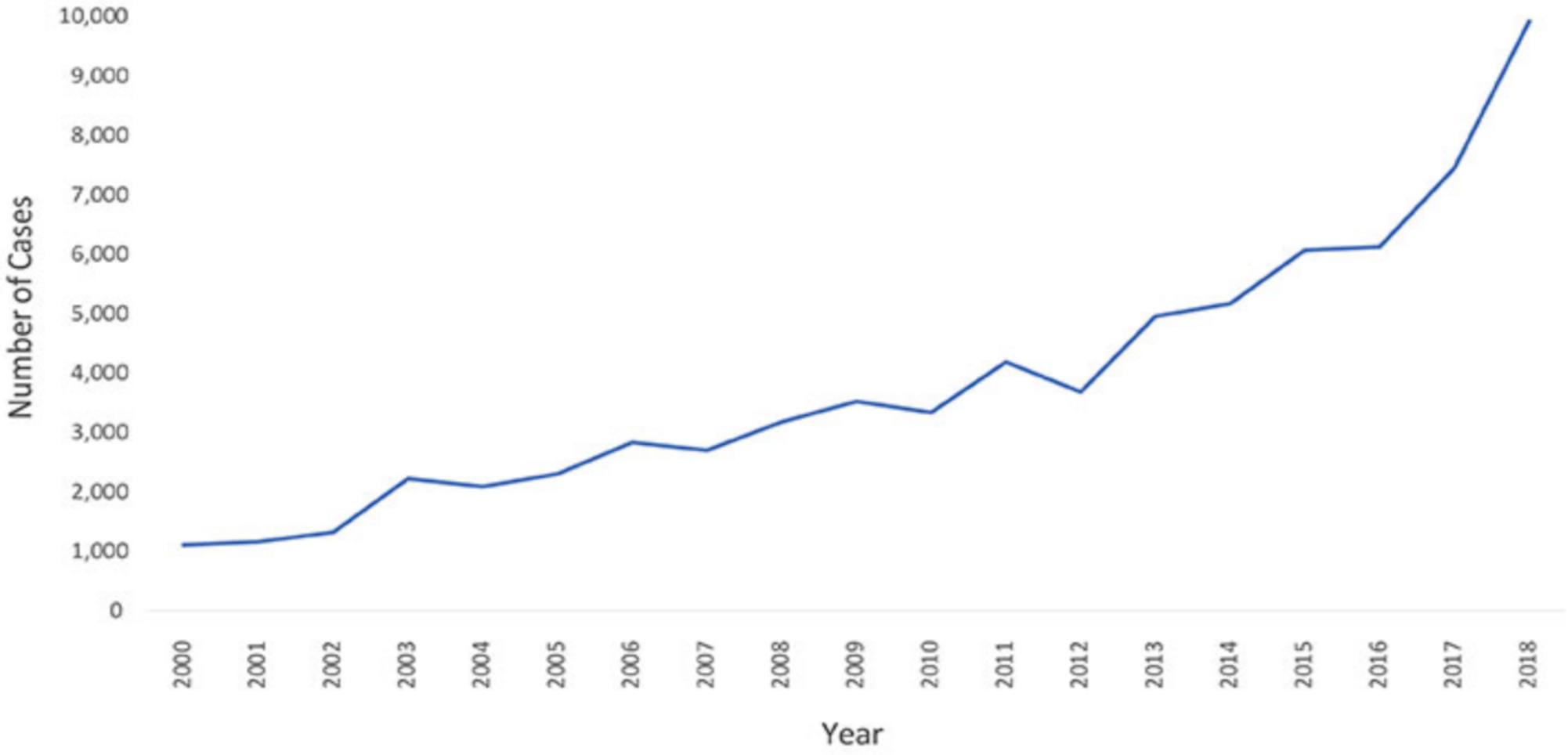
Legionnaires' Epidemiology Cont.

- Additional risk factors:
  - Immunocompromise
  - Recent surgery
  - Intubation and mechanical ventilation
  - Dysphagia/Aspiration risk
  - Nasogastric tubes
  - Respiratory diseases and therapy

- Legionnaires' disease infections increased 9-fold from 2000-2018.

WHO (2022) Legionellosis. Retrieved from: https://www.who.int/news-room/fact-sheets/detail/legionellosis
CDC (2024) About Legionnaires' Disease. Retrieved From: https://www.cdc.gov/legionella/about/history.html

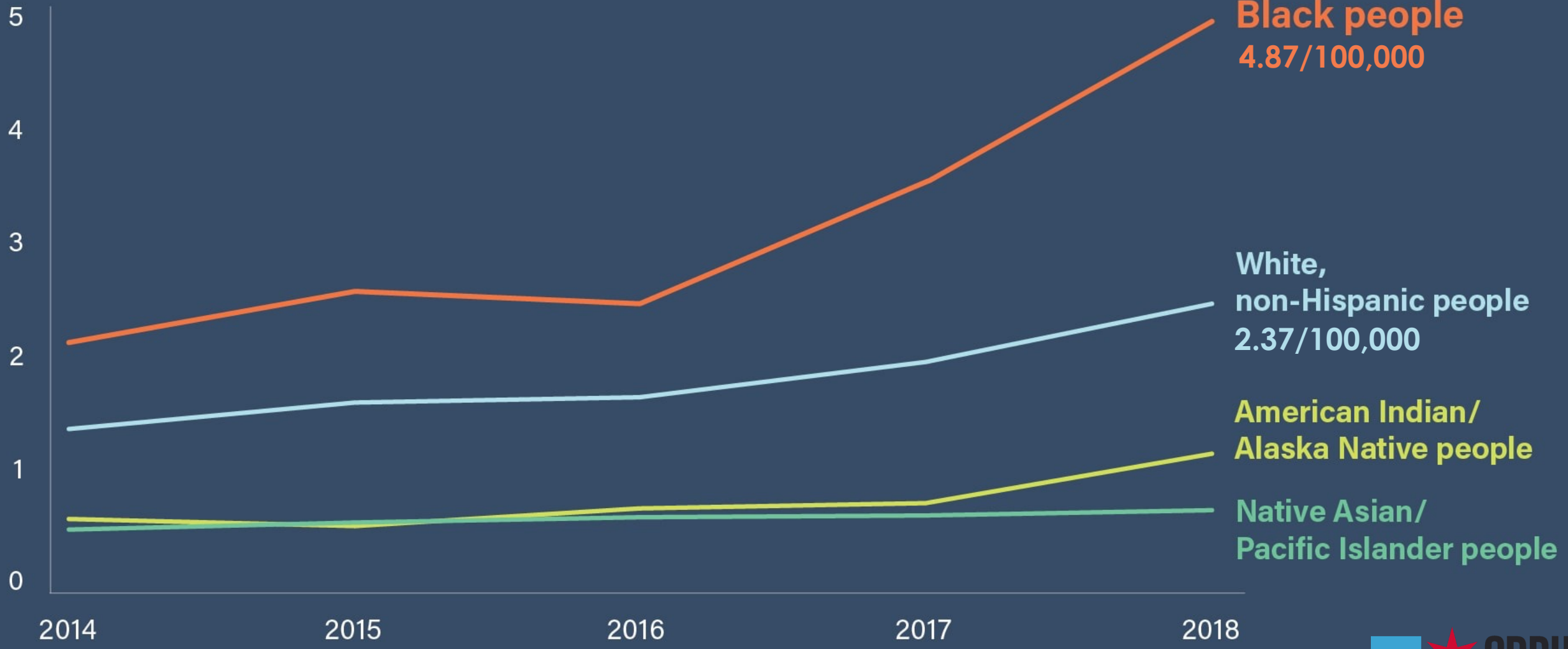
Legionnaires' disease is on the rise in the United States 2000-2018



CDC (2024) About Legionnaires' Disease. Retrieved From: https://www.cdc.gov/legionella/about/history.html

LD is more common among Black people compared with other racial groups

New cases per 100,000 people



CDC. (2024) Health Disparities in Legionnaires' Disease. Retrieved From: https://www.cdc.gov/legionella/health-equity/index.html

CDPH
Chicago Department of Public Health

Pontiac Fever:

- Pontiac fever is an *upper* respiratory tract infection caused by *Legionella*.
- Symptoms generally resemble influenza:
  - Fever, chills, headache, muscle aches, loss of appetite, diarrhea (sometimes)
- Short incubation period (24-72h)
- No fatalities due Pontiac fever have been reported.
- Usually resolves without treatment in 2-5 days.

WHO (2022) Legionellosis. Retrieved from: https://www.who.int/news-room/fact-sheets/detail/legionellosis
MDH (2024) Pontiac Fever. Retrieved From: https://www.health.state.mn.us/diseases/legionellosis/pontiac.pdf

Legionnaires' Disease v. Pontiac Fever

	Legionnaires' disease	Pontiac fever
Symptoms which are unique to each	**Pneumonia** High fever* Productive cough* Chest Pain	Low-grade fever Dry cough
Incubation Period	2-10 days, rarely up to 16	24-72 hours
Attack Rate (rate at which exposed people become infected)	<5%	>90%
Mortality rate (general population)	10%	0%
Diagnosis	Pneumonia diagnosis, confirmed on CXR. **AND** ≥1 positive diagnostic test: *Legionella* urinary antigen test Sputum culture	Urine antigen or blood test. Usually only identified when other confirmed Legionellosis cases present.

*Note: the cough and fever in Legionnaires' disease may ***start*** mild/dry and low-grade, but worsen over time

Elizabethkingia

- *Elizabethkingia* is a genus of gram-negative, bacilli bacteria, some species are emerging human pathogens in healthcare settings.
- *Elizabethkingia ssp.* are almost ubiquitous in soil, and freshwater rivers/lakes around the world.
  - They rarely cause disease in healthy adult humans, however,
    - The very young, those over 65yrs, the immunocompromised, and those with multiple co-morbidities are at increased risk.
  - Until recently *Elizabethkingia* was difficult to identify.
    - It possible that the number of *Elizabethkingia* infections are underestimated.
    - There have been improvements in identification in recent years.

Lin JN, Lai CH, Yang CH, Huang YH. *Elizabethkingia* Infections in Humans: From Genomics to Clinics. Microorganisms. 2019 Aug 28;7(9):295. doi: 10.3390/microorganisms7090295. PMID: 31466280; PMCID: PMC6780780.

Elizabethkingia

- *Elizabethkingia* species are **waterborne**.
- *Elizabethkingia ssp*. usually possess extensive inherent antibiotic resistance.
- There are several species of *Elizabethkingia* which infect humans:
  - *E. meingoseptica* (1959)
  - *E. miricola* (2003)
  - *E. anophelis* (2011)
- They can cause a variety of infections: meningitis, septicemia, pneumonia, necrotizing fasciitis, osteomyelitis, endocarditis, urinary tract infections, and endophthalmitis have been reported.

Zajmi A, Teo J, Yeo CC. Epidemiology and Characteristics of *Elizabethkingia* spp. Infections in Southeast Asia. Microorganisms. 2022 Apr 22;10(5):882. doi: 10.3390/microorganisms10050882. PMID: 35630327; PMCID: PMC9144721.
CDC (2024) About Elizabethkingia. Retrieved From: https://www.cdc.gov/elizabethkingia/about/index.html

Elizabethkingia Epidemiology

- Worldwide, 76% infections are reported in immuno**competent** neonates, usually meningitis.
- *Elizabethkingia ssp*. readily form reservoirs in the environments, including water systems particularly in healthcare facilities.
- *Elizabethkingia* colonization of the human respiratory tract has also been documented.
- Risk factors for adults:
  - Hemodialysis therapy,
  - Trauma patients,
  - Prolonged hospital stays,
  - Central venous catheters and other indwelling devices,
  - Diabetes,
  - Immunocompromise,
  - Prolonged exposure to multiple broad-spectrum antibiotics.

Dziuban EJ, Franks JL, So M, Peacock G, Blaney DD. Elizabethkingia in Children: A Comprehensive Review of Symptomatic Cases Reported From 1944 to 2017. Clin Infect Dis. 2018 Jun 18;67(1):144-149. doi: 10.1093/cid/cix1052. PMID: 29211821; PMCID: PMC9580403.
Seong H, Kim JH, Kim JH, Lee WJ, Ahn JY, M D NSK, Choi JY, Yeom JS, Song YG, Jeong SJ. Risk Factors for Mortality in Patients with Elizabethkingia Infection and the Clinical Impact of the Antimicrobial Susceptibility Patterns of Elizabethkingia Species. J Clin Med. 2020 May 12;9(5):1431. doi: 10.3390/jcm9051431. PMID: 32408478; PMCID: PMC7290601.

Elizabethkingia Outbreaks

- In the US, about 5-10 cases of *Elizabethkingia ssp.* per state are reported each year.
- Annually, several outbreaks are also reported in the US.
  - These outbreaks tend to be small, localized, and are usually in healthcare settings.
- However, there have also been several major outbreaks in recent years

CDC (2024) About Elizabethkingia. Retrieved From: https://www.cdc.gov/elizabethkingia/about/index.html

Prevention | Perspective | Practical Infection Prevention

nts infected wit are outbreak of Elizabethkingia bacteria leading to deaths in the Midwestern United States

ALTH

8 Wisconsin deaths linked to loodstream infection

sse Garza Milwaukee Journal Sentinel

ished 10:00 p.m. CT March 1, 2016

iew Comments

te health officials are investigating the outbreak of a bacterial bloodstream ection in southern and southeastern Wisconsin that has been linked to 18 d ce Dec. 29.

e infection, called *Elizabethkingia*, has been detected in 44 people, the majo whom are over the age of 65, according to State Health Officer Karen McKe

View Comments

BREAKING NEWS

Suburban woman's death linked to Elizabethkingia outbreak

Apr 20, 2016 at 2:29 pm

(CNN) — The rarely seen bloodstream infection Elizabethkingiam, which has sickened dozens in Wisconsin since November, has been identified in a Michigan resident, the Michigan health department said.

The older adult with underlying health conditions died as a result of the infection, the Michigan Department of Health and Human Services said Thursday. It released no other details about the patient.

There have been 54 cases reported to the Wisconsin Department of

Calling it the largest outbreak of its kind and stressing the urgency of finding the source, the CDC has identified two more suspected cases of deadly blood infection and sent additional investigators to Wisconsin.

'This is very much a real outbreak,' said Michael Bell, deputy director of the Division of Healthcare Quality Promotion for the U.S. Centers for Disease Co

lth officials waited are infection

6:07 pm

CDPH Chicago Department of Public Health

Major *Elizabethkingia* Outbreaks

- In late 2015, early 2016, a major outbreak *of E. anophelis* centered in Wisconsin sickened 63 and resulted in 20 fatalities in Wisconsin, Illinois, and Michigan.

- In spring of 2016, Illinois reported an outbreak of *E. anophelis* involving 10 cases, resulting in 6 fatalities.
  - The strain of *E. anophelis* involved in the Illinois outbreak was similar, but distinct from that which caused the Wisconsin outbreak.

- *Elizabethkingia* infections can cause significant mortality: 32-60% in these outbreaks.

CDC (2024) About Elizabethkingia. Retrieved From: https://www.cdc.gov/elizabethkingia/about/index.html
Pasteur Institute. (2024) EMERGING DISEASES: A HIGHLY MUTANT STRAIN OF THE ELIZABETHKINGIA BACTERIUM CAUSED AN OUTBREAK IN WISCONSIN. Retrieved from: https://www.pasteur.fr/en/home/press-area/press-documents/emerging-diseases-highly-mutant-strain-elizabethkingia-bacterium-caused-outbreak-wisconsin

Infection Prevention: Water-Borne Pathogens

- An estimated 7.15 million waterborne infections occur annually in the United States.

- Other important Healthcare Associated Infections (HAIs) which can spread through water include:
  - *Pseudomonas aeruginosa* (CRPA/CP-CRPA when Carbapenem Resistant)
  - *Acinetobacter baumannii* (CRAB, when Carbapenem Resistant)
  - *Stenotrophomonas maltophilia*
  - Nontuberculous Mycobacteria (NTM)

- Ensuring that water is managed and used appropriately in healthcare settings is key to preventing waterborne infections.

Biofilms

- Both *Elizabethkingia ssp*. and *Legionella ssp*. form biofilms, especially within water systems or indwelling medical devices.
- A biofilm is an "*assemblage of bacterial cells enclosed in an extracellular matrix of polymeric molecules*."
- Biofilms serve to protect bacterial cells from disinfectants, antibiotics, heat, and mechanical stress that would otherwise kill or disperse them.
- As a result, biofilm formation can make bacteria very difficult to eradicate from water systems.

Sources of Exposure: Tap Water

Acceptable uses

- Drinking
- Hand washing
- Cooking
- Dish washing

Imperfect uses

- Filling nebulizers
- Flushing feeding tubes
- Rinsing medical devices (i.e. CPAP, nebulizers, ventilator circuits etc.)
- Tap water should **never** be injected

Sources of Exposure: Sinks

- Sinks can splash water droplets up to 3' (1m) away.
  - Generally, deeper sinks are less likely to do this.
  - Water from faucets should not fall directly into a sink's drain.

- IV medications/fluids given by IV should not be stored/prepared within 3' (1m) of a sink.
- Care equipment should not be stored/prepared within 3' (1m) of sink.
  - In situations where limited counter space make this impossible, splash/spray barriers may be used.

- **Handwashing** sinks should not be used for disposal of any wastes.
  - Enteral nutrition, nutritional supplements, intravenous fluids, medications, dialysate, blood, and body fluids can provide nutrition to bacteria in sink drains.

CDC (2019) Guidelines for Environmental Infection Control in Healthcare Facilities. Retrieved From: https://www.cdc.gov/infection-control/media/pdfs/guideline-environmental-h.pdf?CDC_AAref_Val=https://www.cdc.gov/infectioncontrol/pdf/guidelines/environmental-guidelines-P.pdf

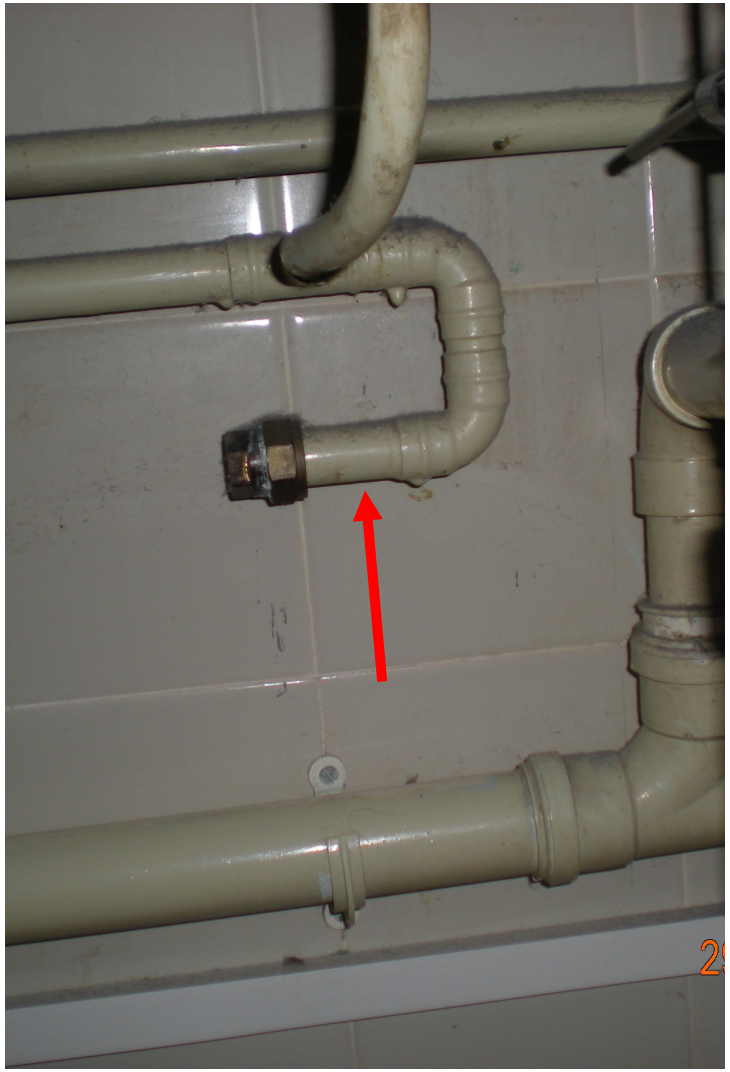
Sinks & Showers

- Sinks should be cleaned and disinfected with an EPA-registered hospital grade product regularly.
- Showers are a potential source of exposure, especially for *Legionella*, since they can create aerosols.
- When water sources are unused for a period of more than 1 week, bacteria may proliferate in the pipes supplying them.
  - Water sources such as sinks, showers, and other water outlets that are not being used regularly should be flushed for at least 5 minutes each week.
- In shower rooms ensure that things allowed to dry
  - Shower wands should be allowed to drain (without touching the floor)
  - Hang shower gurney pads
- Avoid reusable containers in shower rooms, as they may become reservoirs when stored. Disposable washbasins are preferred.

CDC (2019) Guidelines for Environmental Infection Control in Healthcare Facilities. Retrieved From: https://www.cdc.gov/infection-control/media/pdfs/guideline-environmental-h.pdf?CDC_AAref_Val=https://www.cdc.gov/infectioncontrol/pdf/guidelines/environmental-guidelines-P.pdf

Dead Legs

- Dead Legs are sections of pipe which have no outlet.
- They create a section of pipe with little or no water flow.
  - Water temperature equalizes with the air.
  - Over time, disinfectant levels fall, creating ideal conditions for pathogen to proliferate.
- They are often the result of construction and re-modeling.
- If you are doing construction or remodeling, include the removal of any dead legs in your plans.



FGI. Guidelines for Design and Construction of Residential Health, Care and Support Facilities. 2022 Edition. 2.1-8.4.3.2 Handwashing station sink.
Infect Control Hosp Epidemiol. 2018 Dec;39(12):1467-1469.
Infect Control Hosp Epidemiol. 2009;30(1):25-33
CDC (2019) Guidelines for Environmental Infection Control in Healthcare Facilities. Retrieved From: https://www.cdc.gov/infection-control/media/pdfs/guideline-environmental-h.pdf?CDC_AAref_Val=https://www.cdc.gov/infectioncontrol/pdf/guidelines/environmental-guidelines-P.pdf

Additional Sources of Exposure

- Ice Machines/water dispensers
- Cooling towers
- Decorative water features (i.e. fountains, fish tanks, ponds)
- Dialysis

CDC (2019) Guidelines for Environmental Infection Control in Healthcare Facilities. Retrieved From: https://www.cdc.gov/infection-control/media/pdfs/guideline-environmental-h.pdf?CDC_AAref_Val=https://www.cdc.gov/infectioncontrol/pdf/guidelines/environmental-guidelines-P.pdf
CDC (2021) Developing a Water Management program to reduce Legionella growth and Spread in Buildings. Retrieved from: https://www.cdc.gov/control-legionella/media/pdfs/toolkit.pdf

Water Management

- A Water Management Plan (WMP) is executed by a Water Management Committee -- an interdisciplinary group of professionals who have expertise relevant to water management.
  - (i.e. Infection Prevention, Facilities Management/Maintenance, Environmental Services, etc.)

- The activities of the Committee include identifying when water is outside of set parameters (called Control Limits) outlined in the WMP and taking corrective action (called Control Measures).

- The Committee also reviews the WMP and assesses if the activities of the Water Management Committee are effective. They should revise the WMP according to their findings.

- The CDC has a toolkit for creating and running a WMP, which can be found here.

CDC (2021) Developing a Water Management program to reduce Legionella growth and Spread in Buildings. Retrieved from: https://www.cdc.gov/control-legionella/media/pdfs/toolkit.pdf

Water Management Regulation

DEPARTMENT OF HEALTH & HUMAN SERVICES
Centers for Medicare & Medicaid Services
7500 Security Boulevard, Mail Stop C2-21-16
Baltimore, Maryland 21244-1850

CMS CENTERS FOR MEDICARE & MEDICAID SERVICES

Center for Clinical Standards and Quality/Survey & Certification Group

Ref: S&C 17-30-*Hospitals/CAHs/NHs*
REVISED 06.09.2017

DATE: **June 02, 2017**

TO: State Survey Agency Directors

FROM: Director
Survey and Certification Group

SUBJECT: Requirement to Reduce *Legionella* Risk in Healthcare Facility Water Systems to Prevent Cases and Outbreaks of Legionnaires' Disease (LD)
******Revised to Clarify Provider Types Affected******

Memorandum Summary

- ***Legionella* Infections**: The bacterium *Legionella* can cause a serious type of pneumonia called LD in persons at risk. Those at risk include persons who are at least 50 years old, smokers, or those with underlying medical conditions such as chronic lung disease or immunosuppression. Outbreaks have been linked to poorly maintained water systems in buildings with large or complex water systems including hospitals and long-term care facilities. Transmission can occur via aerosols from devices such as showerheads, cooling towers, hot tubs, and decorative fountains.
- **Facility Requirements to Prevent Legionella Infections:** Facilities must develop and adhere to policies and procedures that inhibit microbial growth in building water systems that reduce the risk of growth and spread of *legionella* and other opportunistic pathogens in water.
- *This policy memorandum applies to Hospitals, Critical Access Hospitals (CAHs) and Long-Term Care (LTC). However, this policy memorandum is also intended to provide general awareness for all healthcare organizations.*

Background

LD, a severe sometimes fatal pneumonia, can occur in persons who inhale aerosolized droplets of water contaminated with the bacterium *Legionella*. In a recent review of LD outbreaks in the United States occurring in 2000–2014, 19% of outbreaks were associated with long-term care facilities and 15% with hospitals. The rate of reported cases of legionellosis, which comprises both LD and Pontiac fever (a milder, self-limited, influenza-like illness) has increased 286% in the US during 2000–2014, with approximately 5,000 cases reported to the Centers for Disease Control and Prevention (CDC) in 2014. Approximately 9% of reported legionellosis cases are fatal.

IDPH
ILLINOIS DEPARTMENT OF PUBLIC HEALTH

525-535 West Jefferson Street • Springfield, Illinois 62761-0001 • www.dph.illinois.gov

May 23, 2018

Dear Health Care Facility Licensee:

The Illinois Department of Public Health (IDPH) would like to remind health care facilities about the importance of infection prevention and the need for proactive practices to reduce risks to patients, staff, and the public in health care facilities. A variety of environmental factors associated with warmer temperatures can increase the risk of bacterial infections, especially for water-related diseases like Legionnaires' disease. Since 2000, there has been over a fourfold increase in *Legionella* infections nationwide.

IDPH requests that your facility review and update its water management plan (WMP). In June 2017, the Centers for Medicare and Medicaid Services released Survey and Certification Letter 17-30, *Requirement to Reduce Legionella Risk in Healthcare Facility Water Systems to Prevent Cases and Outbreaks of Legionnaires' Disease*. This Letter required health care facilities to develop, implement, and adhere to a WMP.[1] In 2017, CDC updated its guidance on *Developing a Water Management Program to Reduce Legionella Growth and Spread in Buildings*.[2] These materials can assist your facility in developing and implementing a WMP. Maintaining proper water quality is key to preventing amplification of *Legionella* and the incidence of legionellosis.

A WMP consists of the following:

- Establishment of a water quality management team;
- A description or survey of the facility's water systems;
- Identification of sources of water aerosols capable of introducing *Legionella*, including faucets, showers, evaporative cooling equipment, humidification units, decorative fountains or sprinkler systems;
- A description of measures to control growth of *Legionella*;
- A plan describing intervention strategies to be taken when test results are positive or when there is an illness associated with *Legionella*.

Enclosed is a one-page overview on *Legionella* in water systems. Below are additional resources regarding *Legionella*'s prevalence, clinical symptoms, and *Legionella* control:

- Illinois Department of Public Health: http://dph.illinois.gov/topics-services/diseases-and-conditions/diseases-a-z-list/legionellosis

[1] https://www.cms.gov/Medicare/Provider-Enrollment-and-Certification/SurveyCertificationGenInfo/Downloads/Survey-and-Cert-Letter-17-30.pdf
[2] https://www.cdc.gov/legionella/downloads/toolkit.pdf

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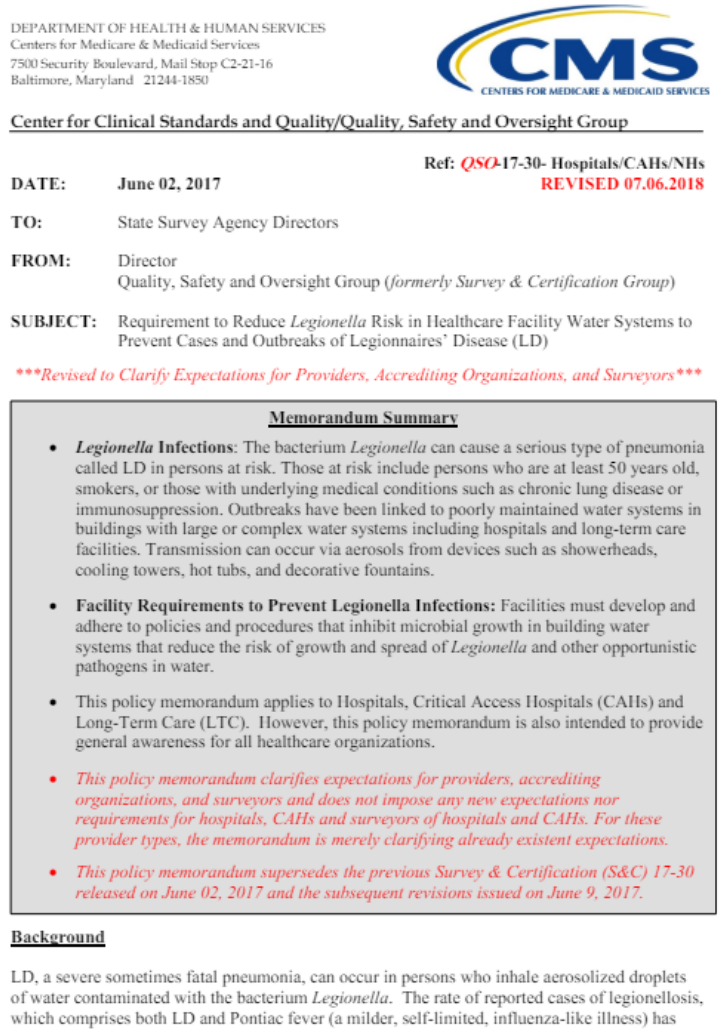
CMS Requirements

- CMS QSO-17-30-Hospitals/CAHs/NHs (revised 07/06/2018)

- ***"CMS expects Medicare and Medicare/Medicaid certified healthcare faciliti to have water management policies and procedures to reduce the risk of growth and spread of Legionella and other opportunistic pathogens in building water systems."***

- CMS also states that Water Management Plans should be consistent with "ASHRAE Industry Standards"



DEPARTMENT OF HEALTH & HUMAN SERVICES
Centers for Medicare & Medicaid Services
7500 Security Boulevard, Mail Stop C2-21-16
Baltimore, Maryland 21244-1850

CMS CENTERS FOR MEDICARE & MEDICAID SERVICES

Center for Clinical Standards and Quality/Quality, Safety and Oversight Group

Ref: *QSO*-17-30- Hospitals/CAHs/NHs

DATE: June 02, 2017 REVISED 07.06.2018

TO: State Survey Agency Directors

FROM: Director
Quality, Safety and Oversight Group (*formerly Survey & Certification Group*)

SUBJECT: Requirement to Reduce *Legionella* Risk in Healthcare Facility Water Systems to Prevent Cases and Outbreaks of Legionnaires' Disease (LD)

****Revised to Clarify Expectations for Providers, Accrediting Organizations, and Surveyors****

Memorandum Summary

- ***Legionella* Infections**: The bacterium *Legionella* can cause a serious type of pneumonia called LD in persons at risk. Those at risk include persons who are at least 50 years old, smokers, or those with underlying medical conditions such as chronic lung disease or immunosuppression. Outbreaks have been linked to poorly maintained water systems in buildings with large or complex water systems including hospitals and long-term care facilities. Transmission can occur via aerosols from devices such as showerheads, cooling towers, hot tubs, and decorative fountains.
- **Facility Requirements to Prevent Legionella Infections:** Facilities must develop and adhere to policies and procedures that inhibit microbial growth in building water systems that reduce the risk of growth and spread of *Legionella* and other opportunistic pathogens in water.
- This policy memorandum applies to Hospitals, Critical Access Hospitals (CAHs) and Long-Term Care (LTC). However, this policy memorandum is also intended to provide general awareness for all healthcare organizations.
- *This policy memorandum clarifies expectations for providers, accrediting organizations, and surveyors and does not impose any new expectations nor requirements for hospitals, CAHs and surveyors of hospitals and CAHs. For these provider types, the memorandum is merely clarifying already existent expectations.*
- *This policy memorandum supersedes the previous Survey & Certification (S&C) 17-30 released on June 02, 2017 and the subsequent revisions issued on June 9, 2017.*

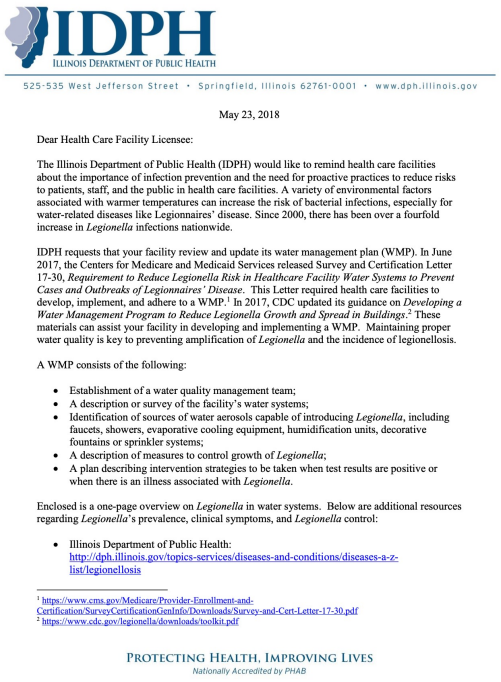
Background

LD, a severe sometimes fatal pneumonia, can occur in persons who inhale aerosolized droplets of water contaminated with the bacterium *Legionella*. The rate of reported cases of legionellosis, which comprises both LD and Pontiac fever (a milder, self-limited, influenza-like illness) has

State Regulatory Compliance

77 Ill. Admin. Code:

- §300.700
- §330.792
- §340.1337



IDPH
ILLINOIS DEPARTMENT OF PUBLIC HEALTH

525-535 West Jefferson Street • Springfield, Illinois 62761-0001 • www.dph.illinois.gov

May 23, 2018

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The Illinois Administrative Code further requires an Infection Prevention and Control Program, with a Water Management Plan, which should include:

- A risk assessment of the threat posed by waterborne pathogens in the building,
- A policy, which lays out specific testing protocols, based on the facility's risk assessment, and acceptable ranges for control limits.
- What actions/control measures would be taken if control limits are outside of acceptable ranges.
- And a system to document the results of testing and any corrective action taken.

In Summary

Rates of *Legionella* and *Elizabethkingia* infections are increasing.

Both organisms are excellent at colonizing healthcare settings, particularly water systems.

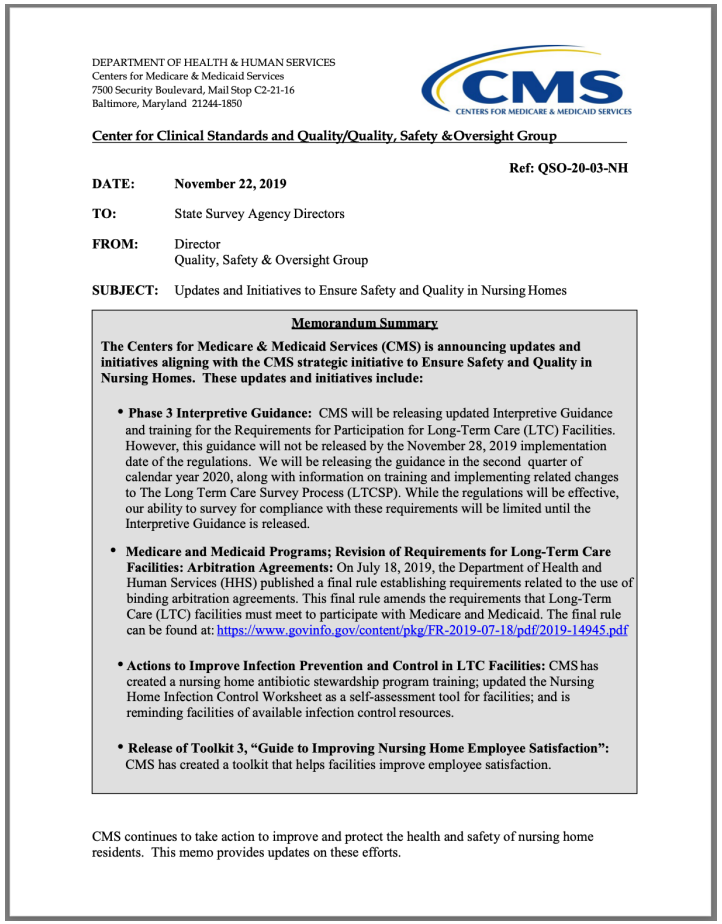
Keep in mind that water is potential source of infection.

Measures can be taken to reduce and control these sources.


Thank You!

CMS LTC Self-Assessment Tool

- The Nursing Home **Infection Control Worksheet (ICWS)** is a collaborative effort by CMS and CDC
- It comprises both regulatory requirements and best practices in infection prevention and control.
- Topics include:
  1. Infection Control program infrastructure and Infection Preventionist
  2. Infection Preventionist relationship to Quality Assurance Committee
  3. Infection surveillance and outbreak response.
  4. Influenza and pneumococcal Immunization
  5. Linen management
  6. Infection prevention during transitions of care
  7. Water Management Program



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CMS
CENTERS FOR MEDICARE & MEDICAID SERVICES

Center for Clinical Standards and Quality/Quality, Safety &Oversight Group

Ref: QSO-20-03-NH

DATE: November 22, 2019

TO: State Survey Agency Directors

FROM: Director
Quality, Safety & Oversight Group

SUBJECT: Updates and Initiatives to Ensure Safety and Quality in Nursing Homes

Memorandum Summary

The Centers for Medicare & Medicaid Services (CMS) is announcing updates and initiatives aligning with the CMS strategic initiative to Ensure Safety and Quality in Nursing Homes. These updates and initiatives include:

- **Phase 3 Interpretive Guidance:** CMS will be releasing updated Interpretive Guidance and training for the Requirements for Participation for Long-Term Care (LTC) Facilities. However, this guidance will not be released by the November 28, 2019 implementation date of the regulations. We will be releasing the guidance in the second quarter of calendar year 2020, along with information on training and implementing related changes to The Long Term Care Survey Process (LTCSP). While the regulations will be effective, our ability to survey for compliance with these requirements will be limited until the Interpretive Guidance is released.
- **Medicare and Medicaid Programs; Revision of Requirements for Long-Term Care Facilities: Arbitration Agreements:** On July 18, 2019, the Department of Health and Human Services (HHS) published a final rule establishing requirements related to the use of binding arbitration agreements. This final rule amends the requirements that Long-Term Care (LTC) facilities must meet to participate with Medicare and Medicaid. The final rule can be found at: https://www.govinfo.gov/content/pkg/FR-2019-07-18/pdf/2019-14945.pdf
- **Actions to Improve Infection Prevention and Control in LTC Facilities:** CMS has created a nursing home antibiotic stewardship program training; updated the Nursing Home Infection Control Worksheet as a self-assessment tool for facilities; and is reminding facilities of available infection control resources.
- **Release of Toolkit 3, "Guide to Improving Nursing Home Employee Satisfaction":** CMS has created a toolkit that helps facilities improve employee satisfaction.

CMS continues to take action to improve and protect the health and safety of nursing home residents. This memo provides updates on these efforts.

Source: https://www.cms.gov/files/document/qso-20-03-nh.pdf

CMS LTC Self-Assessment Tool

Infection Control Program Infrastructure Section

Section A	Infection Preventionand Control Program (IPCP) Infrastructure	Assessments	Comments
A.1.	The facility has written infection preventionand control policies and procedures which arebased on current nationallyrecognized evidence-based guidelines (e.g., CDC/HICPAC), regulations or standards for its Infection Prevention and Control Program(IPCP).	□ Yes □ No	
A.2.	The facility has evidenceof mandatory personnel infection prevention and control training which includes the IPCP written standards, policies, and procedures.	□ Yes □ No	
A.3.	The facility has documentation of a facility infection control risk assessment conducted according to infection control professional organizations (e.g., APIC, SHEA) guidelines.	□ Yes □ No	
A.4.	Facility has documentation of an **annual** review of the IPCPusing a risk assessment of both facility andcommunity risks, andupdates theprogram as necessary.	□ Yes □ No	

Chlorine Water Testing Kits

- Chicago-based SNFs, ALs, and SLs will shortly receive **FREE** chlorine water testing kits (delivered by a third-party).
  - Some facilities may have already received them.
- Training and assistance will be provided once all kits are delivered.
- Contact Janice.turner@cityofchicago.org with any questions.

Questions & Answers

For additional resources and upcoming events, please visit the CDPH LTCF HAN page at:
https://www.chicagohan.org/covid-19/LTCF