



Disease Control Bureau

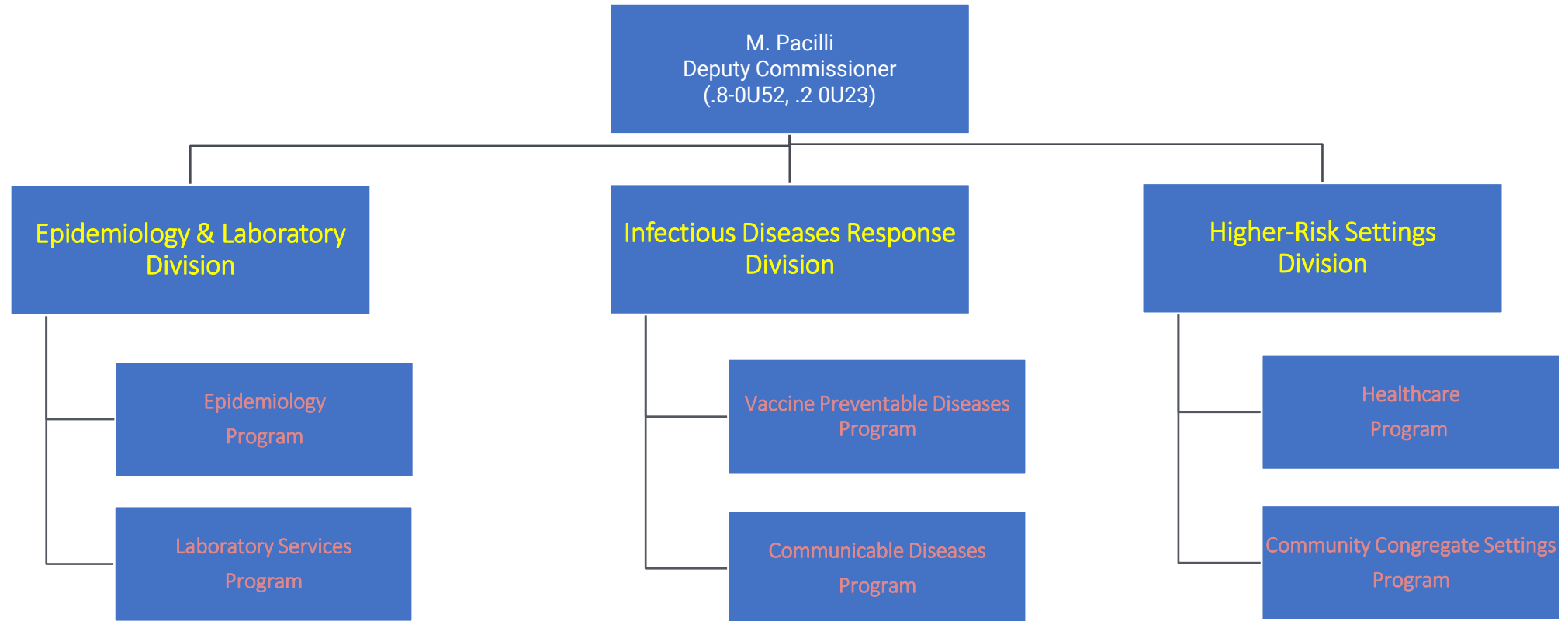
Detect, Track, Contain, and Prevent Infectious Diseases

Massimo Pacilli | Deputy Commissioner

Chicago Department of Public Health

May 17th, 2023

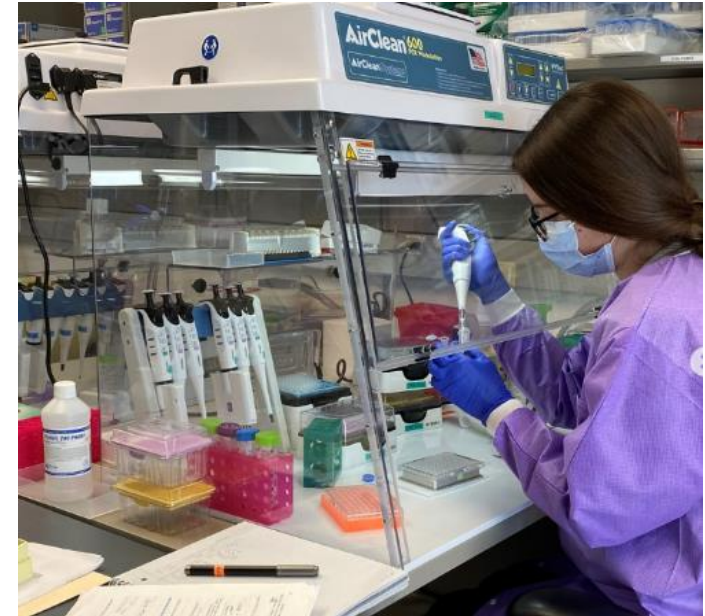
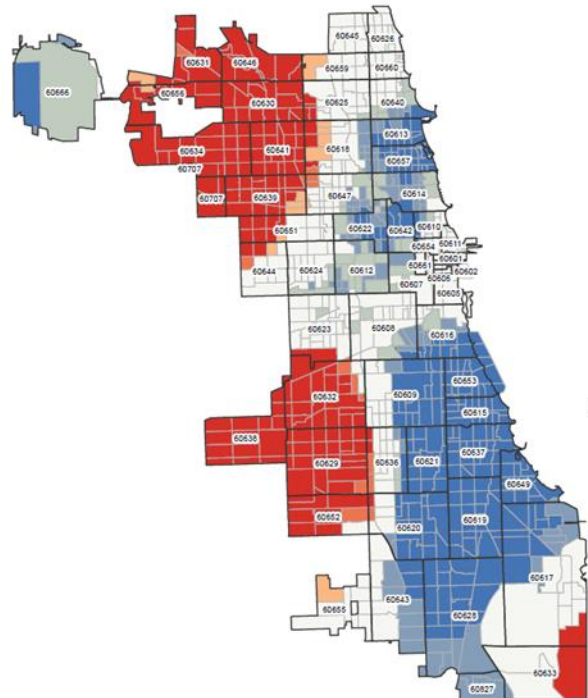
Our Structure



THE BUREAU OF DISEASE CONTROL encompasses Epidemiology and Laboratory science, Infectious Disease Response, and Disease Control in High-risk Settings.

★ DETECT and PROTECT – Epi and Lab Services Division

- Protecting Chicagoans by testing samples, providing expertise and communicating information in coordination with clinical and public health laboratories.
- Epidemiologists monitor trends of infectious diseases and collect information to guide decision-making.



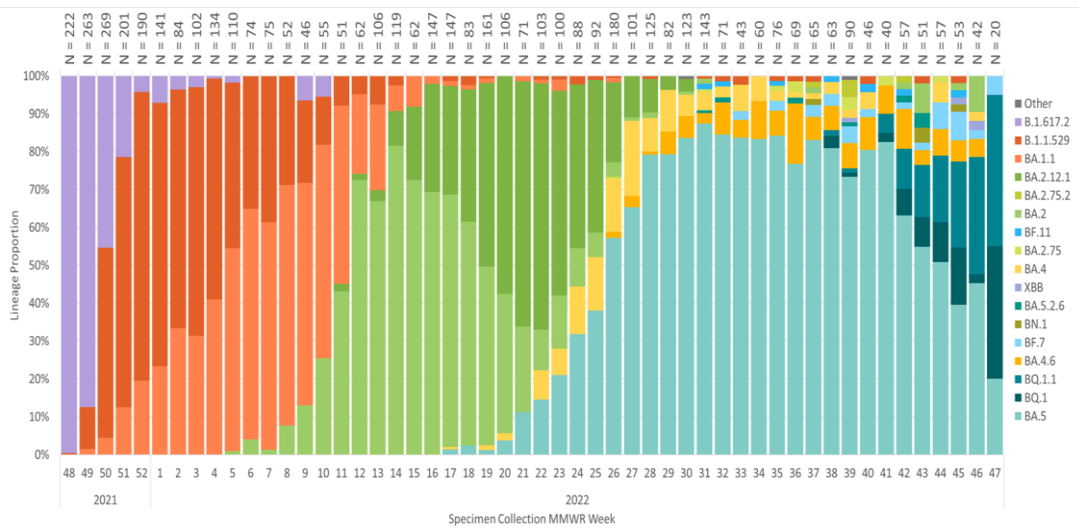
★ Regional Innovative Public Health Laboratory (RIPHL)



RIPHL

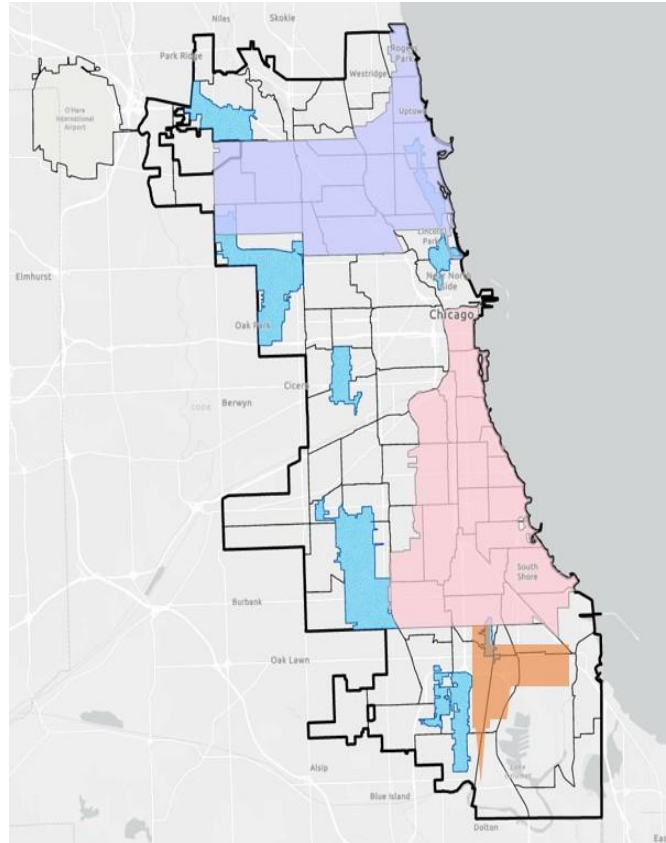
REGIONAL
INNOVATIVE
PUBLIC HEALTH
LABORATORY

- Innovative public-academic partnership between CDPH and Rush University Medical Center
- Genomic tracking and outbreak response
 - SARS-CoV-2, RSV, Influenza surveillance
 - Expand to pathogen surveillance
 - Genomic sequencing for outbreak investigations
 - Multi-drug resistance organisms
 - (Re)emerging pathogens

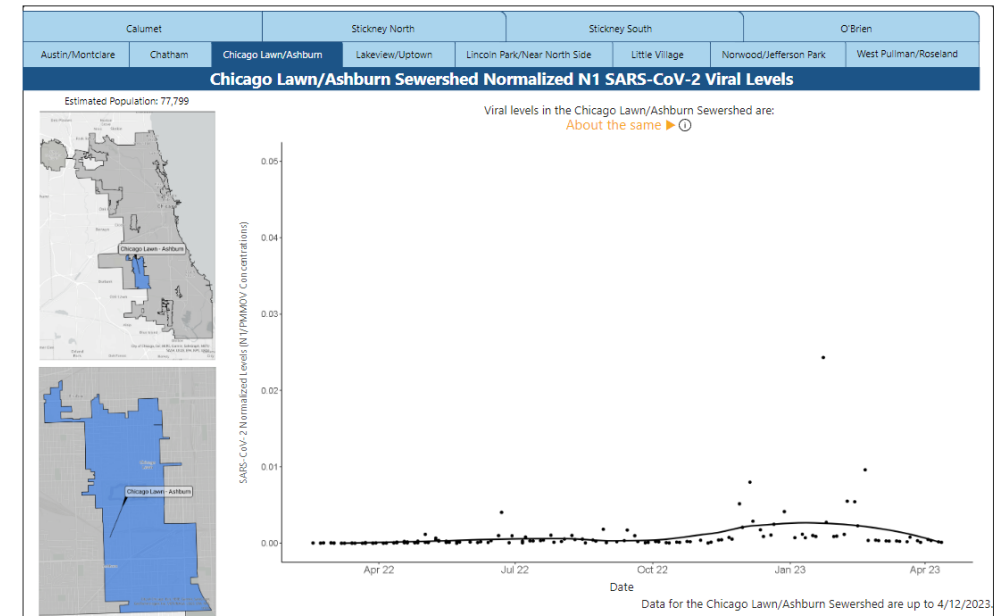


There are **15** wastewater sampling sites

Everyone in the city is covered by at least one site



Wastewater Monitoring Dashboard



Four sampling sites from **three** wastewater treatment plants covering **5 million** Chicago and suburban residents

Chicago Sewersheds **250k** residents
Pumping Stations **700k** residents

<https://www.chicago.gov/city/en/sites/covid-19/home/covid-19-wastewater-surveillance.html>

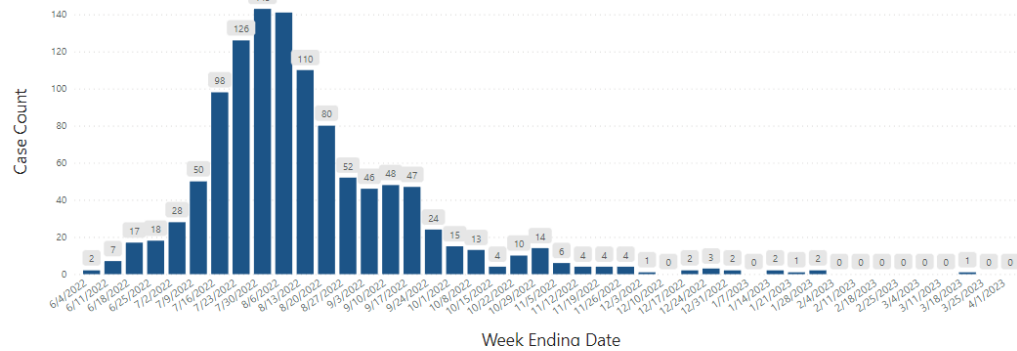
Responding to Infectious Disease Emerging Threats



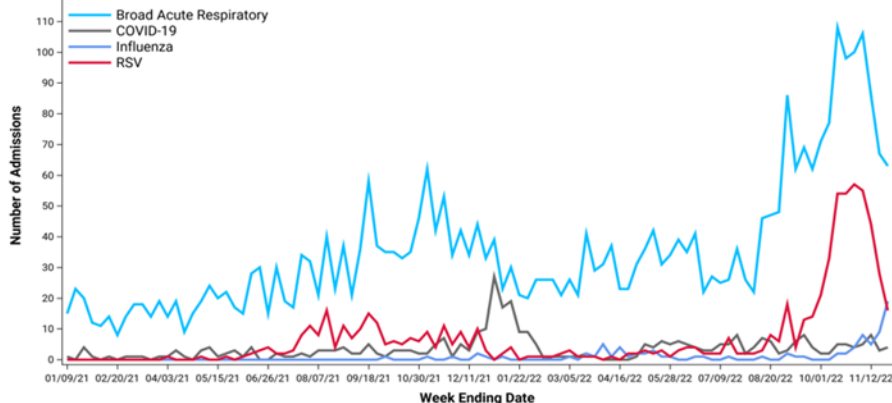
Mpox

Cumulative Cases	Cumulative Hospitalizations	Cumulative Deaths
1,125	76	3

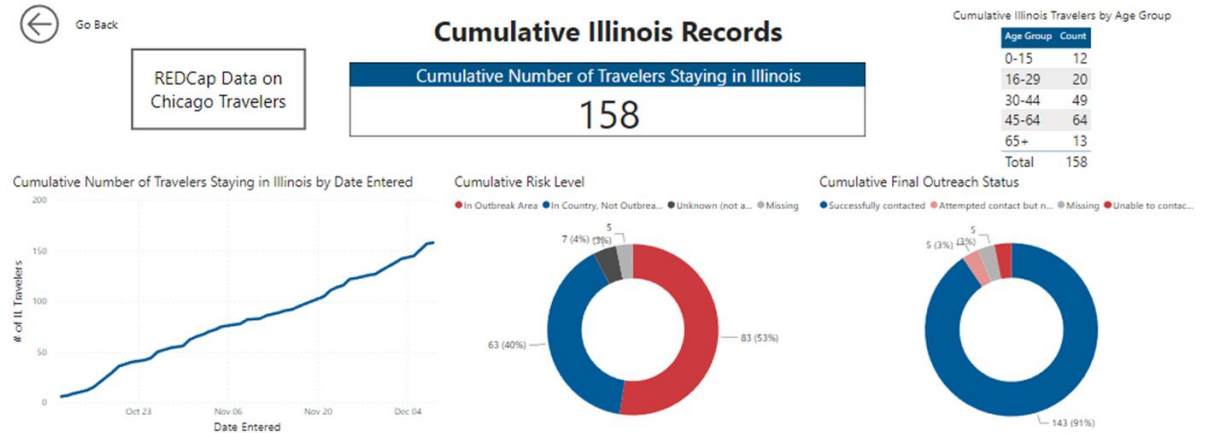
Mpox (Monkeypox) Cases Diagnosed in Chicago Residents, by Week



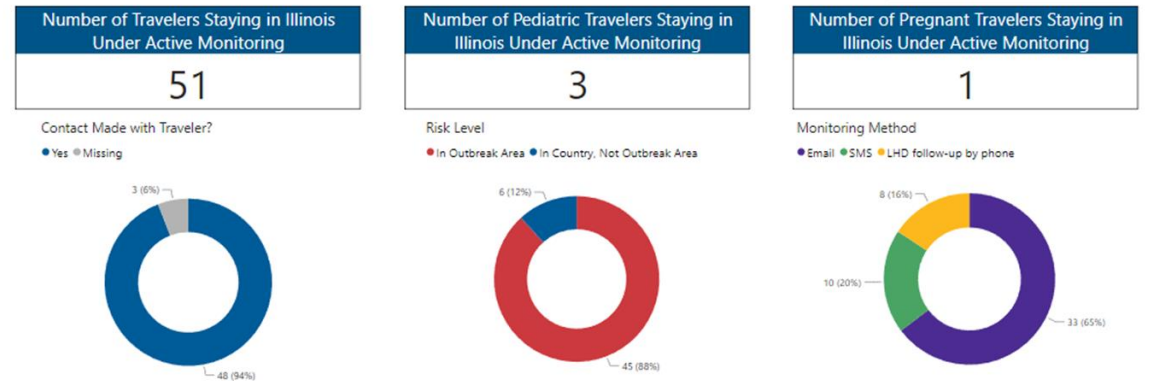
Hospital admissions among children <18 years-old at Chicago hospitals due to acute respiratory viruses



Traveler Monitoring – Viral Hemorrhagic Fever



Illinois Records Under Active Monitoring*



*Only includes records with "successfully contacted" final outreach status. Excludes records of travelers who indicated they will stay outside of Illinois during their monitoring period.

Provider Guidance of Public Health Threats

CHI | Health Alert Network

[Home](#) [Diseases & Conditions](#) [COVID-19](#) [COVID-19 Vaccine](#) [Programs](#)

Monkeypox



Monkeypox diagnostic testing: Job Aid 1 for healthcare providers

Deciding on whether or not to test:

With exception to commercial labs (e.g., LabCorp and Quest), approval is required before any specimens can be tested for monkeypox. Clinicians should promptly report any suspect cases who are Chicago residents to CDPH at the following link: <https://redcap.link/reportmpx>. Reports will be reviewed by CDPH medical team and providers will be contacted for details about testing and submission of specimens to the Illinois Department of Public Health laboratory.



Job Aid 1 for Special Pathogen Treatment Center Laboratories

Diagnostic testing for Ebola (Sudan) Virus:

This guide is intended only for Special Pathogen Treatment Centers (SPTCs) in Chicago. As of November 2022, these are Lurie Children's Hospital of Chicago, Northwestern Memorial Hospital, and Rush University Medical Center. This job aid covers specimen collection, storage, and transfer of specimens for diagnostic testing for Ebola (Sudan) virus. For diagnostic testing for other differential diagnoses in Ebola PUIs, see Job Aid 2 for SPTCs.

Informing the Public



Meningitis

Get the Facts. Get Vaccinated.



Proteja los Alimentos y Goce de un Embarazo Sano
Proteja a su bebé y protéjase usted de la Listeriosis

If you're sick or have a sore,
do no more.
**Time to talk to a
healthcare provider!**



GET THE FACTS
Learn more about MPV
and how to protect
yourself from infection at:
chicago.gov/MPV

**TURN ON
THE LIGHTS** | **BEFORE YOU
TURN OFF
THE LIGHTS**



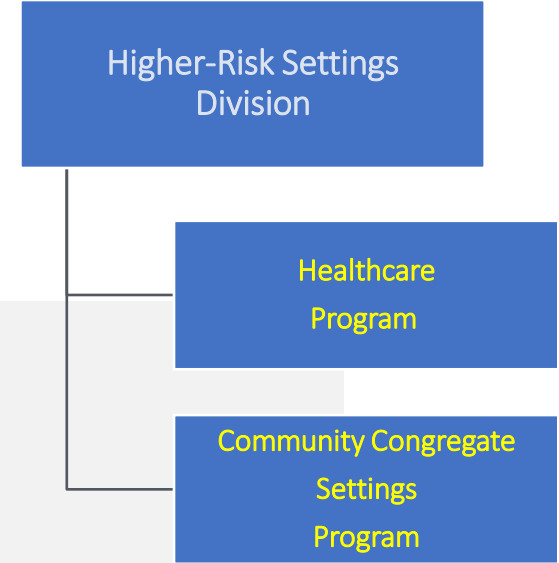
- If you're having sex, spend a little time with your partners to look for any new or unexplained rash or sores, including your mouths, genitals, and butts.
- Don't touch any new or unexplained rash or sores, and see a healthcare provider.

 **GET THE FACTS**  chicago.gov/MPV



Disease Control Bureau

High-Risk Congregate Settings Division

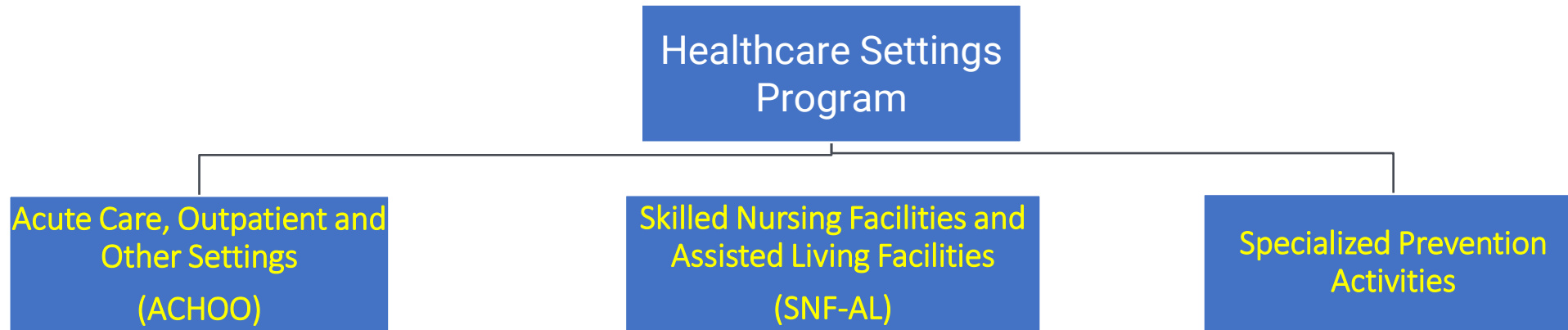


Dr. Stephanie Black & Dr. Do Young Kim | Medical Directors Healthcare Settings

Dr. Michelle Funk | Medical Director Community Congregant Settings



Tracking, Preventing and Containing Infectious Disease in Healthcare Settings



- Track and respond to clusters or outbreaks of communicable diseases, Healthcare Associated Infections (HAI) and resistant organisms within healthcare settings
- Prevent HAI and Antimicrobial Resistance (AR) in healthcare settings across the continuum of care.
- Conduct remote and onsite infection control assessments
- Support antimicrobial stewardship activities
- Educate healthcare personnel and provide resources

★ Healthcare Associated Infections

- CDC estimates that on any given day, **1** in **31** hospital patients and **1** in **43** nursing home residents has an HAI, and
- ~**1/2** of hospital patients and **1** in **12** nursing home residents receive an antimicrobial medication.

Risk Factors

Certain factors raise the risk of contracting HAIs:



Invasive procedures



Severity of illness



Not adhering to best practices for prevention

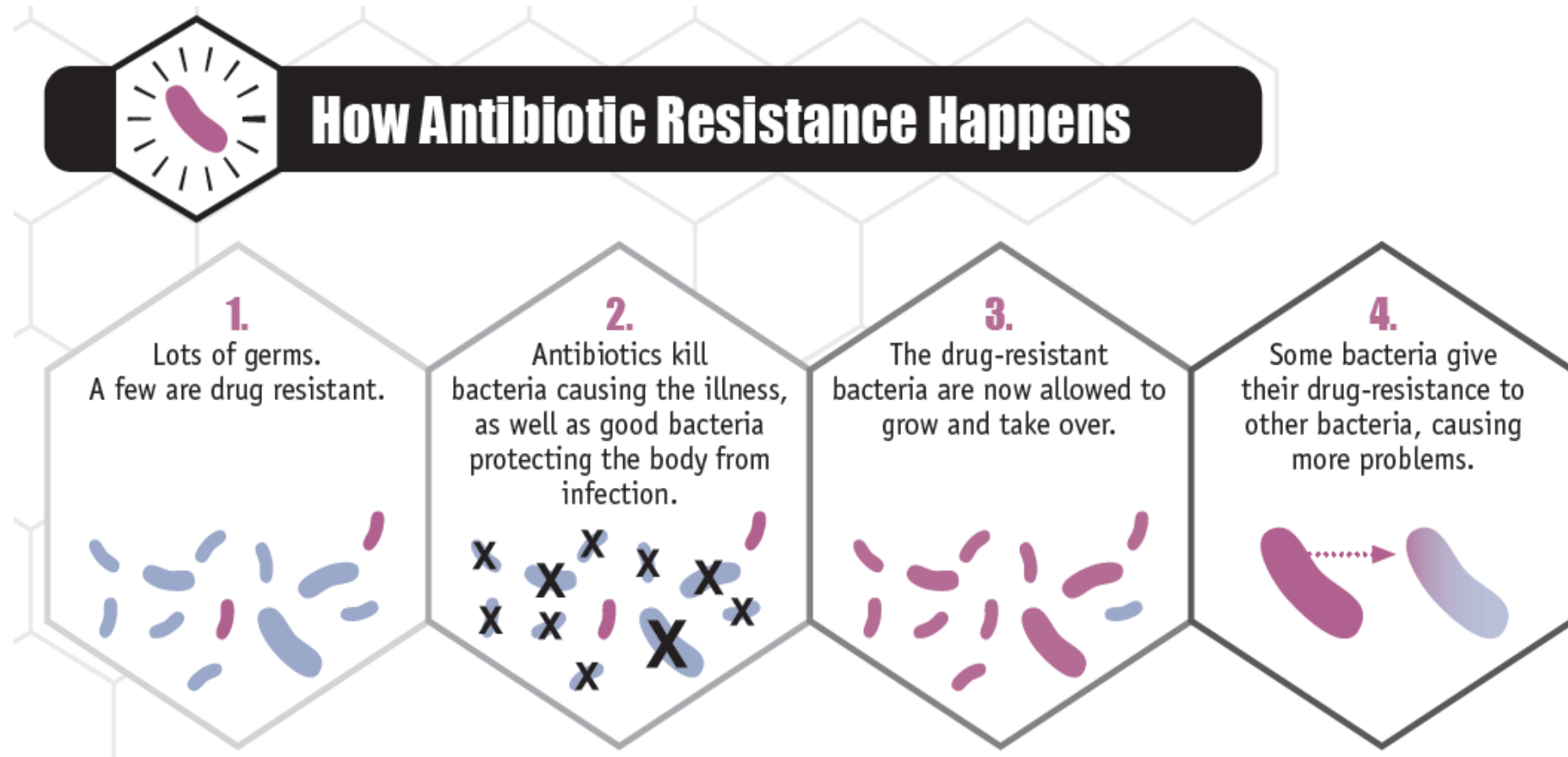


Overuse or improper use of antibiotics

HAI Reporting

For questions related to Healthcare Associated Infection/Antibiotic Resistance, please contact the Chicago Department of Public Health at: CDPHHAIAR@cityofchicago.org

★ Multi-Drug Resistant Organism (MDRO) Threats



Multi-Drug Resistant Organism (MDRO) Threats

Urgent Threats

These germs are public health threats that require urgent and aggressive action:



CARBAPENEM-RESISTANT
ACINETOBACTER



CANDIDA AURIS



CLOSTRIDIOIDES DIFFICILE



CARBAPENEM-RESISTANT
ENTEROBACTERIACEAE



DRUG-RESISTANT
NEISSERIA GONORRHOEAE

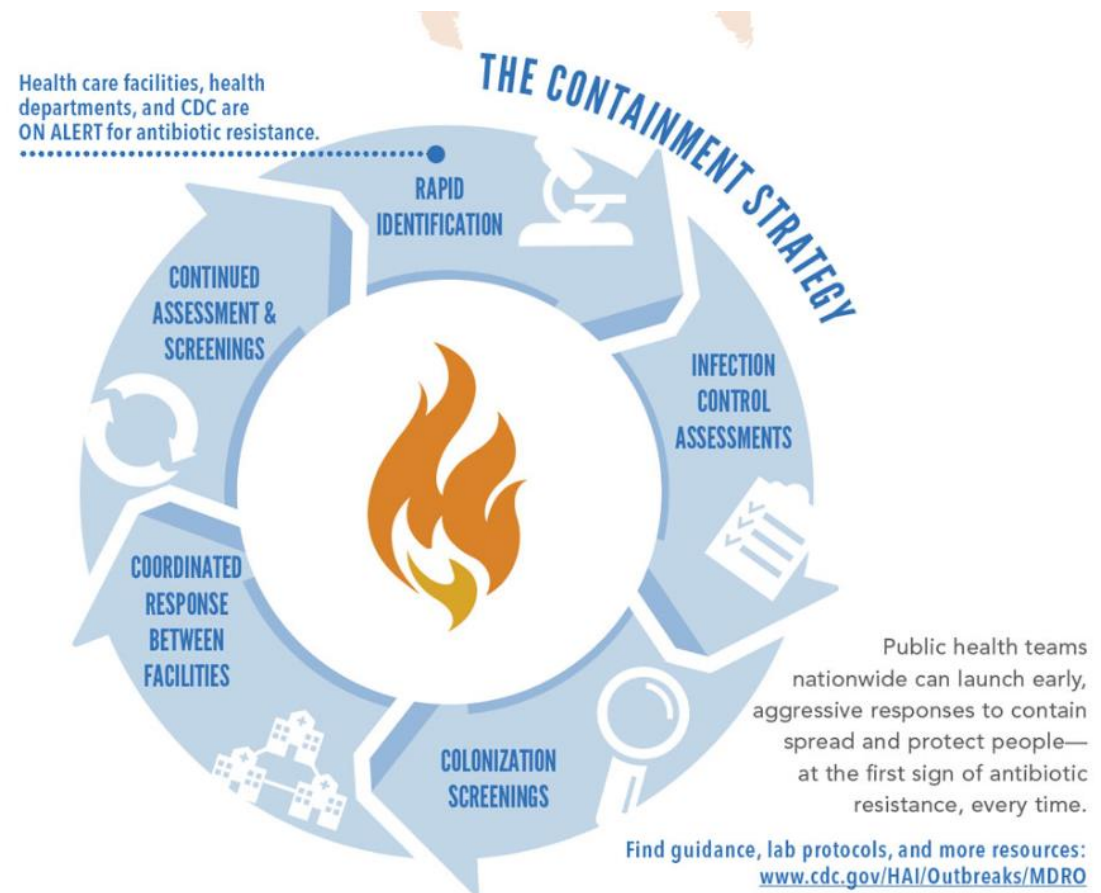
- Priority pathogens for containment in Chicago healthcare settings:
 - Carbapenem-resistant Enterobacterales (CRE)
 - *Candida auris*
 - Carbapenem-resistant *Pseudomonas aeruginosa* (CRPA)
 - Carbapenem-resistant *Acinetobacter baumannii* (CRAB)

 Available data show an alarming increase in resistant infections starting during hospitalization, growing at least 15% from 2019 to 2020.

- | | |
|---|---|
| ▪ Carbapenem-resistant <i>Acinetobacter</i> (+78%) | ▪ ESBL-producing Enterobacterales (+32%) |
| ▪ Antifungal-resistant <i>Candida auris</i> (+60%)* | ▪ Vancomycin-resistant Enterococcus (+14%) |
| ▪ Carbapenem-resistant Enterobacterales (+35%) | ▪ Multidrug-resistant <i>P. aeruginosa</i> (+32%) |
| ▪ Antifungal-resistant <i>Candida</i> (+26%) | ▪ Methicillin-resistant <i>Staphylococcus aureus</i> (+13%) |

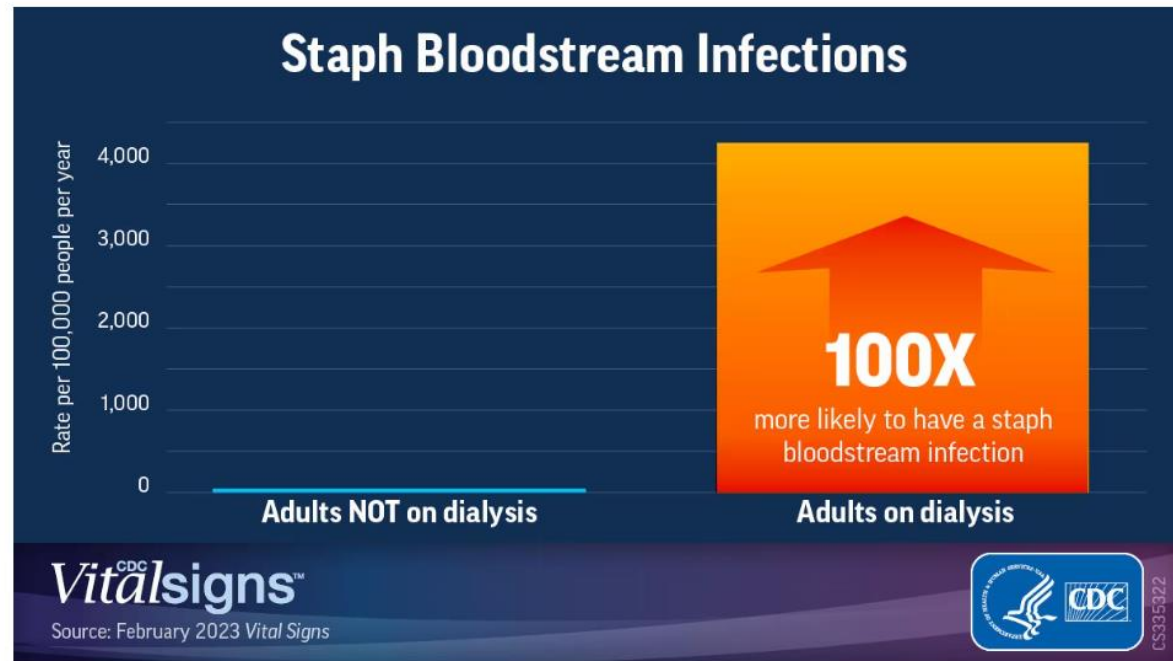
★ We Support Facilities to Detect and Contain MDROs

- Routine point prevalence surveys (PPS) in high-risk facilities every 6 months
- Admission screening
- Prevention ICARs - Hand hygiene and EVS audits
- Environmental survey - Assessing products and methods
- Interfacility Communication - Illinois State Reporting Registry (XDR0 Registry)
- Hospital Epidemiology Call, Acute Care and Long-Term Care Roundtable (monthly)
- HAN pages
- Wastewater Pilot Project



Infection Prevention in Dialysis Settings

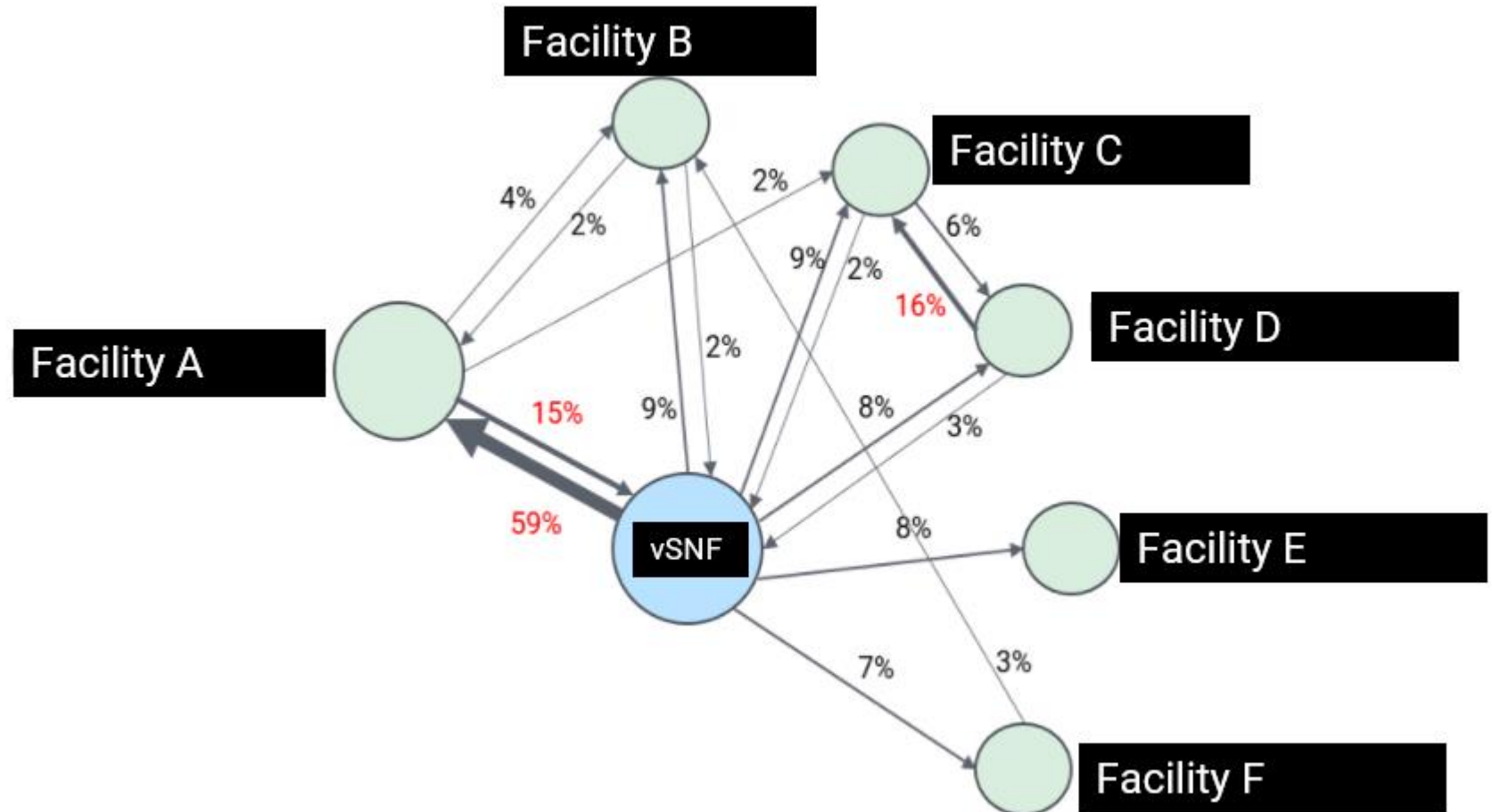
More than half of people in the U.S. receiving dialysis belong to a racial or ethnic minority group—about 1 in every 3 people receiving dialysis is Black and 1 in every 5 is Hispanic. CDC data found patients on dialysis in these groups have higher rates of staph bloodstream infections than White patients on dialysis.



- CDPH is part of Make Dialysis Safer Coalition and partnered with End Stage Renal Disease Network
- Performs site visits in outpatient dialysis facilities with large corporate partners and independent dialysis facilities
 - Prioritizing independent dialysis facilities

★ MDRO Prevention Activities

- Patient transfer networks
 - Using patient transfer data to identify facilities that may admit patients from high burden facilities
- Prioritizing Facilities for Health Equity



★ COVID-19 Response

- Monitor and Respond to Clusters of COVID-19
- Long-Term Care Facility (LTCF) COVID-19 Booster Project
- Rapid Response Evaluation And Treatment of COVID-19 (TREAT COVID-19)

https://www.cdc.gov/mmwr/volumes/70/wr/mm7017e1.htm?s_cid=mm7017e1_w#F1_down

Thanks, Justina.

Thank you for being our rock. The leader we can always count on no matter what.

Thank you for being so unbelievably calm through everything. Especially during the early stages of the pandemic.

Thank you for volunteering to work in the COVID unit, when others were afraid.

Thank you for answering all of our questions. Especially the tough ones.

Thank you for your grace under fire. For your wisdom. Your patience. Your beautiful way of explaining things simply.

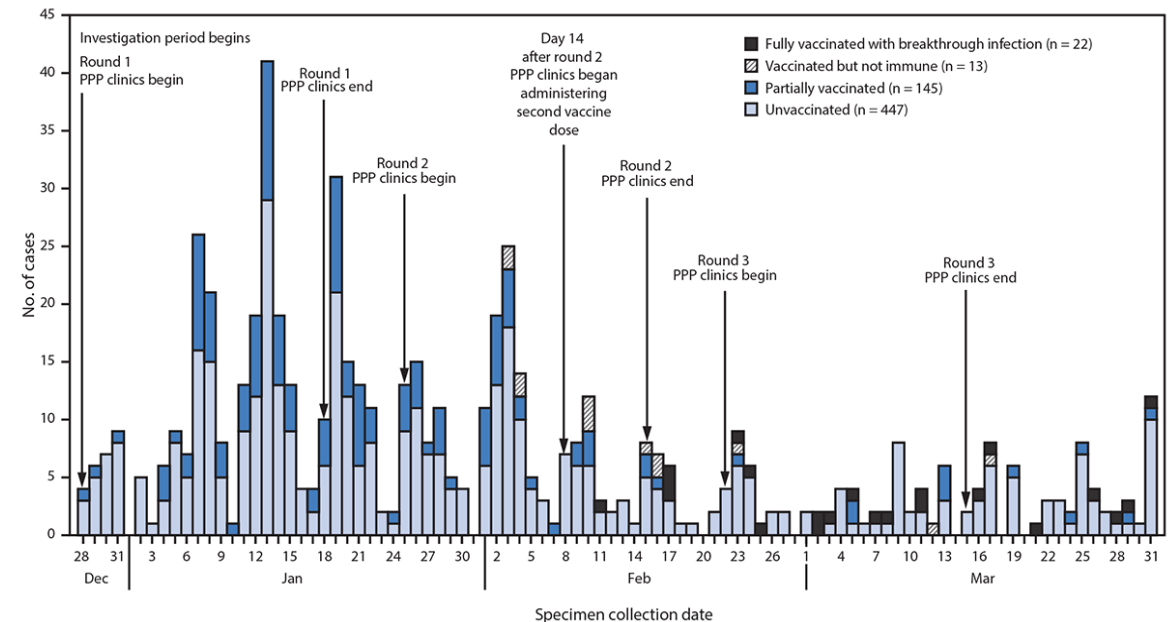
Thank you most of all for making our nursing home feel like home.

Thanks for choosing to get boosted.



Justina U.
Nursing Supervisor

FIGURE. Confirmed SARS-CoV-2 infections (n = 627) among residents and staff members at 75* skilled nursing facilities, by specimen collection date and vaccination status[†] — Chicago, Illinois, December 2020–March 2021



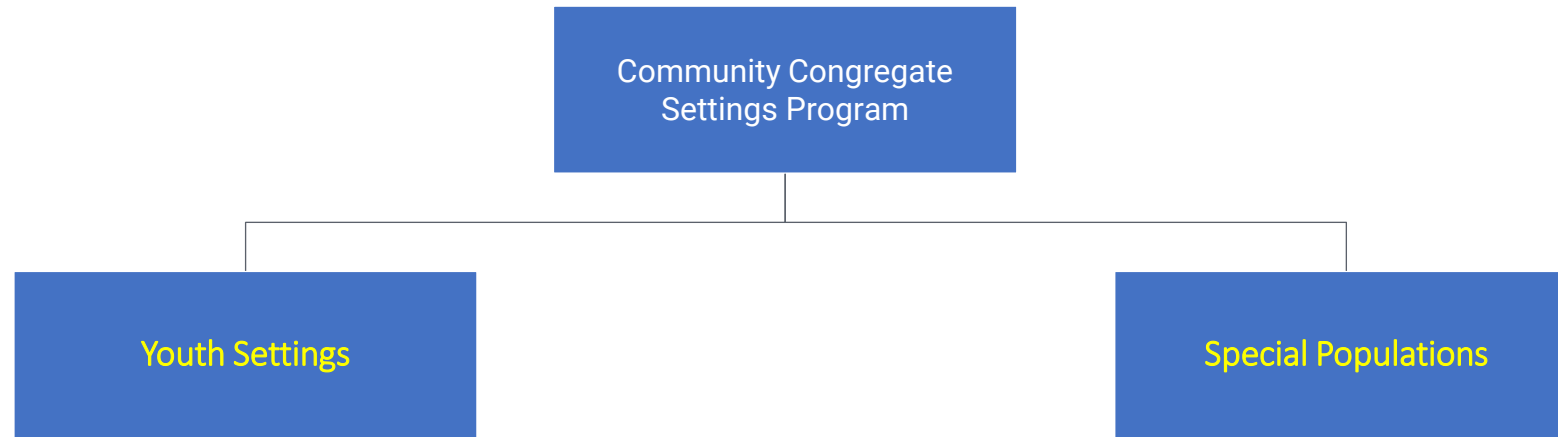
Abbreviation: PPP = Federal Pharmacy Partnership for Long-Term Care Program.

★ CDC Calls out “CDPH Project Firstline Success Story”

- Project Firstline
 - CDC’s national training collaborative for healthcare infection prevention & control
 - Educational resources to meet the diverse learning needs and preferences of the healthcare workforce
- CDPH created online, interactive trainings to help frontline healthcare workers safely care for patients being evaluated for mpox (monkeypox virus)
- **Training was delivered to >200 HCWs**
- Infection control best practices protect providers even in the context of emerging infections.



Prevent and Control Infectious Diseases in Settings where People Live or Gather in Close Proximity to Each Other



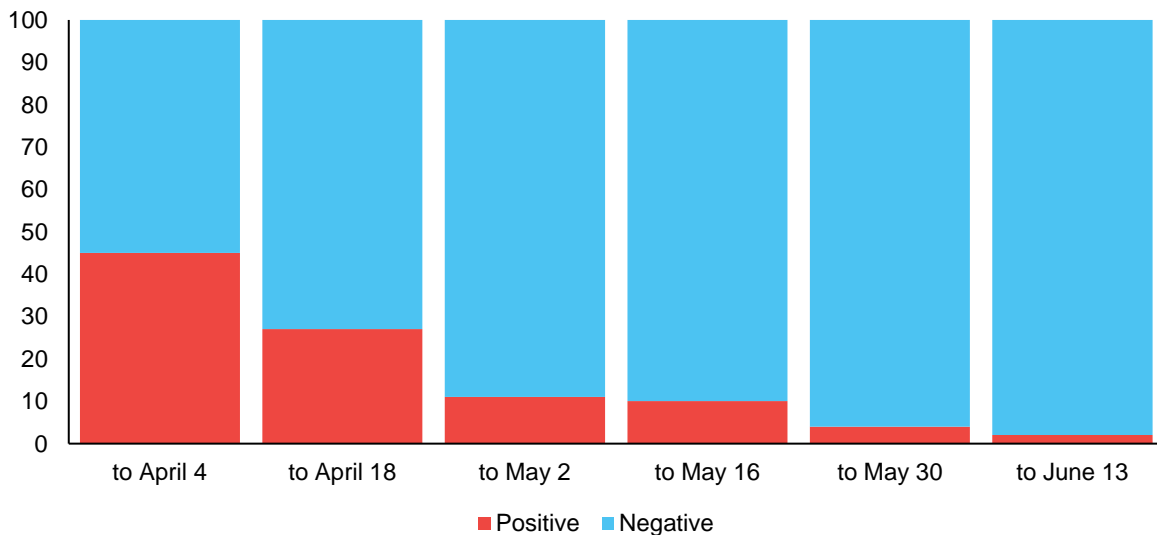
- K-12 Schools
- Early Childcare Centers
- Universities
- Day camps/Summer programs

- Facilities that serve people who live in close proximity
 - Shelter facilities
 - Correctional facilities
 - Facilities Treating Developmental Disabilities
 - Behavioral Health facilities
 - Substance use treatment, Specialized Mental Health Rehabilitation Facilities (SMHRFs), and/or people experiencing behavioral health issues

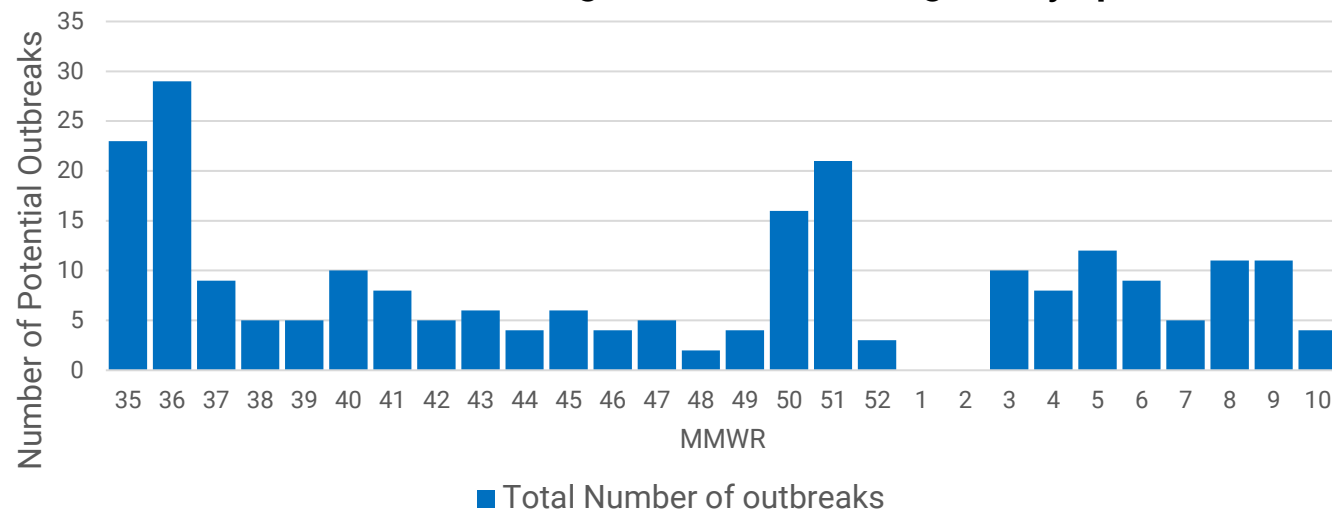


Track and Respond to Infectious Diseases

Covid test- Percent positivity across Chicago shelters by two-week period, 2020



SY22-23 Youth Settings Outbreaks Investigated by Epi Week





Provide Infection Control Guidance

Teach your children to thoroughly wash their hands often.

CDPH
Chicago Department of Public Health

Perform infection control consultations and site-specific support for Special Populations facilities.

Develop setting-specific guidelines to control COVID-19 and other diseases of public health importance.



YOU ARE INVITED TO A PARENT WEBINAR

PROTECTING OUR CHILDREN:



What families need to know about RSV, flu and COVID-19 in 2022 (and 2023!)

WHAT: An information session for families of Early Childcare Centers about how to keep their children healthy this winter

WHEN:

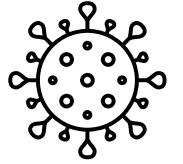
WHERE: Online

CDPH
Chicago Department of Public Health

FIND YOUR VACCINE AT:
CHICAGO.GOV/COVIDVAX

Educate school and ECE staff and parents about emerging diseases.

Support COVID-19 Response in Congregant settings



Allocated **>1,000,000 rapid tests** to Chicago Schools and Early Childcare Centers since Jan 2022

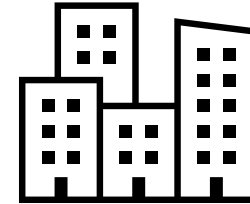


Established **Health Alert Network** for Schools, Universities, and Early Childcare facilities, to share **up-to-date guidance** information and resources



Implemented **Test to Stay** program in **29** Charter Schools and **23** Early Childcare Centers

Youth Settings



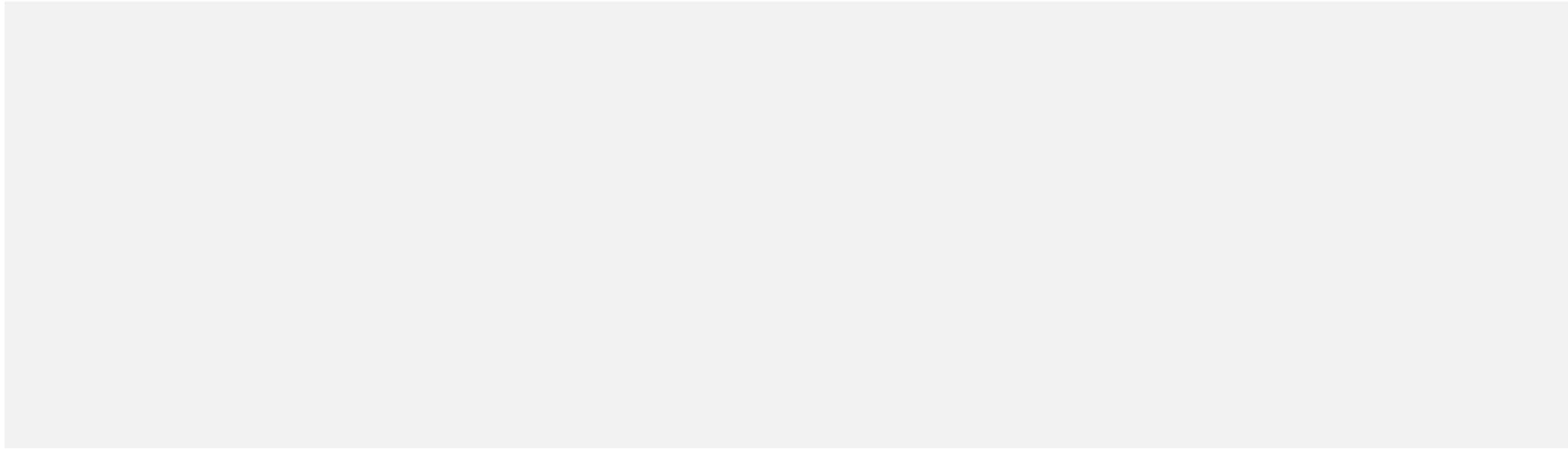
Public Health staff and partners visited **77 shelters** to assist with infection prevention, symptom screening and in-person education.

In collaboration with partners, **supported temporary shelter** operations to decompress congregate settings and allow for appropriate social distancing.



Special Populations

Organized **COVID-19 testing** for those living in congregant settings



Chicago.gov/Health



HealthyChicago@cityofchicago.org



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