



COVID-19 Chicago Long Term Care Roundtable

04-27-2023



Agenda

- COVID-19 Epidemiology & Updates
- TB Data
- Project Firstline
- Legionella 101
- Questions & Answers

Chicago COVID-19 Dashboard



CHICAGO | COVID-19 Summary

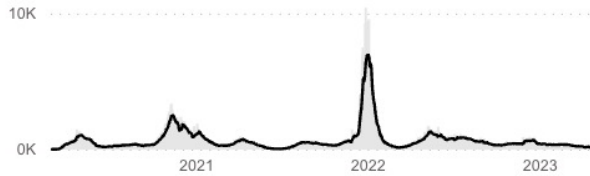
Data current as of Apr 25, 2023.
Data are updated Wednesdays at 5:30 p.m., except for City holiday.

SUMMARY CASES CASES BY ZIP TESTS VACCINES VACCINES BY ZIP

[Learn how to use this dashboard.](#)

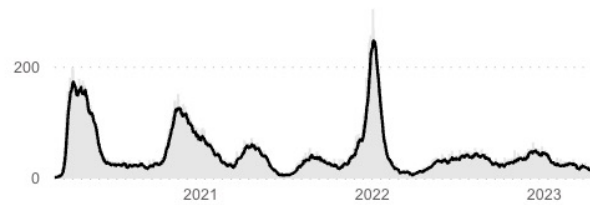
LABORATORY-CONFIRMED CASES

136 ▼ 186 (-27%) 773,717 4.9
Current daily avg Prior week Cumulative Daily rate per 100,000



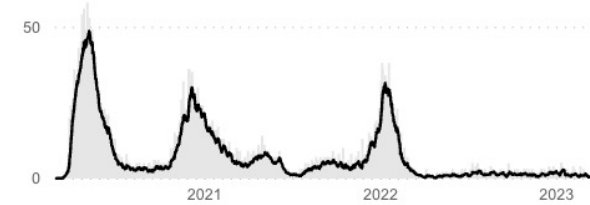
HOSPITALIZATIONS

16 ▲ 15 (+5%) 52,522 0.6
Current daily avg Prior week Cumulative Daily rate per 100,000



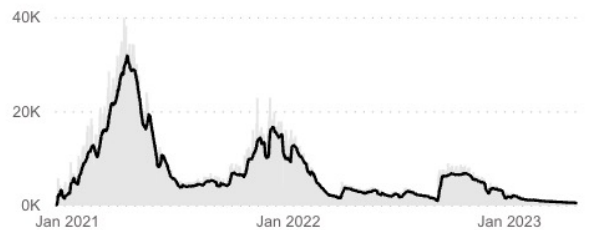
DEATHS

0.29 ▼ 0.57 (-50%) 8,128 0.0
Current daily avg Prior week Cumulative Daily rate per 100,000



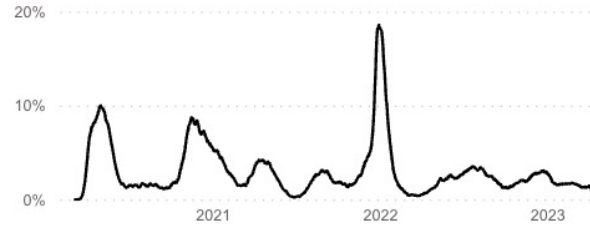
VACCINATIONS ADMINISTERED

493 ▼ 5,814,175 70.9% 80.3%
Current daily avg Cumulative Completed series At least one dose



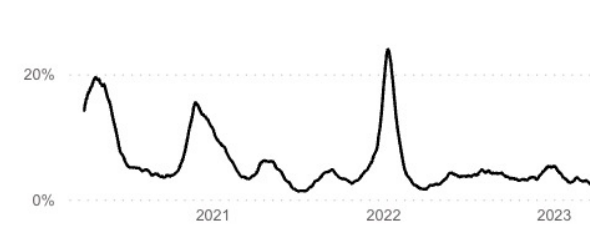
EMERGENCY ROOM VISITS

0.8% ▼ 1.1%
Current daily avg Prior Week



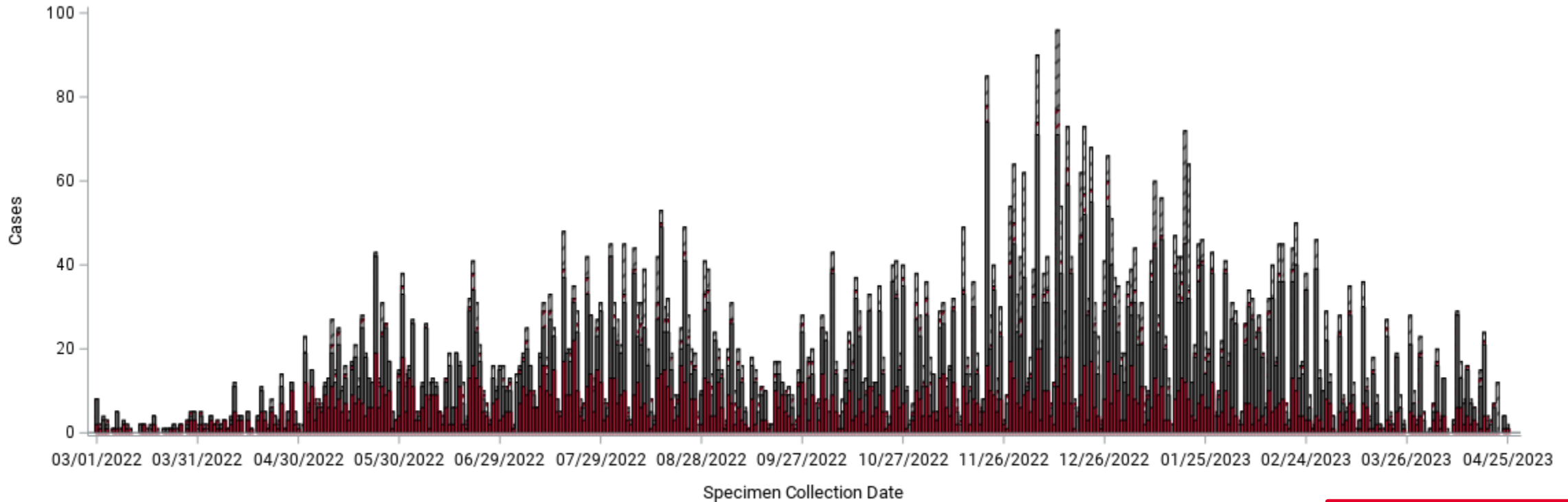
HOSPITAL BEDS IN USE

1.8% ▼ 1.9%
Current daily avg Prior Week



SNF COVID-19 Cases

(Mar. 1, 2022 – Apr. 26, 2023)



Not Fully Vaccinated Resident Not Fully Vaccinated Staff Fully Vaccinated Resident Fully Vaccinated Staff

Data Sources: INEDSS (Illinois state) and REDCap (facility self report)

A fully vaccinated case occurs when the positive test specimen was collected at least 14 days after the individual completed their COVID vaccination

Fully vaccinated cases may be underestimated due to delayed reporting

**19 (24%) SNFs
have active
outbreaks**

COVID-19 Variant Proportions



HHS Region: Data for Week Ending in: View: Nowcast and Weighted Estimates Weighted Estimates Only

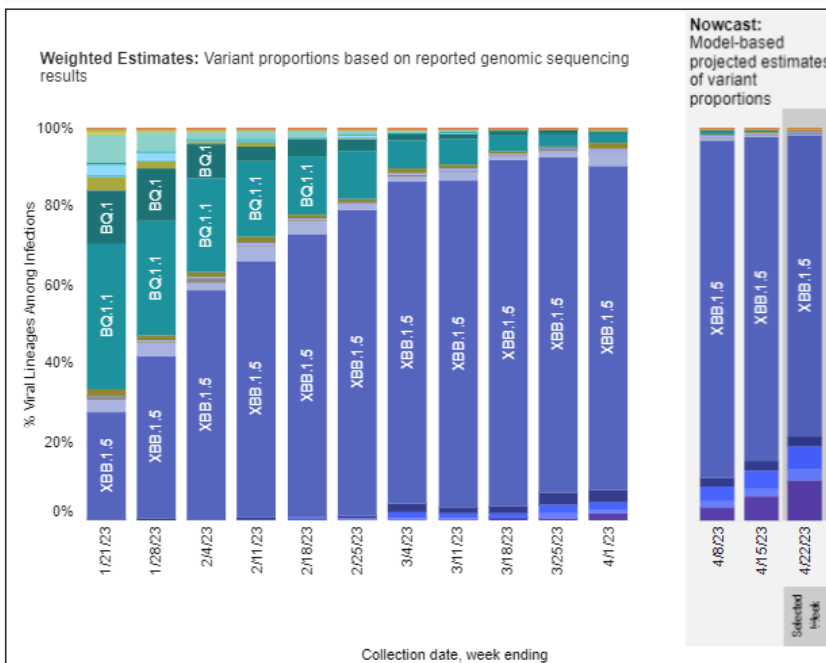
This shows weighted and Nowcast estimates for the United States. The table and map show estimates for the week ending in 4/22/2023 (Nowcast).

Weighted and Nowcast Estimates in HHS Region 5 for Weeks of 1/15/2023 – 4/22/2023

Nowcast Estimates in HHS Region 5 for 4/16/2023 – 4/22/2023

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

Region 5 - Illinois, Indiana, Michigan, Minnesota, Ohio, and Wisconsin



WHO label	Lineage #	US Class	%Total	95%PI
Omicron	XBB.1.5	VOC	76.8%	67.6-84.0%
	XBB.1.16	VOC	10.4%	4.0-23.0%
	XBB.1.9.1	VOC	5.9%	4.2-8.1%
	XBB.1.9.2	VOC	2.6%	1.7-4.0%
	XBB.1.5.1	VOC	2.6%	1.7-3.8%
	XBB	VOC	0.6%	0.3-1.3%
	BQ.1.1	VOC	0.5%	0.3-0.6%
	CH.1.1	VOC	0.3%	0.2-0.4%
	FD.2	VOC	0.2%	0.1-0.4%
	BQ.1	VOC	0.1%	0.0-0.1%
	BN.1	VOC	0.0%	0.0-0.0%
	BA.5	VOC	0.0%	0.0-0.0%
	BA.2.75	VOC	0.0%	0.0-0.0%
	BA.2	VOC	0.0%	0.0-0.0%
	BF.7	VOC	0.0%	0.0-0.0%
	BA.2.75.2	VOC	0.0%	0.0-0.0%
	BF.11	VOC	0.0%	0.0-0.0%
	BA.5.2.6	VOC	0.0%	0.0-0.0%
	BA.4.6	VOC	0.0%	0.0-0.0%
Other	Other*		0.1%	0.0-0.1%

* Enumerated lineages are US VOC and lineages circulating above 1% nationally in at least one week period. "Other" represents the aggregation of lineages which are circulating <1% nationally during all weeks displayed.
 # BA.1, BA.3 and their sublineages (except BA.1.1 and its sublineages) are aggregated with B.1.1.529. Except BA.2.12.1, BA.2.75, XBB and their sublineages, BA.2 sublineages are aggregated with BA.2. Except BA.2.75.2, CH.1.1 and BN.1, BA.2.75 sublineages are aggregated with BA.2.75. Except BA.4.6, sublineages of BA.4 are aggregated to BA.4. Except BF.7, BF.11, BA.5.2.6, BQ.1 and BQ.1.1, sublineages of BA.5 are aggregated to BA.5. Except the lineages shown and their sublineages, sublineages of XBB are aggregated to XBB. Except XBB.1.5.1 and FD.2, sublineages of XBB.1.5 are aggregated to XBB.1.5. For all the other lineages listed, their sublineages are aggregated to the listed parental lineages respectively. Previously, XBB.1.9.2 and XBB.1.16 were aggregated to XBB; FD.2 was aggregated to XBB.1.5. Lineages BA.2.75.2, XBB, XBB.1.5, XBB.1.5.1, FD.2, XBB.1.9.1, XBB.1.9.2, XBB.1.16, BN.1, BA.4.6, BF.7, BF.11, BA.5.2.6 and BQ.1.1 contain the spike substitution R346T.

★ Reminder: CDC COVID Data Tracker

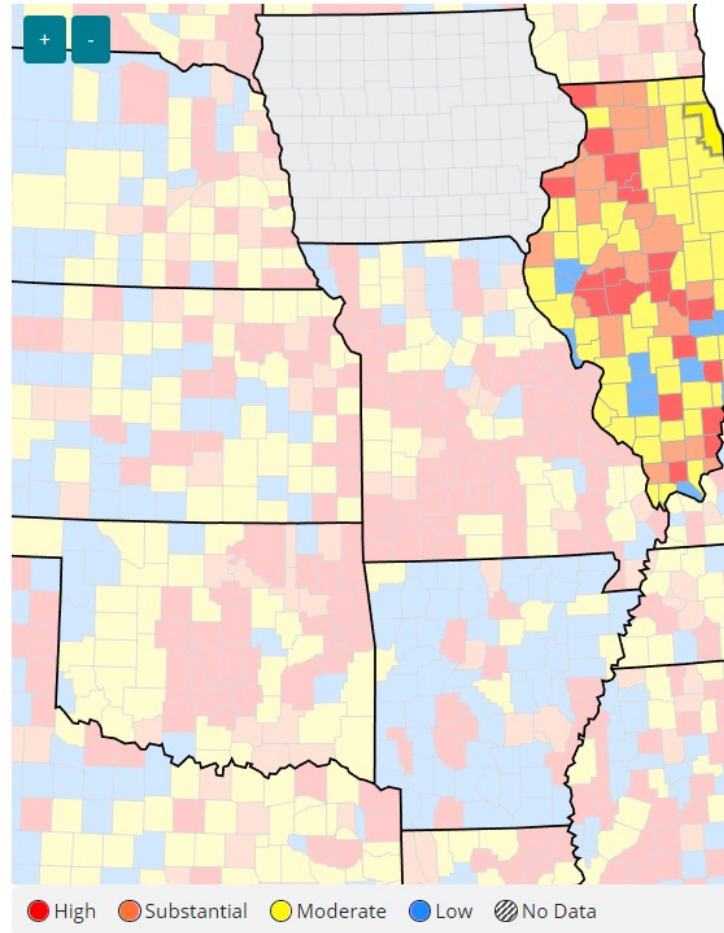
Indicator - If the two indicators suggest different transmission levels, the higher level is selected	Low Transmission Blue	Moderate Transmission Yellow	Substantial Transmission Orange	High Transmission Red
Total new cases per 100,000 persons in the past 7 days	0-9.99	10-49.99	50-99.99	≥100
Percentage of NAATs ¹ that are positive during the past 7 days	0-4.99%	5-7.99%	8-9.99%	≥10.0%

Note: Community transmission levels will now be updated weekly

CDC COVID Data Tracker: Cook County



Data Type:
Community Transmission





Chicago Respiratory Virus Surveillance Report – Current Week & Cumulative

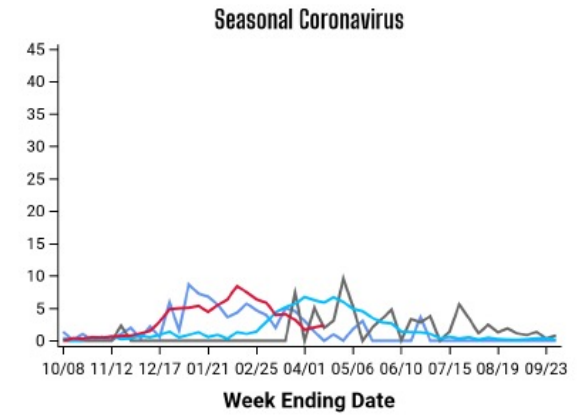
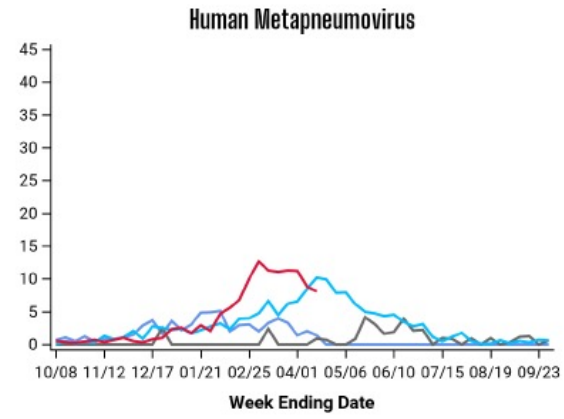
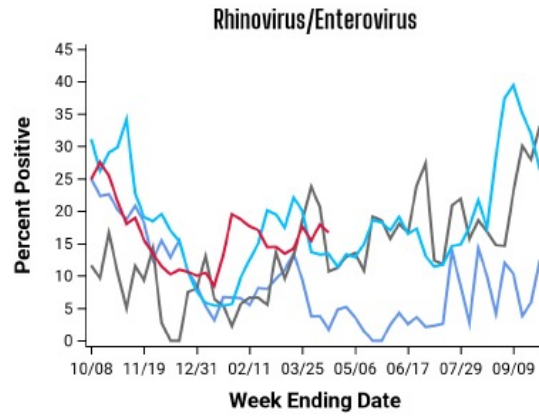
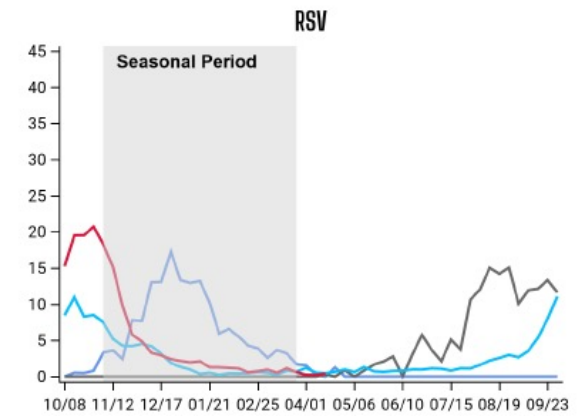
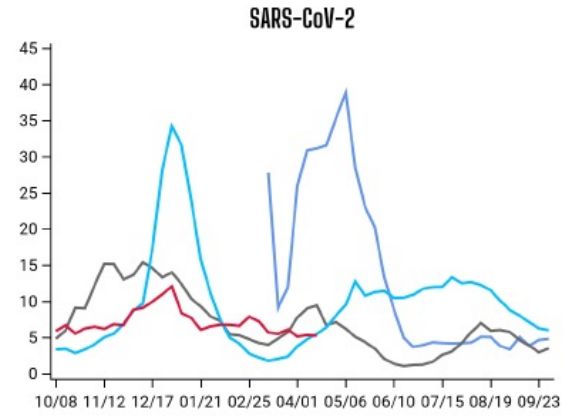
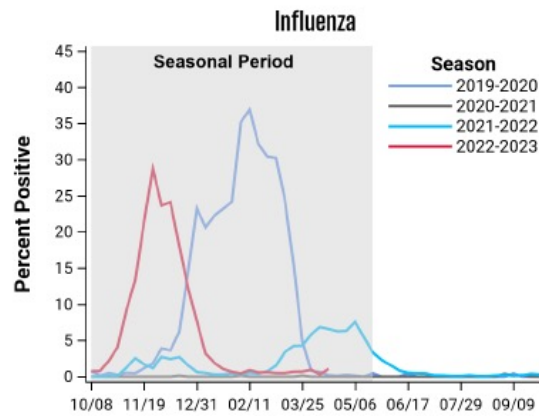
Respiratory Virus Laboratory Surveillance - Current Week and Cumulative *The table below includes respiratory viral PCR tests performed by several hospital laboratories in Chicago as well as two commercial laboratories serving Chicago facilities. Reporting facilities represent nearly half of all acute care hospitals in the city. Data reported include Chicago and non-Chicago residents.*

Respiratory Pathogen	Week Ending April 15, 2023		Since October 2, 2022	
	# Tested	% Positive	# Tested	% Positive
Influenza*	3,429	1.1	144,328	8.6
RSV*	2,178	0.4	106,935	6.1
SARS-CoV-2*	3,175	5.3	176,170	7.2
Parainfluenza	1,648	5.2	47,290	2.9
Rhinovirus/Enterovirus	972	16.7	32,638	15.9
Adenovirus	977	5.1	32,523	3.7
Human Metapneumovirus	977	8.1	32,910	3.8
Seasonal Coronaviruses [†]	1,644	2.4	47,689	3.1

*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.



Chicago Respiratory Virus Surveillance Report – Seasonal Trends





Reminder: Minimum Routine Staff Testing Frequency

Vaccination Status	Community Transmission Level	Testing Frequency
Not up to date	All	No required routine testing*
Up to date**	All	No required routine testing*

* Unless symptomatic, had a high-risk exposure, or your facility is in outbreak and performing unit/broad-based testing.

** An individual has received all COVID-19 vaccinations for which they are eligible



Reminder: Minimum Routine Resident Testing Frequency

Vaccination Status	Community Transmission Level	Routine Testing Frequency
Not up to date*	All	No required routine testing**
Up to date*	All	No required routine testing**
New and readmissions, regardless of vaccination status	Low, Moderate, Substantial	No required routine testing**
New and readmissions, regardless of vaccination status***	High	Upon admission, 48 hours after 1st negative test, 48 hours after 2nd negative test (i.e., days 0, 2, 4)

*Excluding new/readmissions when community transmission is high

**Unless symptomatic, following a high-risk exposure, or your facility is in outbreak and performing broad-based testing.

***Unless COVID+ within the prior 30 days

Vaccination Updates

- The bivalent vaccine can now be used for **all** doses for individuals 6 months and older
- Monovalent vaccines are no longer authorized for use in the United States
- Adults 65+ who received a single dose of the bivalent vaccine may receive an additional dose at least four months following their initial bivalent dose

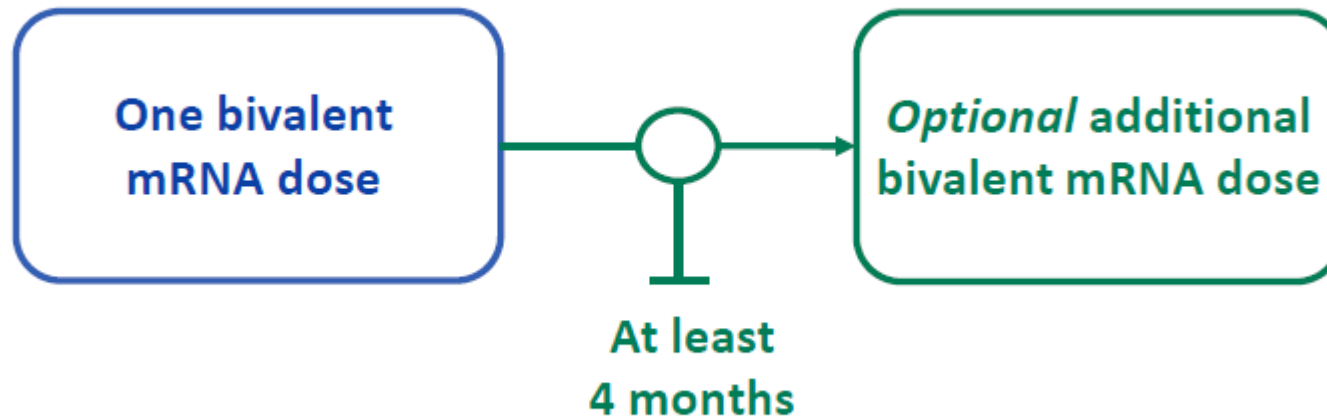
FDA NEWS RELEASE

Coronavirus (COVID-19) Update: FDA Authorizes Changes to Simplify Use of Bivalent mRNA COVID-19 Vaccines

[f Share](#) [t Tweet](#) [in LinkedIn](#) [✉ Email](#) [🖨 Print](#)

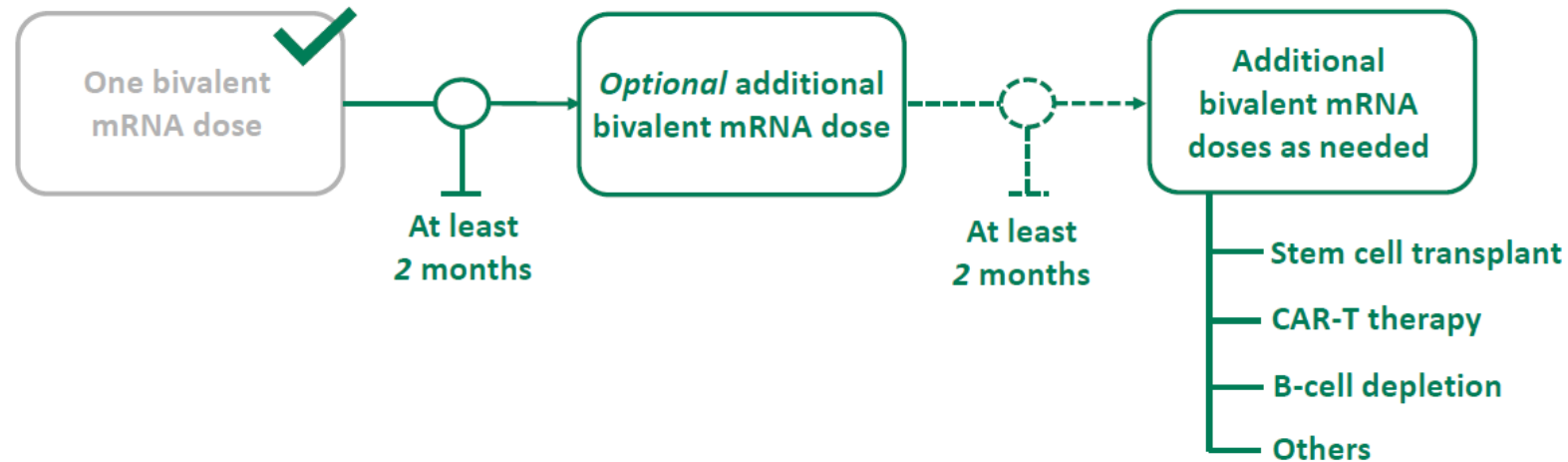
For Immediate Release: April 18, 2023

★ Bivalent Dose Spacing for 65+



★ Bivalent Spacing for Immunocompromised

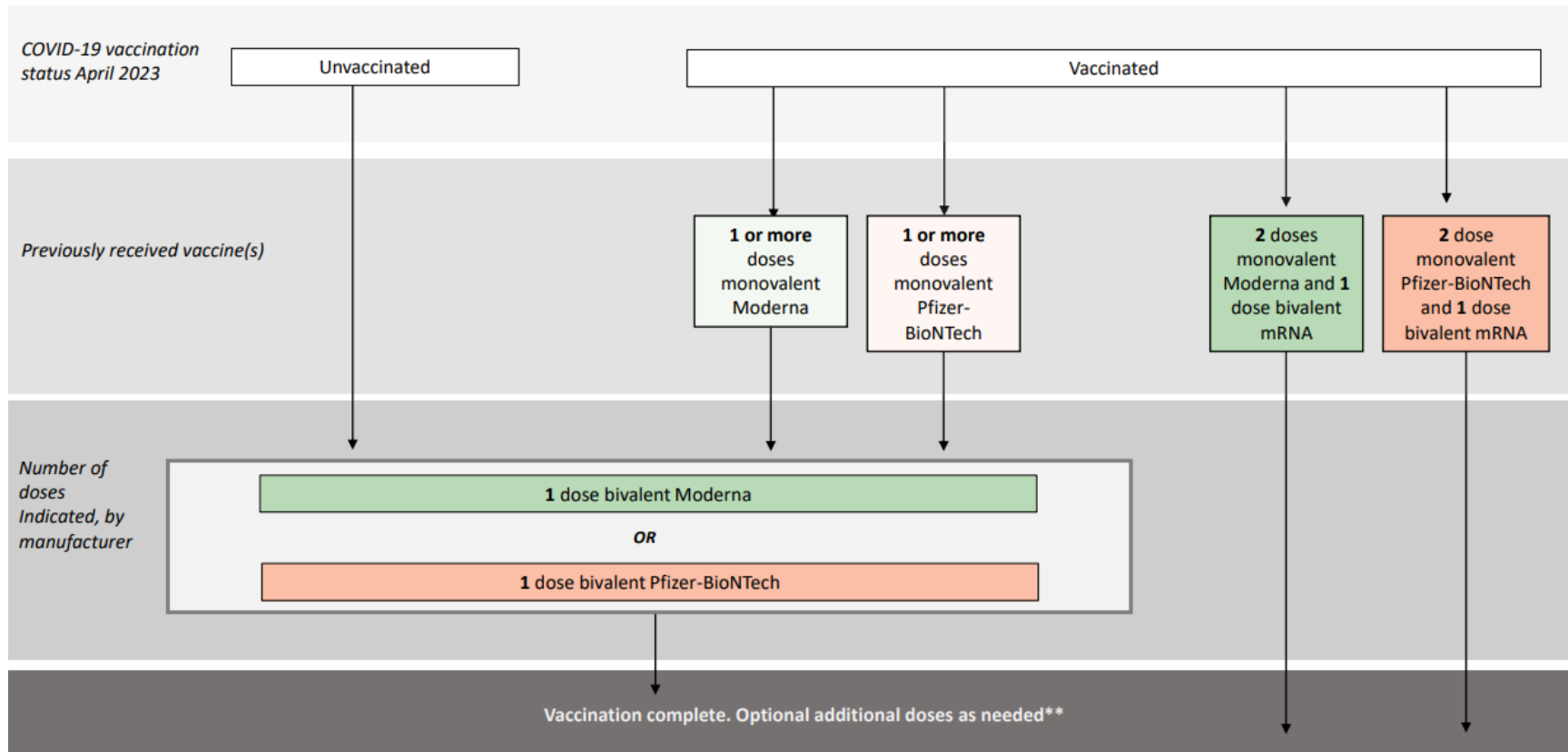
New flexibility for people at higher risk of severe COVID-19:
People aged ≥ 6 years *with immunocompromise** who have
already received a bivalent mRNA dose



*Including those with imminent immunocompromise (e.g., prior to organ transplant; other causes.)



COVID-19 vaccination algorithm for people who are NOT moderately or severely immunocompromised, age 6 years and older



*To see product-specific doses and intervals of administration, see reference Table 1 in Interim Clinical Considerations, forthcoming.

**People ages 65+ have the option to receive 1 additional bivalent mRNA dose at least 4 months after the first dose of a bivalent mRNA vaccine.

Upcoming NHSN Reporting Changes

- CMS-certified LTCFs must still report to NHSN via the LTCF COVID-19 module surveillance pathways and the COVID-19 vaccination module even after the public health emergency ends
- Several modifications will be made to the COVID-19 module surveillance pathways, including:
 - Reducing vaccination elements
 - Removal of influenza and staffing/supply shortages data fields
 - Removal of deaths in the staff and personnel impact pathway
 - Removal of the therapeutics pathway
 - Addition of hospitalizations in the resident impact and facility capacity pathway
- Webinars outlining the changes will be held on June 1st & June 7th



FAQ: Since community transmission is not high, how often should we check residents' vital signs?

- **If the facility is not experiencing an outbreak**, residents' vital signs should be checked at least weekly, including temperature, pulse, and respirations (TPR), blood pressure (BP), and pulse ox.
- **If the facility is experiencing an outbreak**, all residents should be evaluated at least daily for signs and symptoms of COVID-19, temperature, and respiratory status with pulse ox.
- **Regardless of facility outbreak status**, if a resident has a fever or symptoms consistent with COVID-19, monitoring should be completed every four hours. Include symptom assessment, TPR, pulse ox, and assess respiratory status.



2022 City of Chicago TB Rates, by Region

- **Central: 0.0**

- Near North Side
- Loop
- Near South Side

- **North Side: 2.2**

- North Center
- Lakeview
- Lincoln Park
- Avondale
- Logan Square

- **Far North Side: 4.9**

- Rogers Park
- West Ridge
- Uptown
- Lincoln Square
- Edison Park
- Norwood Park
- Jefferson Park
- Forest Glen
- North Park
- Albany Park
- O'Hare
- Edgewater

- **Far Southeast Side: 2.9**

- Chatham
- Avalon Park
- South Chicago
- Burnside
- Calumet Heights
- Roseland
- Pullman
- South Deering
- East Side
- West Pullman
- Riverdale
- Hegewisch



2022 City of Chicago TB Rates, by Region

- **Southwest Side: 3.7**

- Garfield Ridge
- Archer Heights
- Brighton Park
- McKinley Park
- New City
- West Elsdon
- Gage Park
- Clearing
- West Lawn
- Chicago Lawn
- West Englewood
- Englewood

- **Far Southwest Side: 2.3**

- Ashburn
- Auburn Gresham
- Beverly
- Washington Heights
- Mount Greenwood
- Morgan Park

- **South Side: 4.8**

- Armour Square
- Douglas
- Oakland
- Fuller Park
- Grand Boulevard
- Kenwood
- Washington Park
- Hyde Park
- Woodlawn
- South Shore
- Bridgeport
- Greater Grand Crossing



2022 City of Chicago TB Rates, by Region

- **Northwest Side: 5.1**

- Portage Park
- Irving Park
- Dunning
- Montclare
- Belmont Cragin
- Hermosa

- **West Side: 6.0**

- Humboldt Park
- West Town
- Austin
- West Garfield Park
- East Garfield Park
- Near West Side
- North Lawndale
- South Lawndale
- Lower West Side

Project Firstline

Alison VanDine, MPH, CIC

Infection Prevention Specialist I Project Firstline Lead

Healthcare Program



CDPH's Project Firstline: Learning Needs Assessment

- As a CDC [Project Firstline Partner](#), the [Chicago Department of Public Health](#) working to identify priority IPC training needs among frontline healthcare personnel in 2023.
- Have an idea for a new IPC training topic to train frontline staff or an area you would like to learn more about? Please complete [this brief survey](#).
- This survey can also be distributed among your frontline staff (e.g., Nurse educators, EVS staff, technicians, etc.).
- Please contact the **PFL-Chicago team** at projectfirstline@cityofchicago.org:
 - For support in distributing the survey to your frontline staff
 - To schedule an onsite training tailored to your facility
 - Learn more about CDC's Project Firstline!





Legionellosis Trends and Prevention

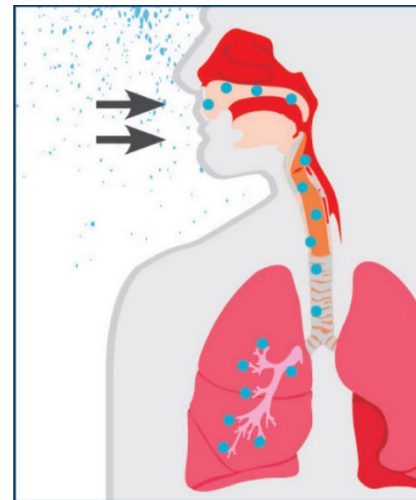
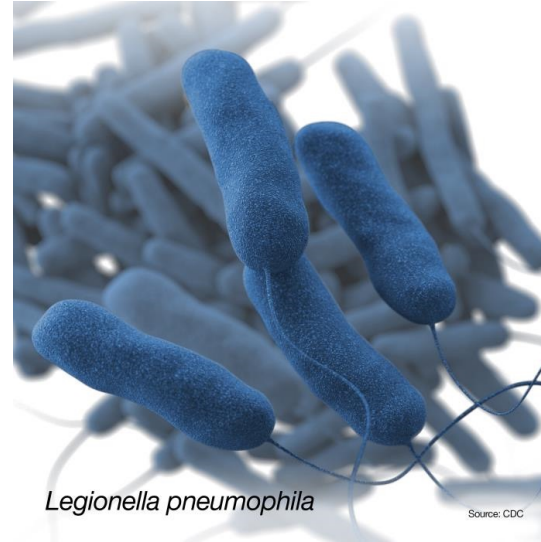
Karrie-Ann Toews and Janice Turner

Long term care roundtable

April 27th, 2023

Legionella

- Intracellular parasite of free-living protozoa primarily found in freshwater
- Can live and grow in biofilms
- *L. pneumophila*: ~90% of reported U.S. cases
- Transmitted to susceptible host via aerosolized water droplets



From *legionella* in fresh water to clinical disease: a multi-step cascade

Legionella
lives in fresh
water



- Natural reservoir for legionella
- Insufficient quantities to cause disease

Certain conditions in
large, complex water
systems can lead to
legionella amplification



- Temperature (77-108° F)
- Stagnation
- Scale and sediment
- Biofilm
- Protozoa
- Absence of disinfectant

Certain devices
can aerosolize
water containing
legionella



- Showerheads and sink faucets
- Cooling towers
- Hot tubs
- Decorative fountains

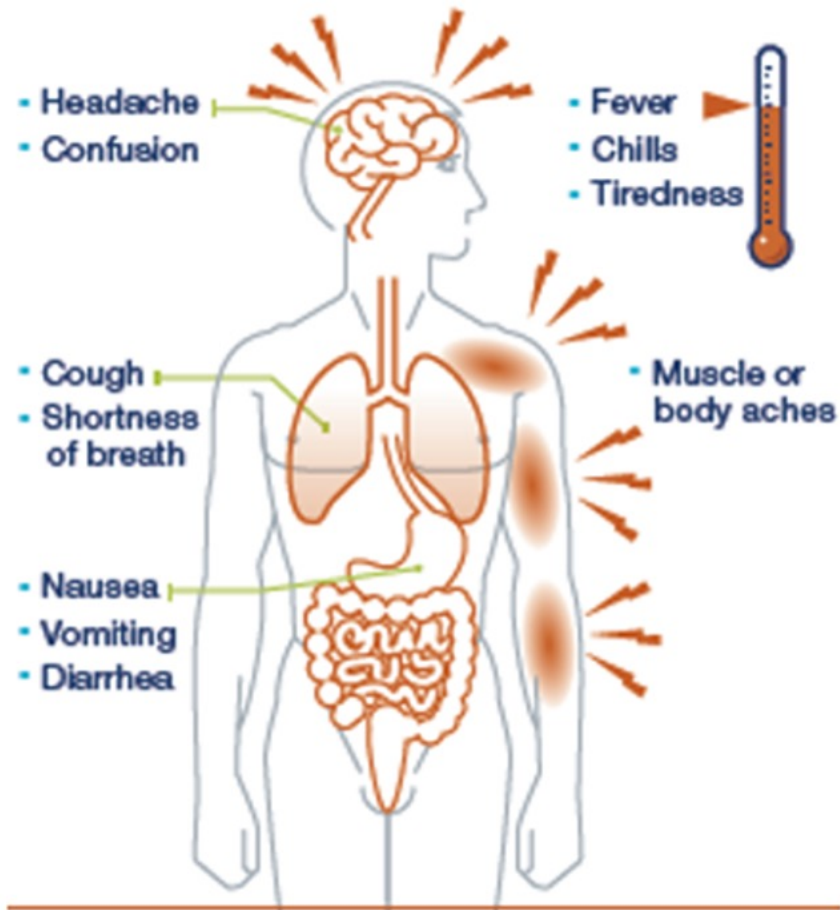
Legionella can
be transmitted
to susceptible
hosts and
cause disease



- Age > 50 years
- Smoking
- Weakened immune system
- Chronic disease

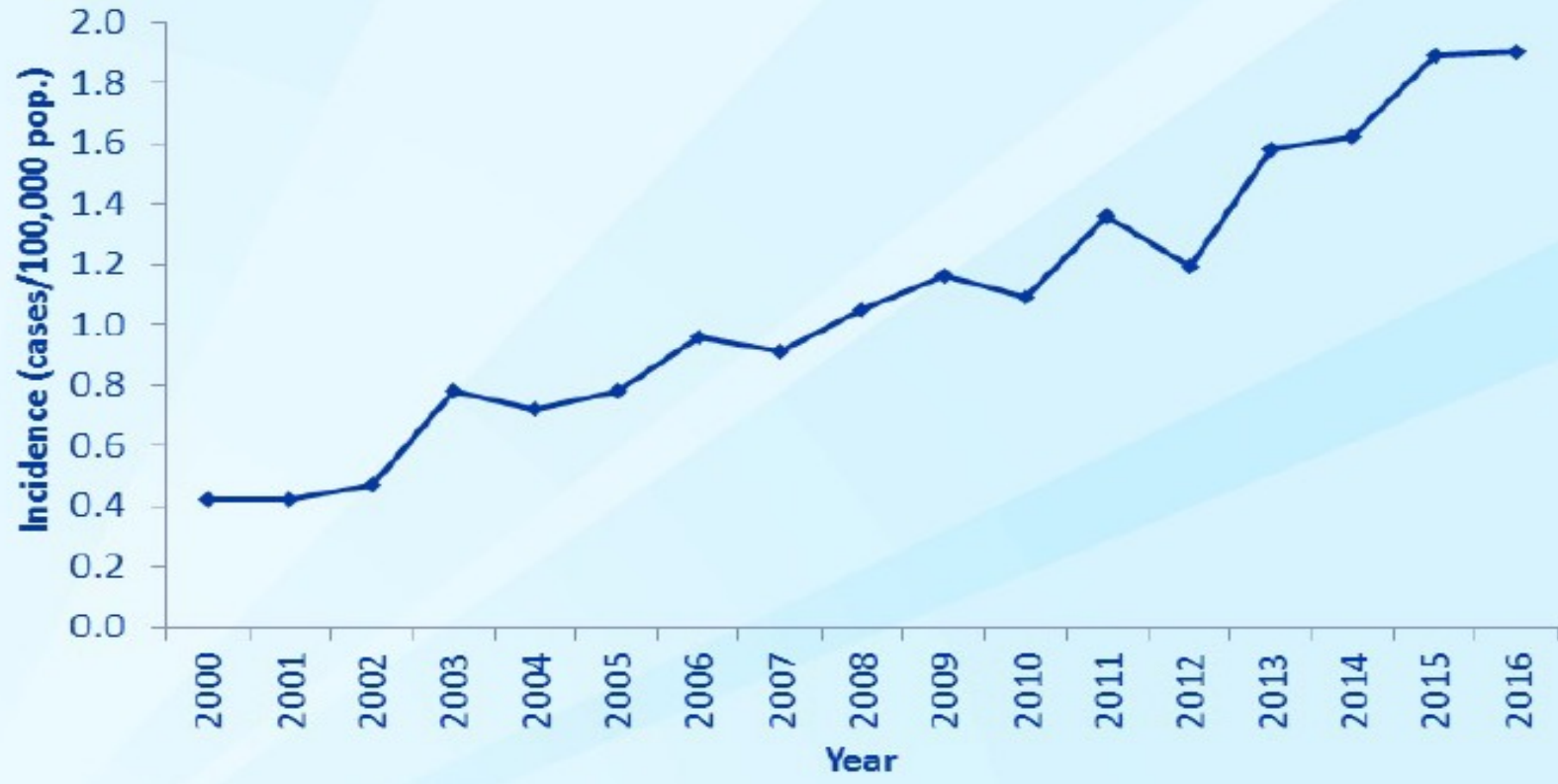
Slide courtesy of Darrah Dunlap, IDPH

Two manifestations of illness



- Pontiac fever (1-3 days)
 - Flu-like (fever, chills, fatigue)
 - No pneumonia
 - Does not typically result in hospitalization or antibiotics
 - Typically self-resolving
- Legionnaires' disease (2-10 days)
 - Severe pneumonia
 - Fever, myalgia, cough, shortness of breath
 - Treated with antibiotics
 - Hospitalization is common

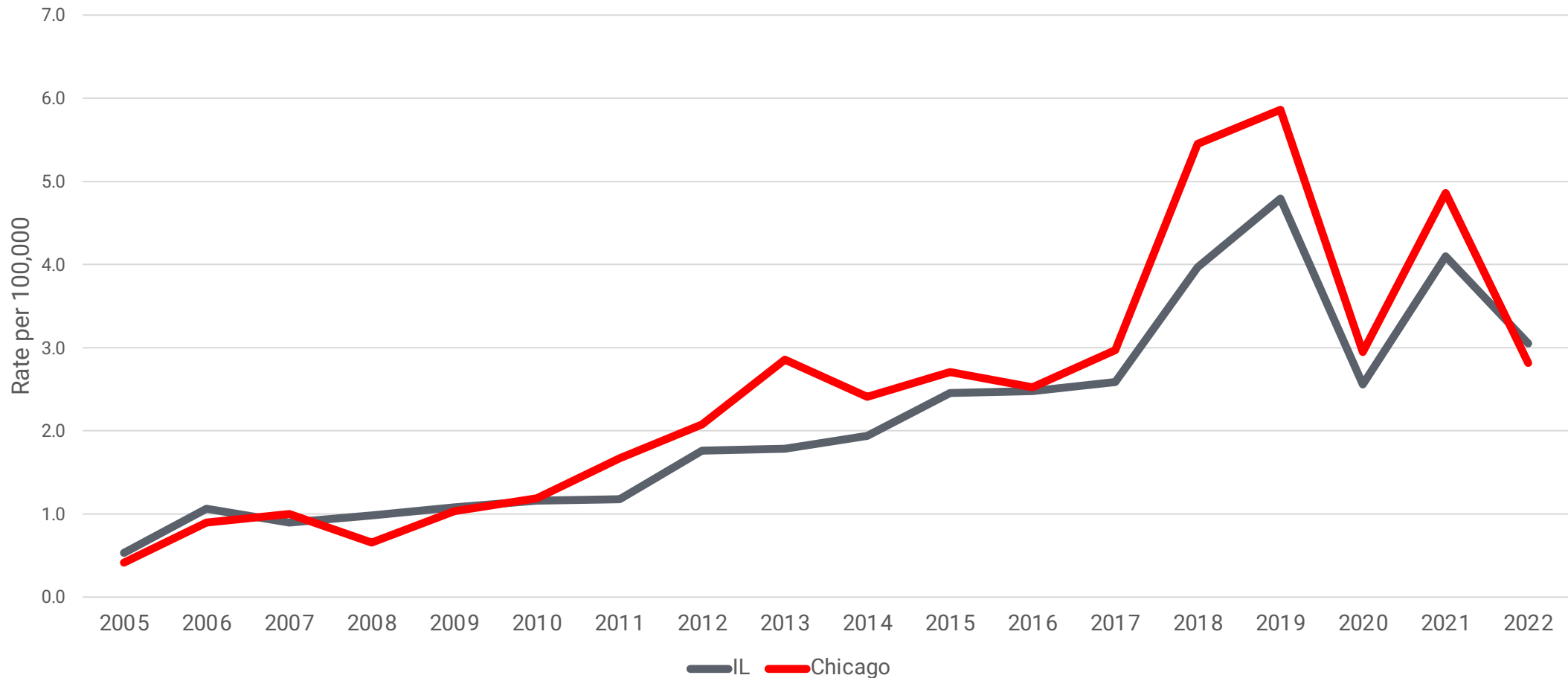
Legionnaires' Disease Is On The Rise 2000—2016*



*National Notifiable Diseases Surveillance System

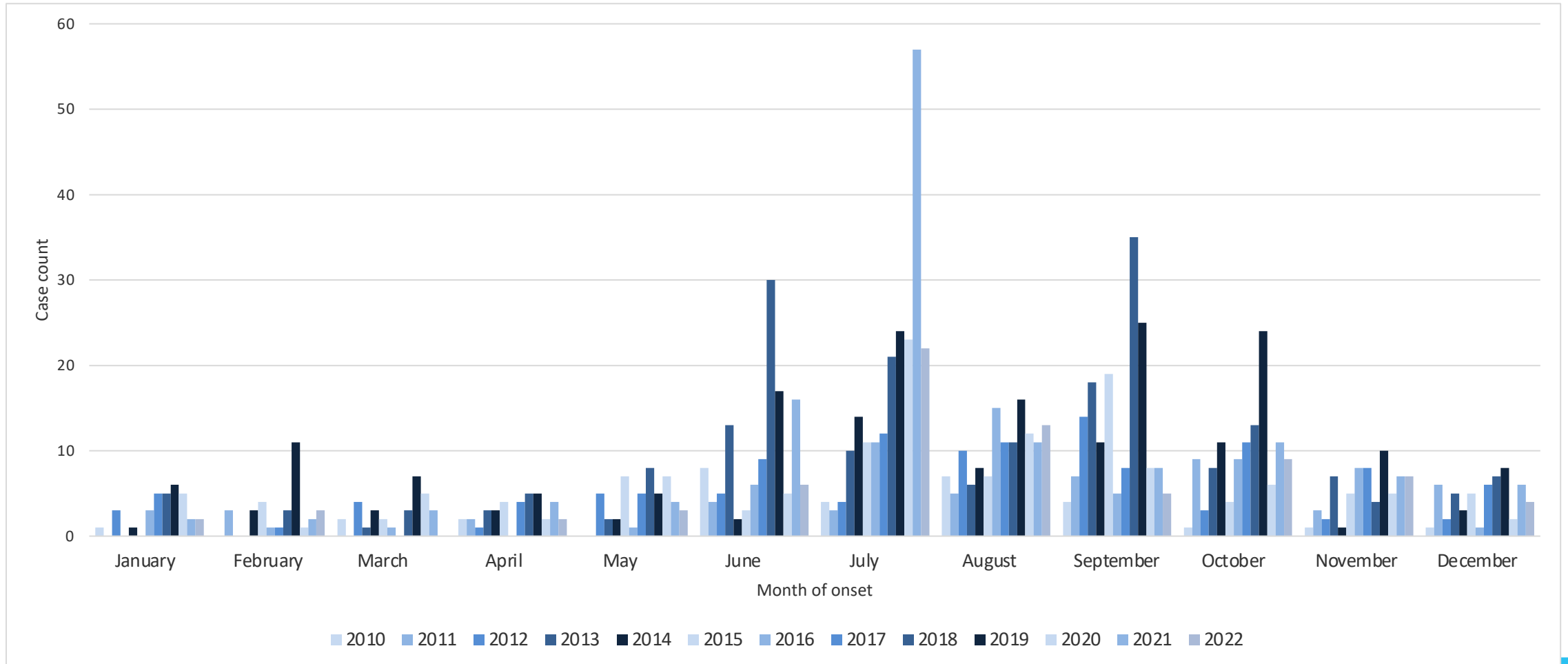


Legionellosis rates have been increasing steadily in IL and Chicago





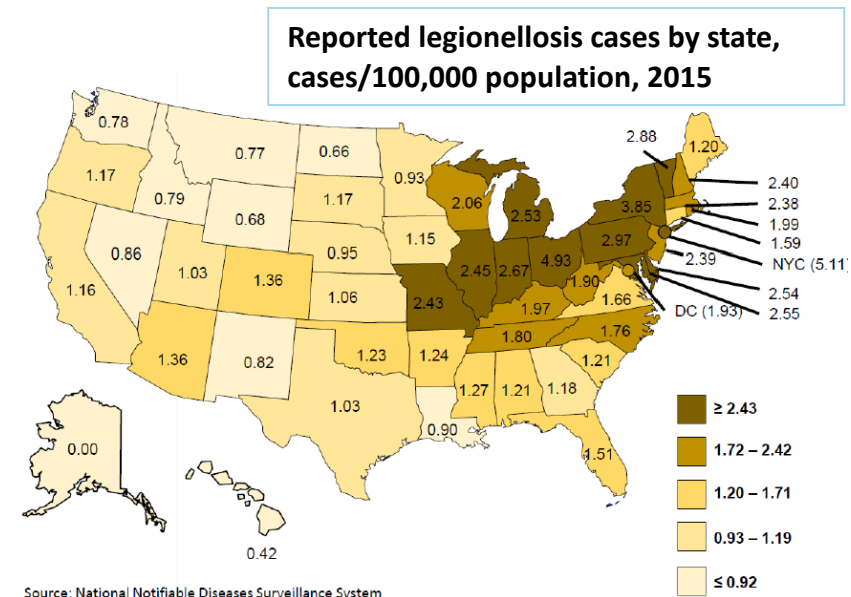
Legionellosis cases peak from June to October in Chicago





Possible reasons for increasing number of reported cases

- Increased susceptibility of the population
 - Aging US population
 - More people with immune suppressing medications
- More Legionella in the environment
 - Warmer temperatures
 - Aging infrastructure
 - Water-saving building modification
- Improved diagnostic capabilities
 - Urine antigen test
- Improved diagnosis and reporting
 - Increased awareness and testing
 - Increased surveillance capacity



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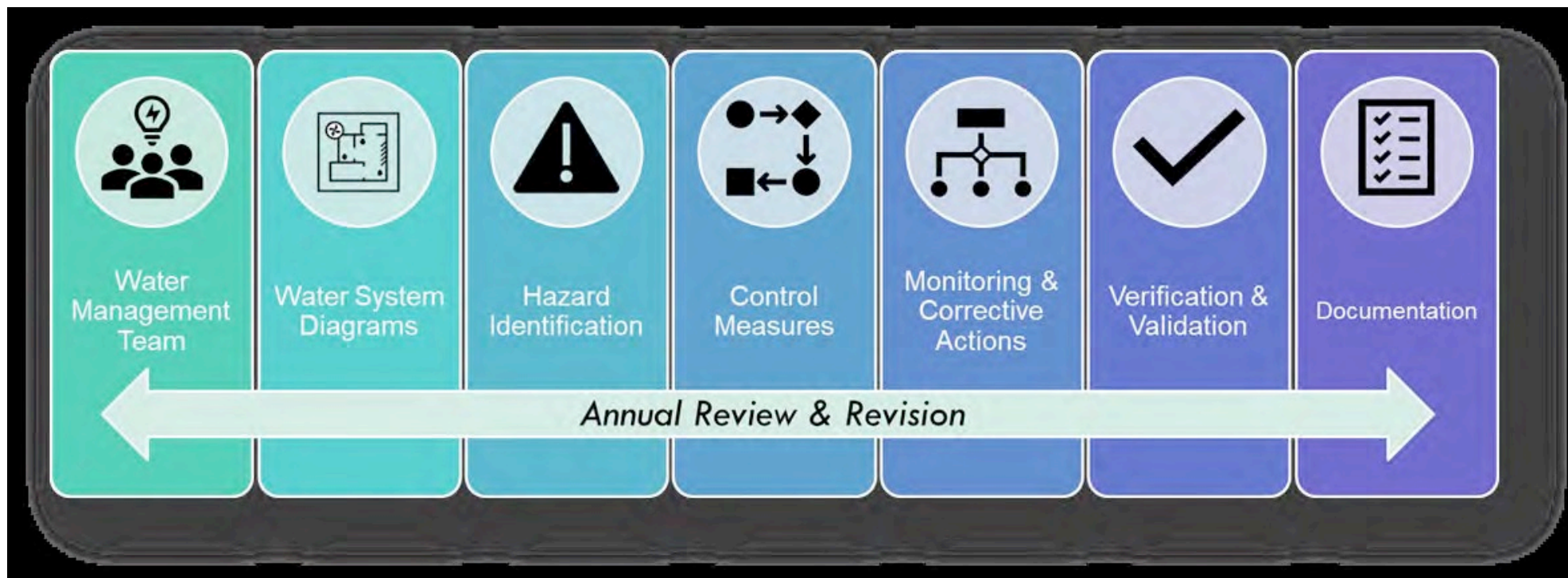
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Slide courtesy of Darrah Dunlap, IDPH

Developing a Water Management Plan (WMP)



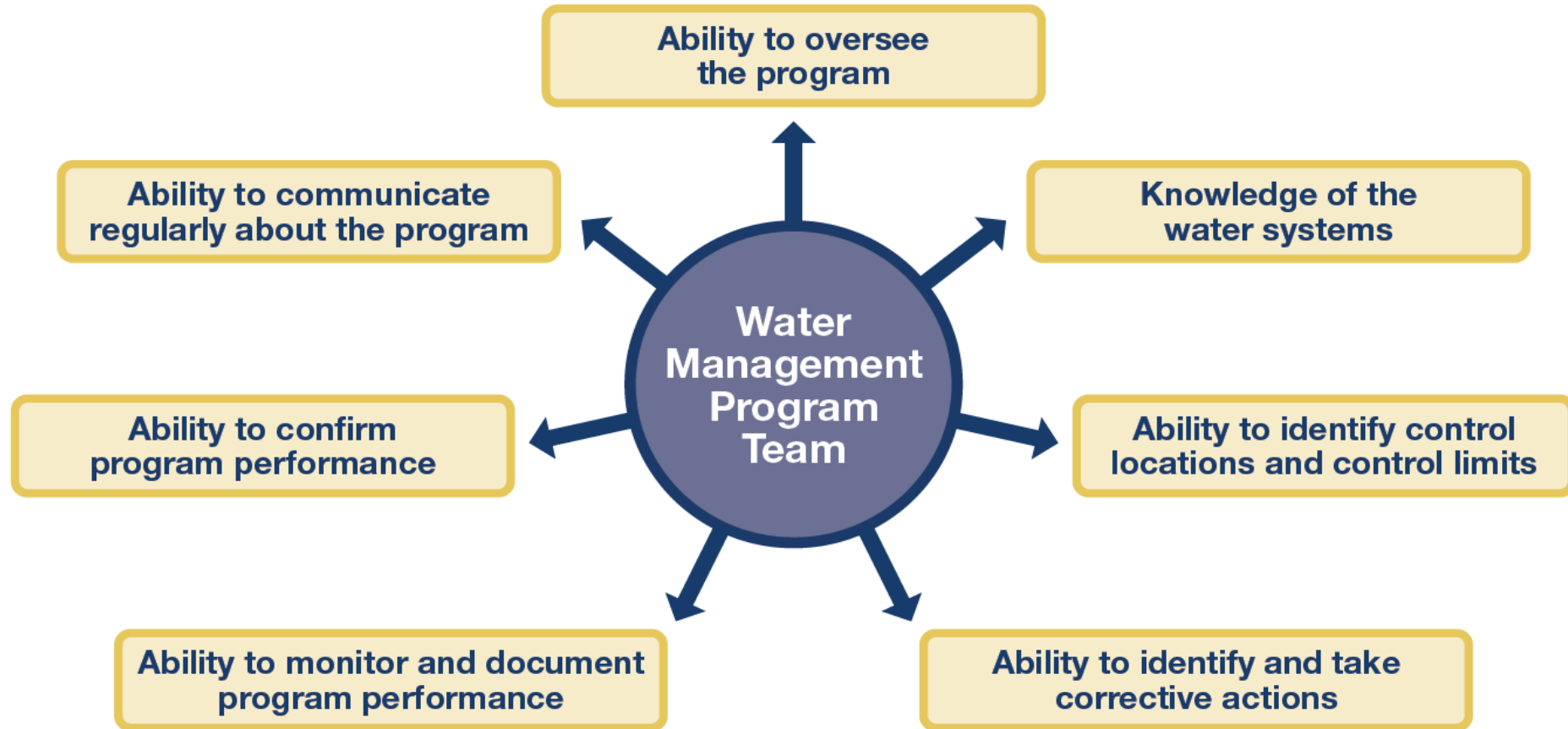
Form a team

- Assemble all diagrams & relevant history
- Identify Hazards
- Develop Controls


Monitor & Correct

- Are we doing it right?
- Is it working?
- Ongoing documentation, review & revision


Step 1 - Water Management Program Team



Step 1 - Water Management Program Team



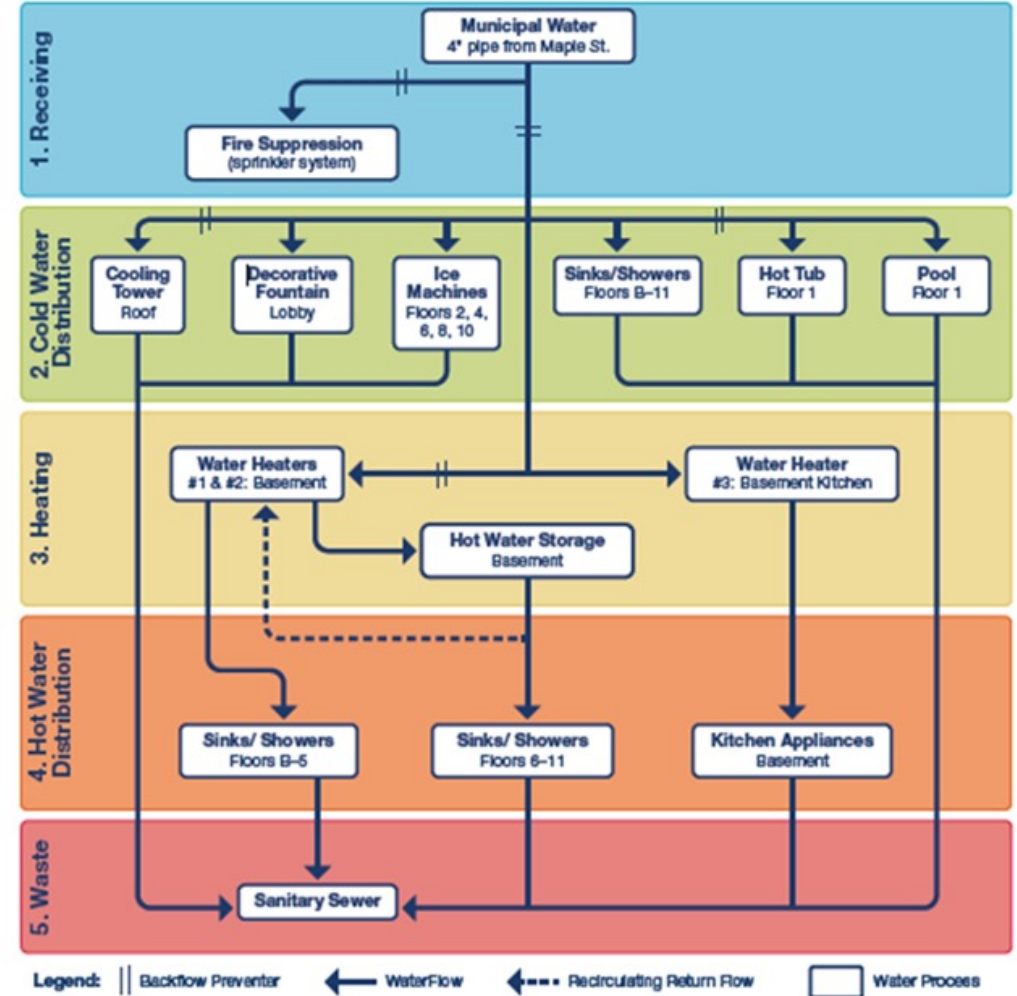
Consider who among your employees, partners, and outside experts can provide these skills so that you can develop the most effective program possible. Those who might be part of your water management program team include:

- Building owner
 - Building manager/administrator
 - Maintenance or engineering employees
 - Safety officers
 - Equipment or chemical suppliers
 - Contractors/consultants (e.g., water treatment professionals)
 - Certified industrial hygienists
 - Microbiologists
 - Environmental health specialists
 - Public health officials
- 

Step 2 - Understand Water System



- Flow diagram
- Characterize building water system
 - ID potable and non-potable systems
 - Where water enters and how distributed throughout system





Step 3 - Identify Areas of Amplification and Potential Exposure

Amplification

- Where *Legionella* can proliferate
 - Water temperatures between 80-120°F
 - Water recirculated or stagnant
 - “dead ends” and “dead legs”
 - Occupancy
 - Low flow fixtures
 - Nutrient sources
 - Iron (Fe)
 - Events that may disrupt water systems

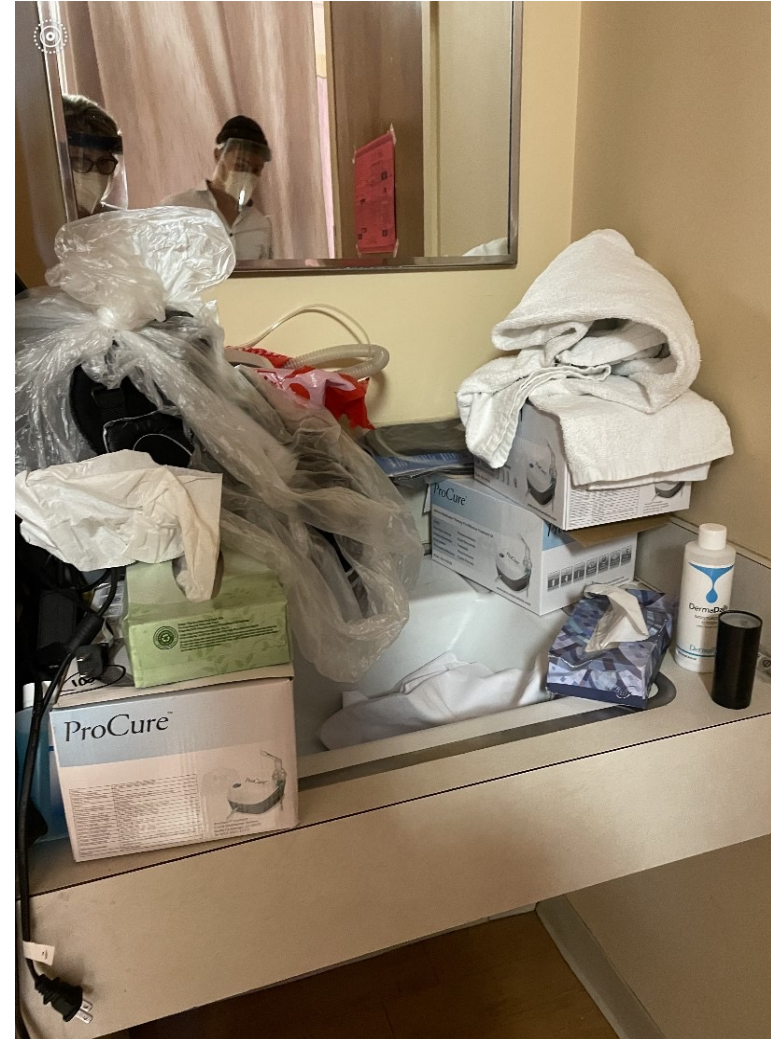
Potential Exposure

- Where patients, staff, or visitors may be exposed to water droplets
- Healthcare facilities should consider how water is used at point of care and assess risks
- *Aerosolization*
 - Showers
 - Hydrotherapy
 - Decorative fountains
 - Spas/hot tubs
 - Spray irrigation
 - Respiratory equipment
- *Aspiration (less common)*
 - Ice machines
 - Drinking water

Step 3 – Potential Exposure



Sinks should be uncluttered and functional



Step 4 - Monitoring Control Measures

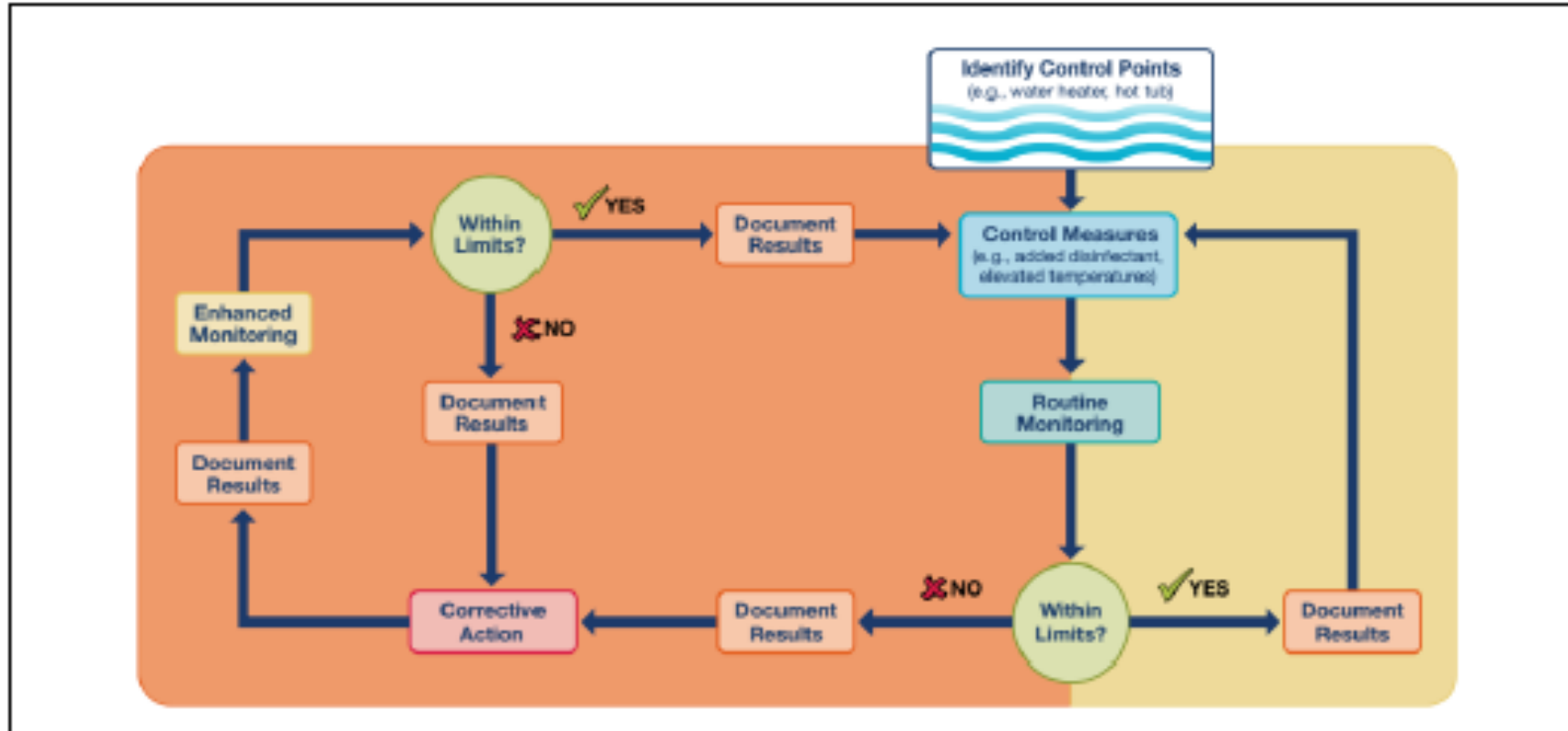



Figure 4.1: Implementing and monitoring the control measures process (CDC, 2021).

Step 4 - *Legionella* Control Measures for Potable Water Systems



Water Parameter	Control Measure	Recommendations
Sediment and Biofilm	Flushing, cleaning, and maintenance	<ul style="list-style-type: none">• Flush after an intrusion event (e.g., water main break).• Clean and maintain water system components such as water heaters, mixing valves, aerators, showerheads, hoses, and filters regularly as indicated by water quality measurements.
Temperature	Control limits	<ul style="list-style-type: none">• Store hot water above 140°F (60°C) and maintain circulating hot water above 120°F (49°C).• Store and maintain circulating cold water below the growth range most favorable to <i>Legionella</i> (77–113°F, 25–45°C). Note that <i>Legionella</i> may grow at temperatures as low as 68°F (20°C).
Water Age	Flushing	<ul style="list-style-type: none">• Flush low-flow pipe runs and dead legs at least weekly.• Flush infrequently used fixtures regularly.
Disinfectant Residual*	Control limits	<ul style="list-style-type: none">• Chlorine: Detectable residual as directed by WMP.• Monochloramine: Detectable residual as directed by WMP.

<https://www.cdc.gov/legionella/wmp/control-toolkit/index.html>



Step 5 - Establish Intervention Responses



- Options when control measures not met
 - Close room, restrict showers, point of use filters
 - Restrict use of tap water
 - Remove unused piping/fixtures
 - Communications to residents/patients/staff





Step 6 - Establish Verification and Validation Procedures

- Verification
 - WMP is being implemented as designed
 - People should not verify program activities they are responsible for
- Validation
 - WMP is controlling *Legionella* as designed
 - Clinical surveillance for Legionnaires' disease
 - Environmental sampling for *Legionella*
 - Culture-based is the gold standard
 - CDC ELITE member laboratories
 - Environmental *Legionella* Isolation Techniques Evaluation
 - Sampling plans are unique to each facility

Step 7 -Establish Documentation Practices and a Communication Plan

- All records associated with the WMP should be dated and signed or initialed by the person performing the action
- Maintain a current copy of the WMP and all records of activities conducted under the WMP including:
 - Monitoring logs
 - Flushing logs
 - Filter replacement logs
 - Intervention response records
 - Environmental sampling results
- Develop a communications plan to patients/residents/staff in the event of a case



Cooling Towers



At least the size of a car




Visible fan blades





Best Practices to Control Spread of *Legionella* in Cooling Towers

- **Operation**
 - Clean and disinfect
 - Monitor water parameters
 - Flush weekly
 - **Inspections/Maintenance**
 - Frequent visual inspection of all components
 - Tower and basin free from biofilm and debris
 - Look for signs of excessive drift
 - **Design**
 - Equip water collection areas with drains
 - Install drift eliminators
 - **Cleaning**
 - Clean and disinfect at least twice per year
- 

Legionella Control Measures for Cooling Towers



Water Parameter	Control Measure	Recommendations
Sediment and Biofilm	Cleaning frequency, scale and corrosion inhibitors	<ul style="list-style-type: none">• Cleaning frequency varies based on operational factors.• Remove from service, clean, and disinfect at least annually.• Monitor scale and corrosion inhibitor levels frequently as indicated by water quality measurements.
Temperature	Control limits	<ul style="list-style-type: none">• Operate at the lowest possible water temperature outside the favorable growth range for <i>Legionella</i> (77–113°F, 25–45°C).
Water Age	Make-up water quality and turnover frequency	<ul style="list-style-type: none">• Flush low-flow pipe runs and dead legs at least weekly.• During wet system standby (water remains in system and shutdown for less than 5 days), maintain water treatment program and circulate water 3 times a week through the open loop of a closed-circuit cooling tower and entire open-circuit cooling system. Ensure system water quality is managed through automated system blow down.• Use potable water for system make-up water or ensure reclaimed or condensate sources are appropriately managed.
Disinfectant Residual	Control limits	<ul style="list-style-type: none">• pH: Maintain based on type of disinfectant used and manufacturer recommendations to prevent corrosion.• Oxidizing disinfectants (e.g., chlorine & bromine): Maintain measurable residuals throughout each day. Consult manufacturer recommendations.• Non-oxidizing disinfectants: Maintain based on product label concentration and contact time.

Table 1. Routine Legionella Testing: A Multifactorial Approach to Performance Indicator Interpretation

The Centers for Disease Control and Prevention (CDC) have established this figure as a general guideline intended for use during routine testing. The table indicates guidance when concentration, change in concentration, and extent indicates *Legionella* growth.

The following table guidelines are intended to help clients better understand sampling results and summarize common responses based on sampling from the domestic potable water system.

Concentration indicates that *Legionella* growth appears:

Uncontrolled	Poorly Controlled	Well Controlled			
≥10 CFU/mL ¹ in potable water OR ≥100 CFU/mL in non-potable water	1.0–9.9 CFU/mL in potable water OR 10–99 CFU/mL in non-potable water	Detectable to 0.9 CFU/mL in potable water OR Detectable to 9 CFU/mL in non-potable water	No <i>Legionella</i> detected in a single round of testing	No <i>Legionella</i> detected in multiple rounds of testing	No <i>Legionella</i> detected in multiple rounds of testing with methods that detect viable and non-viable bacteria of any <i>Legionella</i> species

Change in concentration over time indicates that *Legionella* growth appears:

Uncontrolled	Poorly Controlled	Well Controlled			
100-fold or greater increase in concentration (e.g., 0.05 to 5 CFU/mL)	10-fold increase in concentration (e.g., 0.05 to 0.5 CFU/mL)	<i>Legionella</i> concentration steady (e.g., 0.5 CFU/mL for two consecutive sampling rounds)	No <i>Legionella</i> detected in a single round of testing	No <i>Legionella</i> detected in multiple rounds of testing	No <i>Legionella</i> detected in multiple rounds of testing with methods that detect viable and non-viable bacteria of any <i>Legionella</i> species

Extent indicates that *Legionella* growth appears:

Uncontrolled	Poorly Controlled	Well Controlled			
Detection in multiple locations AND a common source location ² OR Detection across many locations within a water system	Detection in a common source location that serves multiple areas OR Detection in more than one location within a water system	Detection in a few of many tested locations within a water system	No <i>Legionella</i> detected in a single round of testing	No <i>Legionella</i> detected in multiple rounds of testing	No <i>Legionella</i> detected in multiple rounds of testing with methods that detect viable and non-viable bacteria of any <i>Legionella</i> species

Type^a of *Legionella* (species and serogroup) associated with Legionnaires' disease:

Highly Associated	Less Associated
<i>L. pneumophila</i> serogroup 1; Non-Lp1 <i>L. pneumophila</i> ; Presence of multiple different <i>Legionella</i> species or serogroups	Any non- <i>pneumophila</i> <i>Legionella</i> species including "blue-white" fluorescent <i>Legionella</i>

^{*}This figure is intended for use during routine testing only. Test results are performance indicators and are not a measure of risk of human illness. This figure is not intended for use if a building or device is associated with Legionnaires' disease (LD) cases or an outbreak.

[†]See "Routine testing for *Legionella*" for guidance regarding suggested response activities. Comparable results may lead to different suggested response activities when other factors are considered (e.g., if there is evidence of poorly controlled growth at a healthcare facility).

[‡]Considering the type of *Legionella* identified along with other *Legionella* testing performance indicators provides a clearer picture of water system control than the results of any single indicator. For example, facility owners and operators may consider implementing immediate interventions for a healthcare facility with: A. detectable but <10

colony-forming units per milliliter (CFU/mL), B. non-Lp1 *Legionella pneumophila*, C. observed at steady concentrations, but D. detected at multiple distal locations including a central water heater.

¹Concentrations expressed as CFU/mL are for test results generated by traditional spread plate culture methods. If other test methods are used, consult testing lab or manufacturer instructions for appropriate interpretation.

²Common source location examples include water heaters, hot water returns, storage tanks, and cooling tower basins.

³If a facility has a history of associated LD cases, then sequencing isolates obtained during routine testing may provide performance indicators regarding outbreak strain persistence (if that strain is detected).



U.S. Department of Health and Human Services
Centers for Disease Control and Prevention






***Legionella* Resources**

- <https://www.cdc.gov/legionella/downloads/legionella-environmental-assessment-p.pdf>
 - <https://www.cdc.gov/legionella/wmp/toolkit/index.html>
 - <https://www.cdc.gov/legionella/index.html>
 - <https://www.cdc.gov/legionella/downloads/legionella-environmental-assessment-marking-guide-508.pdf>
 - <https://www.cdc.gov/legionella/videos.html>
 - <https://www.chicagohan.org/diseases-and-conditions/legionellosis>
- 



Take-aways

- Reduce *Legionella* growth in water systems to prevent disease
 - In order to control *Legionella* growth in water systems it is vital to have an active and dynamic Water Management Program
 - Water Management Programs require a team effort
 - Monitor water parameters frequently
 - Keep records of all testing and monitoring of the water system
 - Cooling towers require regular monitoring and scheduled maintenance
- 

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Your email address

* must provide value

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Questions & Answers

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