



# **COVID-19 Chicago Long Term Care Roundtable**

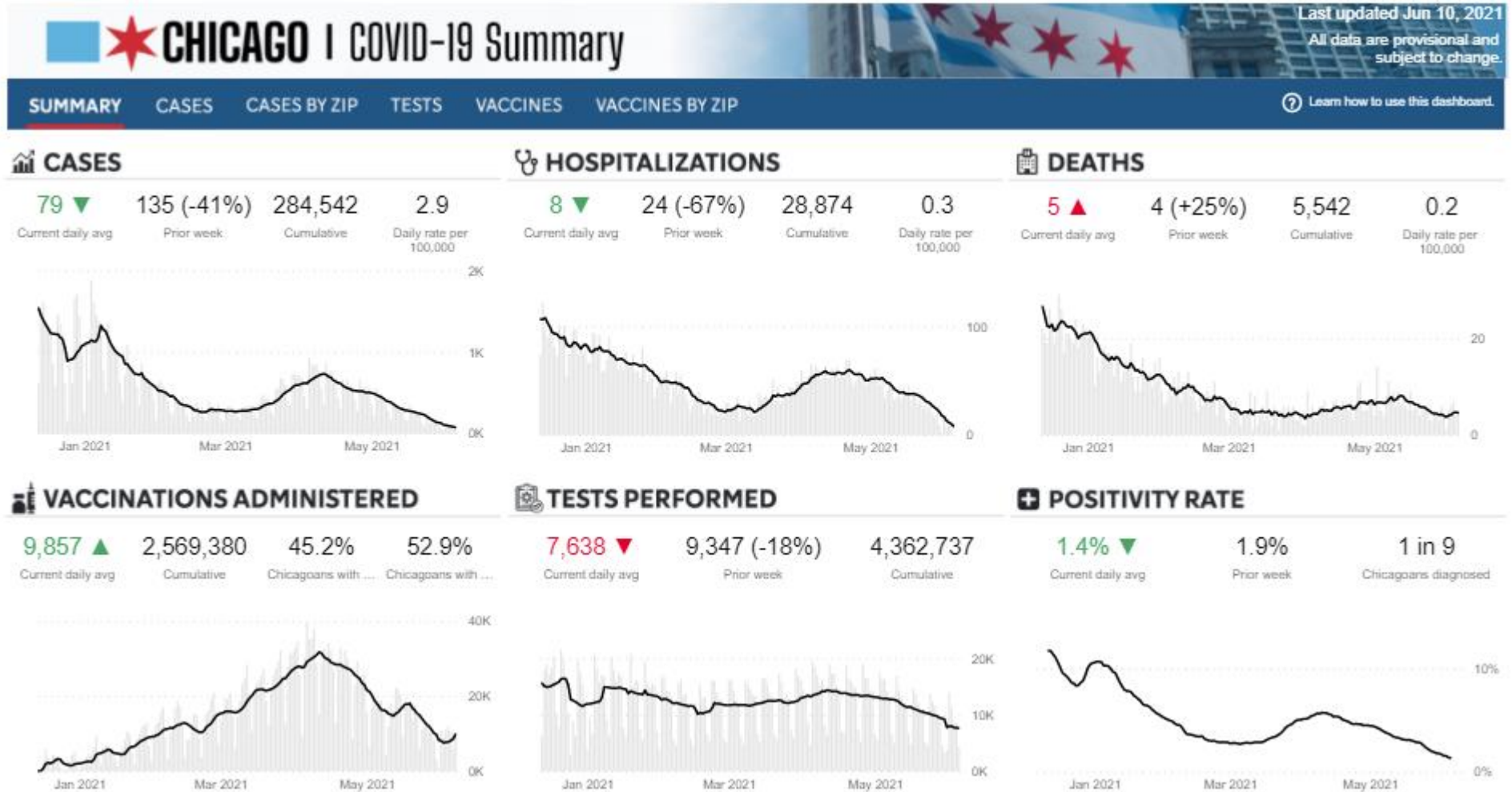
06-10-21



# Objectives

- Chicago COVID-19 Epidemiology
- COVID Reminders, Updates, and FAQs
- Hand Hygiene
- Antimicrobial Stewardship
- Q&A

# Chicago Dashboard

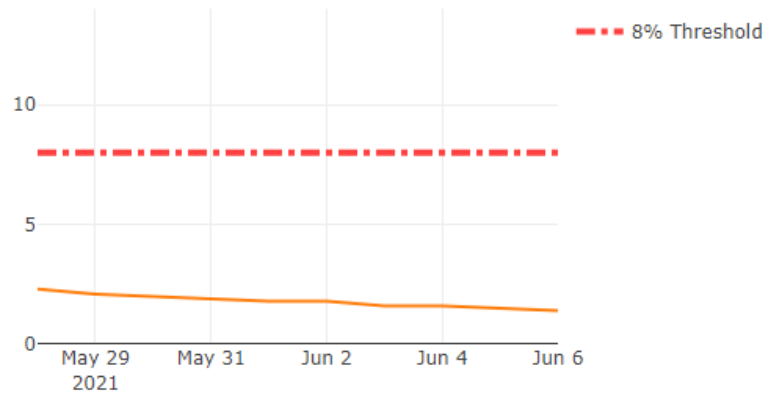




# IDPH Regional Resurgence Metrics: Region 11

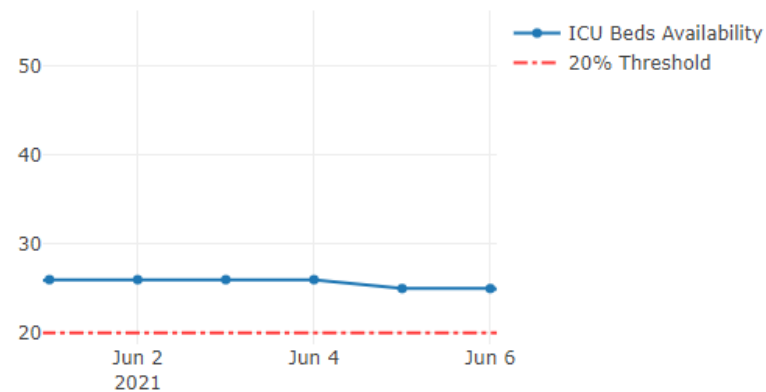
Test Positivity 7-Day Rolling Average

11 Consecutive Days under 8% threshold



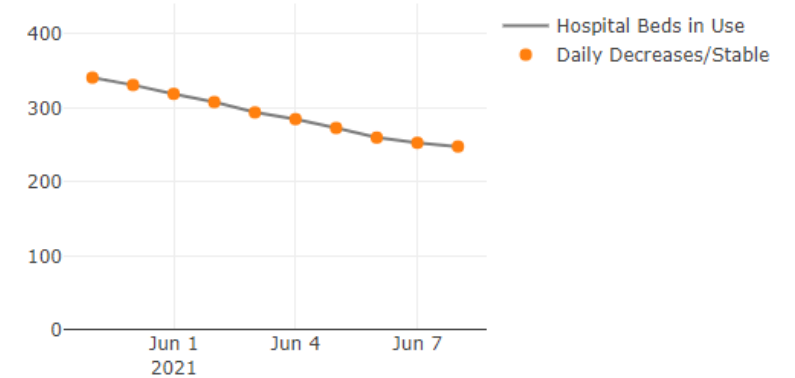
Hospital Bed Availability 7-Day Rolling Average

ICU Beds: 11 Consecutive Days  $\geq$  20% Threshold

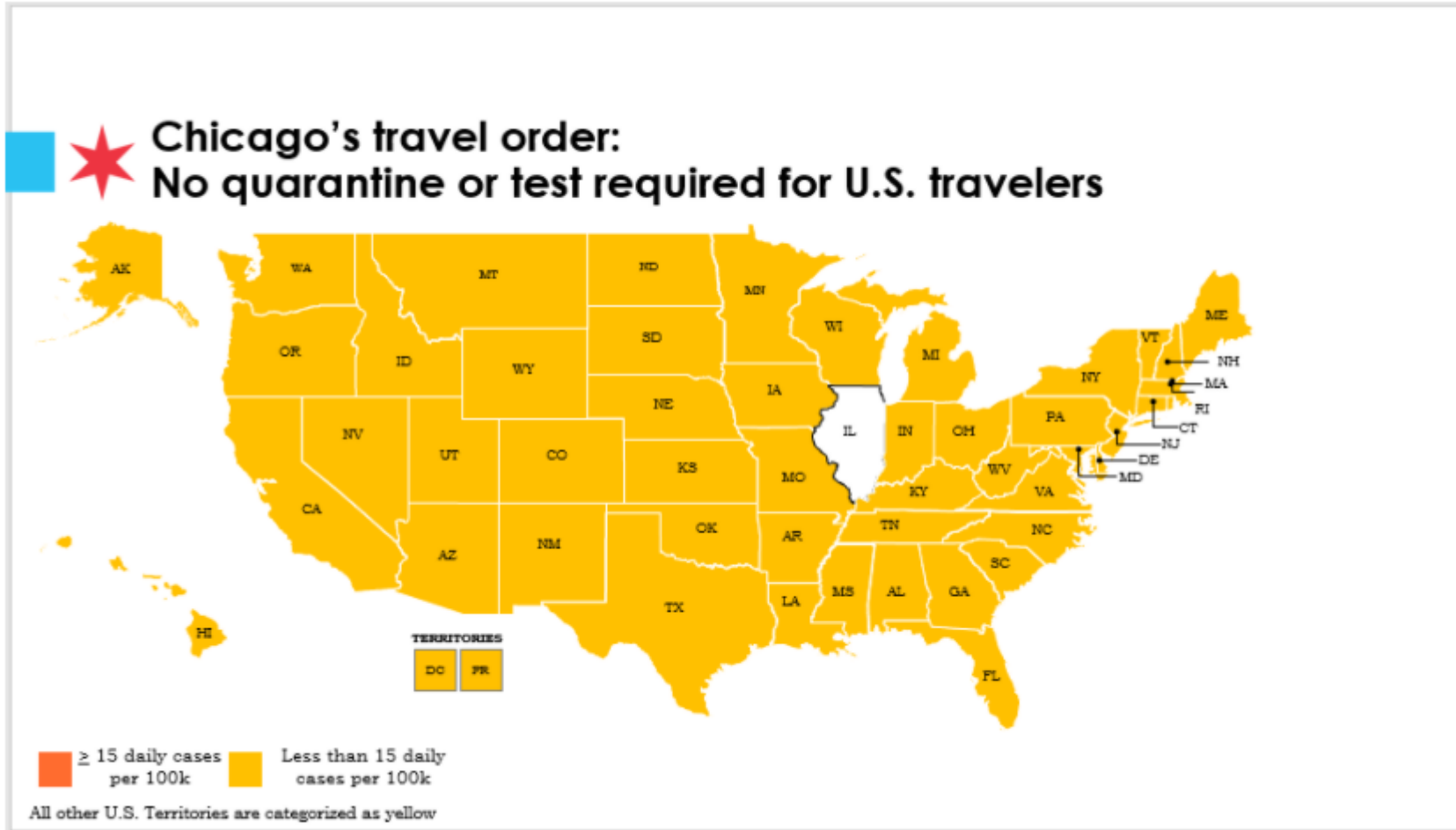


COVID-19 Patients in the Hospital 7-Day Rolling Average

10 Days of COVID-19 Patient Decreases or Stable



# ★ Chicago Emergency Travel Order



# Skilled Nursing Facility COVID-19 Cases

- **61 (78%)** SNFs are out of outbreak
- **50 (64%)** have not had a single new case since

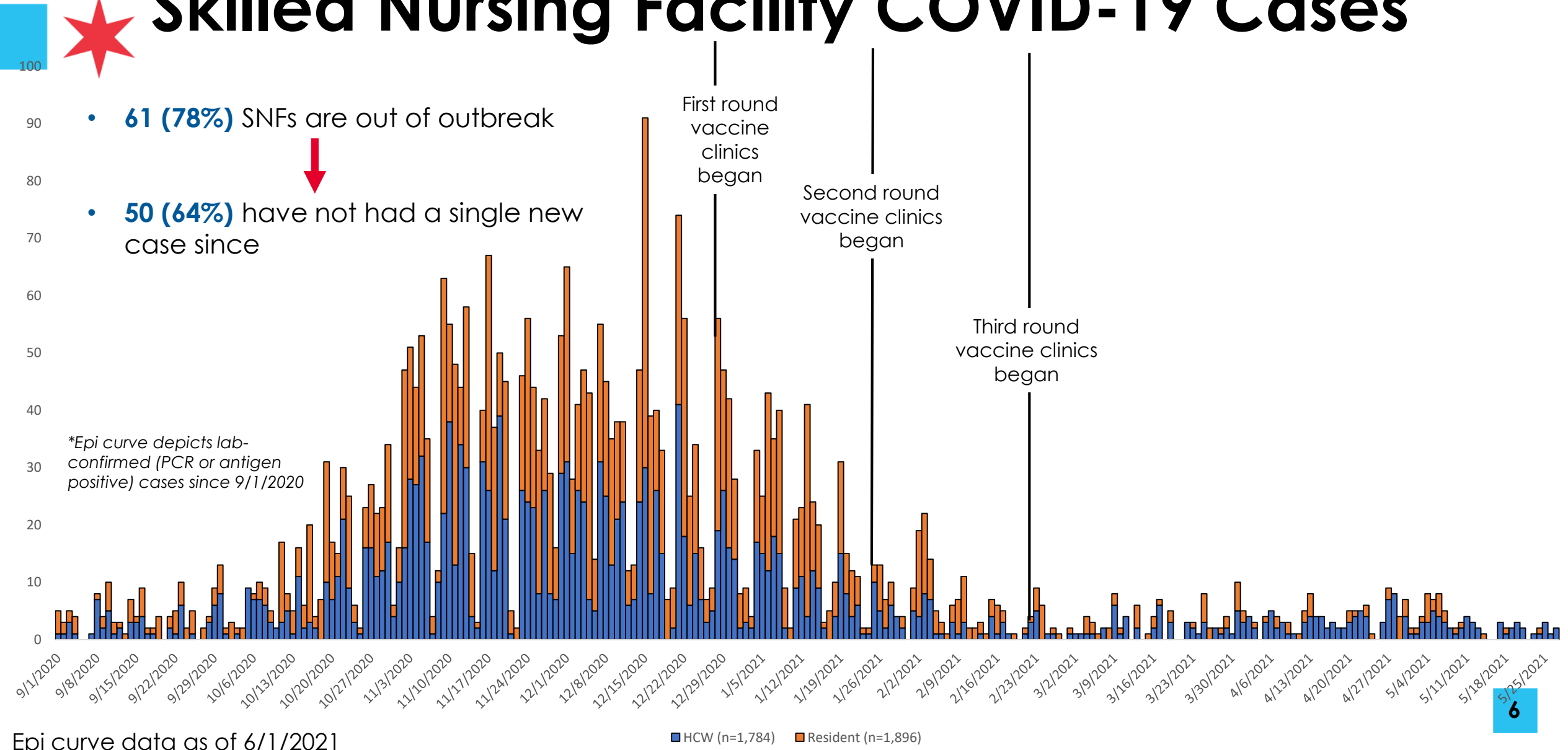


First round vaccine clinics began

Second round vaccine clinics began

Third round vaccine clinics began

*\*Epi curve depicts lab-confirmed (PCR or antigen positive) cases since 9/1/2020*



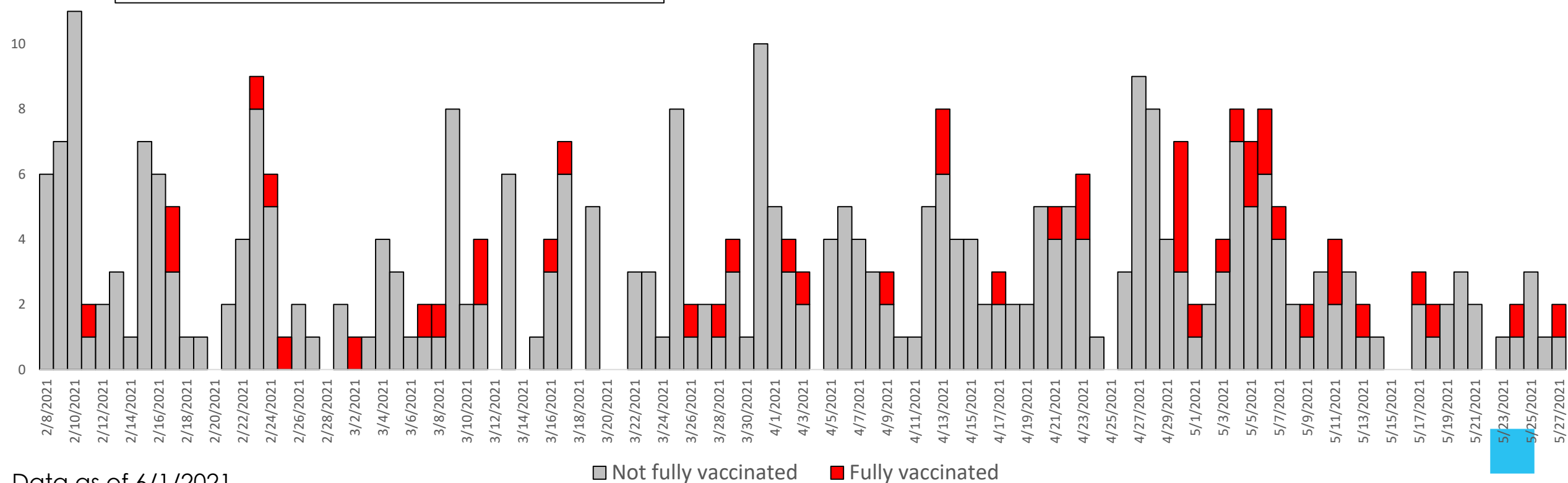


# The majority of new SNF-associated COVID-19 cases are not fully vaccinated

Vaccine uptake estimates in SNFs:

- Residents: 88% (IQR: 77% - 95%)
- Staff: 62% (IQR: 50% - 80%)

12



Data as of 6/1/2021

■ Not fully vaccinated ■ Fully vaccinated

# ★ COVID Variants in the US & IL

- **Proportions in Illinois:**

- B.1.1.7 (U.K.)– 61.1%
- B.1.351 (South Africa) – 1.0%
- B.1.427/1.429 (California) – 1.1%
- P.1 (Brazil) – 22.6%
- Other lineages – 14.3%

Unweighted Proportions of Variants of Concern and Other Lineages by State or Jurisdiction

State	B.1.1.7	B.1.351	B.1.427 / B.1.429	P.1	Other lineages	Total Available Sequences
Arizona	67.8%	0.7%	4.2%	9.0%	18.3%	600
California	58.1%	1.0%	5.1%	9.5%	26.3%	4,060
Colorado	79.0%	0.5%	2.5%	2.2%	15.8%	2,312
Connecticut	53.9%	0.7%	0.6%	4.1%	40.8%	714
Florida	67.4%	0.3%	0.9%	10.4%	21.0%	5,281
Georgia	80.0%	1.5%	0.3%	5.2%	13.1%	950
Illinois	61.1%	1.0%	1.1%	22.6%	14.3%	2,598
Indiana	73.6%	0.5%	0.7%	12.2%	13.1%	1,347
Kentucky	78.2%		0.6%	5.3%	15.9%	358
Maine	38.1%		1.2%	3.7%	57.0%	328
Maryland	75.8%	1.2%	0.3%	1.2%	21.6%	781
Massachusetts	52.1%	0.1%	0.7%	13.0%	34.1%	5,145
Michigan	81.5%	0.5%	1.0%	3.0%	14.1%	1,984
Minnesota	80.6%	0.7%	3.5%	3.2%	12.0%	4,286
Missouri	79.2%	0.5%	0.8%	7.2%	12.3%	390
New Hampshire	54.4%		0.4%	6.7%	38.6%	555
New Jersey	53.8%	0.1%	0.5%	5.0%	40.7%	1,468
New Mexico	73.3%		3.3%	1.8%	21.6%	329
New York	57.8%	1.7%	0.7%	7.1%	32.9%	1,032
North Carolina	68.0%	0.8%	0.2%	2.9%	28.0%	1,681
Ohio	79.7%	0.6%	0.2%	5.7%	13.7%	839
Oregon	49.5%	2.2%	9.5%	10.8%	28.1%	548
Pennsylvania	68.8%	0.5%	0.4%	1.8%	28.5%	2,772
Rhode Island	45.4%	0.5%	0.8%	10.0%	43.4%	791
Tennessee	86.0%	0.5%	0.5%	5.7%	7.3%	757
Texas	74.1%	0.2%	1.0%	6.1%	18.6%	3,092
Vermont	68.4%		0.4%	1.3%	29.8%	450
Virginia	75.5%	1.2%		3.5%	19.9%	695
Washington	63.4%	2.0%	9.7%	10.5%	14.5%	1,741
West Virginia	61.4%	0.1%		0.5%	37.9%	736
Wisconsin	65.1%	0.6%	2.8%	6.0%	25.4%	633



# ★ Update: Use of Eye Protection

- Eye protection must be worn:
  - For the care of any resident under quarantine or isolation for COVID (e.g., unvaccinated new and readmitted residents, exposed residents, symptomatic residents, and COVID+ residents)
  - For the care of **all residents** if a facility has had a case within the past 14 days **and/or** if the Cook County positivity rate is >5% as per CMS.
- If a facility has not had a case in >14 days (with the final round of outbreak testing occurring on or after the 14<sup>th</sup> day following the specimen collection date for the most recent positive test) **and** the Cook County positivity rate is <5% as per CMS:
  - Eye protection does not need to be worn for the care of residents who are not under quarantine or isolation for COVID (i.e., no eye protection would be needed in the **green** or **gray** zones).



# Update: Discordant Antigen & PCR Results

- If any of the following are true, then treat a positive antigen result as a true positive (even if a PCR collected within 48 hours is negative):
  - Individual is symptomatic; and/or
  - Individual had a confirmed exposure; and/or
  - Facility has had a case within the last 14 days; and/or
  - Positivity rate in Cook County is >5%
- For residents: place in a private room in the COVID unit
- For staff: exclude from work for 10 days



# Update: Discordant Antigen & PCR Results

- If **all** of the following are true, then you can treat a positive antigen as a likely false positive result:
  - Individual is asymptomatic
  - Individual had no confirmed exposure
  - Facility has not had a case within the last 14 days
  - Positivity rate in Cook County is <5%
  - PCR collected within 48 hours of the positive antigen test was negative
- For residents: place in a private room (not in the COVID unit) while awaiting PCR results. If/when PCR is negative, resident can return to their original room.
- For staff: exclude while PCR test is pending. If/when PCR is negative, the staff member can return to work.

# ★ Update: FDA Recommendations

- FDA no longer recommends:
  - Using non-NIOSH-approved respirators (e.g., KN95s) in lieu of NIOSH-approved respirators (e.g., N95s)
  - Decontaminating disposable respirators for re-use
- Facilities should **not** be using any crisis-capacity strategies for N95s, including re-donning a previously used respirator (e.g., do not store respirators in paper bags for re-use)
- Facilities are encouraged to move to conventional use strategies for N95 respirators (e.g., single use).
- Reminder that current CDC guidance is to wear N95 respirators for the care of **all** residents for 14 days following a facility-associated staff or resident case.



# ★ Hand Hygiene

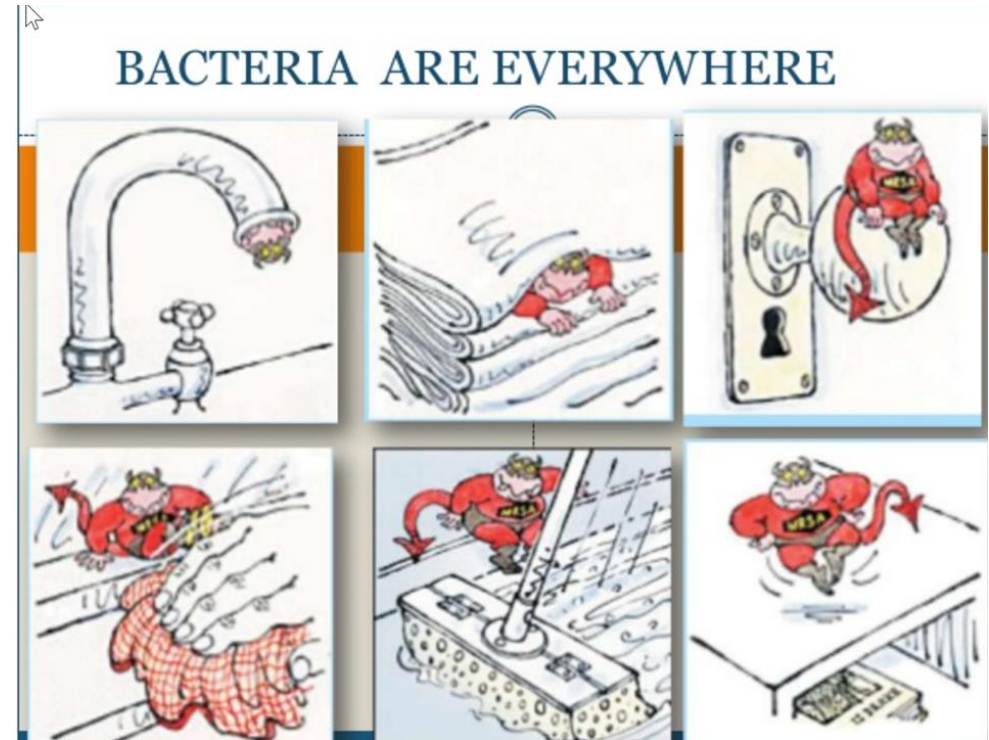




# Hand Hygiene

- 5 C's of preventing transmission of infection in the facility:
- Clean Clothes
- **Clean Hands** (Hands are the number one-way germs are transmitted)
- Clean equipment
- Covered wounds
- Contained drainage
  
- **Why is it Important?**
- Decrease spread of germs to patients
- Decrease risk of transmission within the facility

# ★ Dirty hands spread germs





# ★ Methods for Hand Hygiene

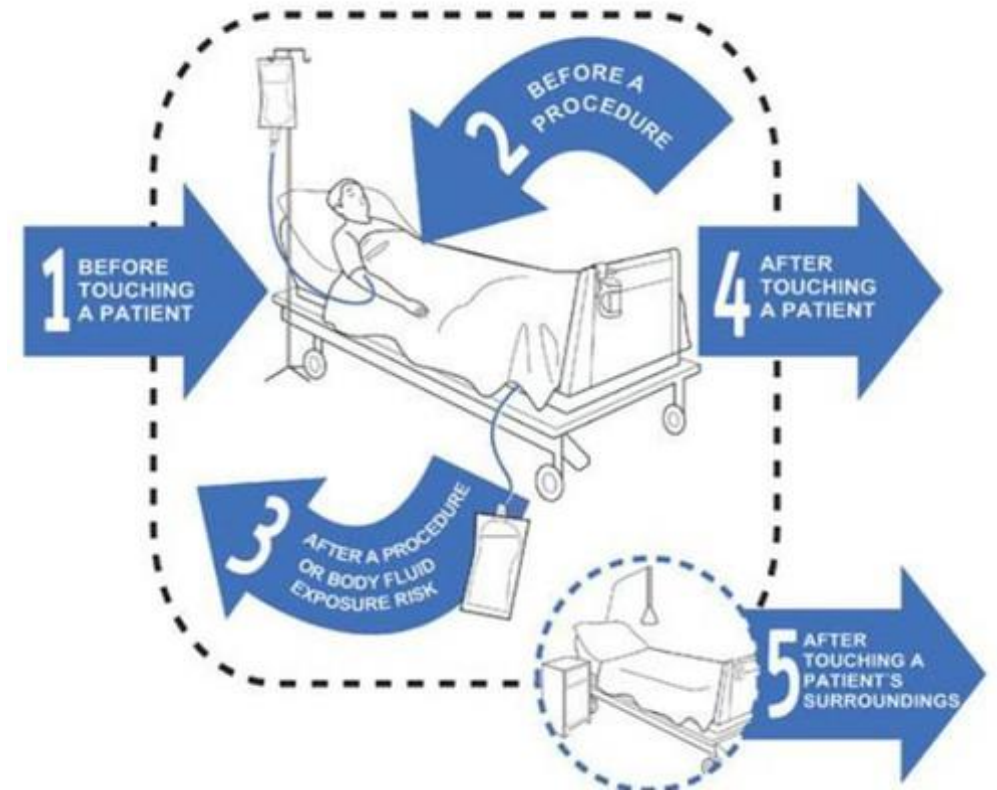
Soap and Water	Alcohol-Based Hand Sanitizer
visibly dirty/soiled, before eating, and after using the restroom.	Most effective product for reducing the number of germs on the hands of healthcare providers.
After caring for a person with known or suspected infectious diarrhea	Immediately before and after touching a patient or patient's environment
After known or suspected exposure to spores (e.g. B. anthracis, C difficile outbreaks)	Before performing an aseptic task (e.g., placing an indwelling device) or handling invasive medical devices
	Before moving from work on a soiled body site to a clean body site on the same patient
	Immediately after glove removal

# ★ Remember !!!

## If you are caring for a room with more than one resident:

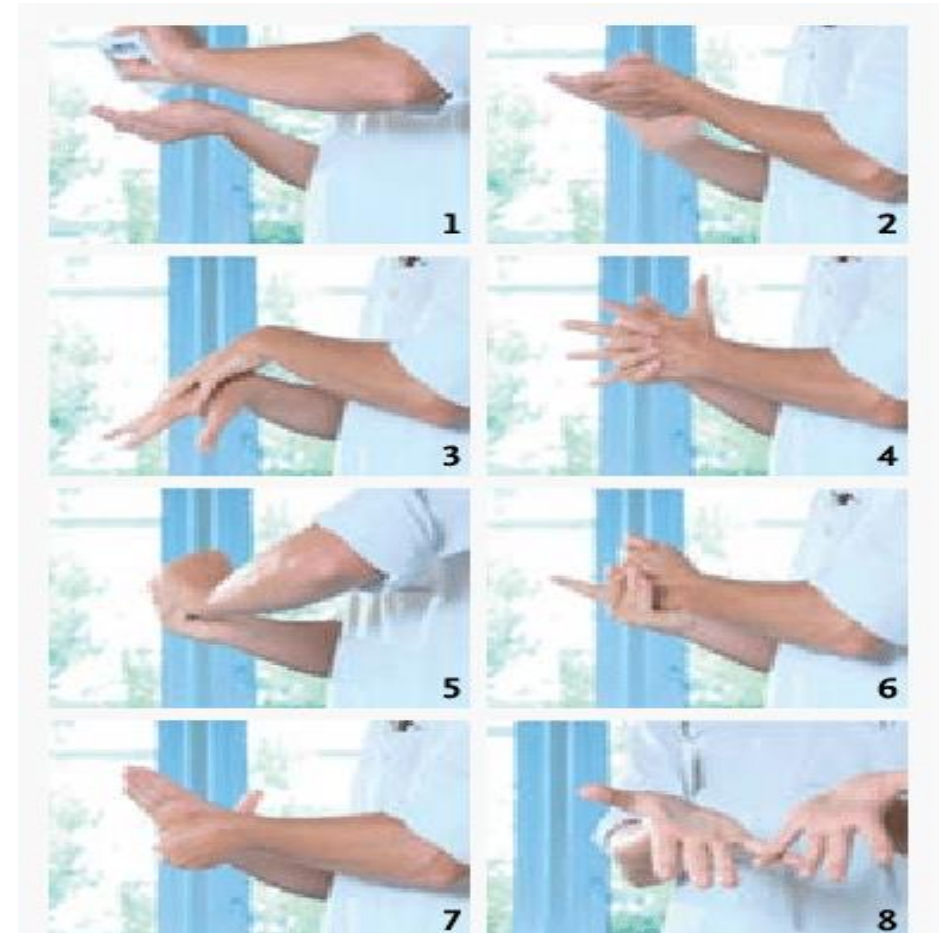
- You must always perform hand hygiene between residents
- You should imagine that each resident is in their own room

## 5 Moments of Hand Hygiene:



# ★ Why is ABHR preferred over Soap and water?

- It is more effective than soap and water at killing most germs
- It is faster
- It is easier to access
- It is less drying to your hands especially in the winter



# ★ Glove Use

- Gloves are **NOT** a substitute for hand hygiene.
- Change gloves and perform hand hygiene during patient care, if
  - gloves become damaged,
  - gloves become visibly soiled with blood or body fluids following a task,
  - moving from work on a soiled body site to a clean body site on the same patient or if another clinical indication for hand hygiene occurs.
- Never wear the same pair of gloves in the care of more than one patient.
- Carefully remove gloves to prevent hand contamination.



# ★ Fingernails and Hand Hygiene

- Germs can live under artificial fingernails both before and after using an alcohol-based hand sanitizer and handwashing
- Artificial nails have been associated with outbreaks of *Pseudomonas aeruginosa*<sup>1</sup> and *Candida*<sup>2</sup> infections
- It is recommended that healthcare providers do not wear artificial fingernails or extensions when having direct contact with patients at high risk (e.g., those in intensive-care units or operating rooms)
- Keep natural nail tips less than ¼ inch long



<sup>1</sup> Outbreak of *Pseudomonas aeruginosa* in a neonatal intensive care unit - Moolenaar RL et al, *Infect Control Hosp Epidemiol* 21(2):80, 2000; <sup>2</sup> *Candida* Osteomyelitis and Diskitis after Spinal Surgery - Parry et al, *Clinical Infectious Diseases* 32:352-7, 2001; <sup>3</sup> Larson, *Nursing Research* 1998; 47:54;

# Monitoring compliance

- Place alcohol-based hand rubs at entrance to patient room, or at bedside  
Provide HCWs with pocket-sized containers
- Monitor Healthcare workers (HCWs) adherence with recommended hand hygiene practices and give feedback
- Facilities should monitor hand hygiene performance (various shifts, various units)
- Record at a minimum of 30 observations per unit each month
- Use secret shoppers (EVS team, dietary aides) to collect these observations
- Resources:  
<https://www.cdc.gov/handhygiene/providers/guideline.html>

# ★ Auditing tools:



## SPEEDYAUDIT

SpeedyAudit Lite is a free hand hygiene auditing app that works on mobile devices, allowing you to capture hand hygiene actions, precautions and personal protective equipment with your phone or tablet. The tool captures 4 and 5 moments and In/Out standards of auditing.



**Insert Facility Name**  
Hand Hygiene Monitoring Tool

Observer Name: \_\_\_\_\_

Date	Time	Floor/ Location	Type of Healthcare Provider	Opportunities Compliant						Comments			
				Clean In		Clean Out		Clean Between Resident					
			MD N CNA RT HSKP Oth	Y	N	U	Y	N	U	Y	N	U	
			MD N CNA RT HSKP Oth	Y	N	U	Y	N	U	Y	N	U	
			MD N CNA RT HSKP Oth	Y	N	U	Y	N	U	Y	N	U	
			MD N CNA RT HSKP Oth	Y	N	U	Y	N	U	Y	N	U	
			MD N CNA RT HSKP Oth	Y	N	U	Y	N	U	Y	N	U	
			MD N CNA RT HSKP Oth	Y	N	U	Y	N	U	Y	N	U	
			MD N CNA RT HSKP Oth	Y	N	U	Y	N	U	Y	N	U	
			MD N CNA RT HSKP Oth	Y	N	U	Y	N	U	Y	N	U	
			MD N CNA RT HSKP Oth	Y	N	U	Y	N	U	Y	N	U	
			MD N CNA RT HSKP Oth	Y	N	U	Y	N	U	Y	N	U	
			MD N CNA RT HSKP Oth	Y	N	U	Y	N	U	Y	N	U	
			MD N CNA RT HSKP Oth	Y	N	U	Y	N	U	Y	N	U	
			MD N CNA RT HSKP Oth	Y	N	U	Y	N	U	Y	N	U	
			MD N CNA RT HSKP Oth	Y	N	U	Y	N	U	Y	N	U	
			MD N CNA RT HSKP Oth	Y	N	U	Y	N	U	Y	N	U	
			MD N CNA RT HSKP Oth	Y	N	U	Y	N	U	Y	N	U	
			MD N CNA RT HSKP Oth	Y	N	U	Y	N	U	Y	N	U	
			MD N CNA RT HSKP Oth	Y	N	U	Y	N	U	Y	N	U	
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			MD N CNA RT HSKP Oth	Y	N	U	Y	N	U	Y	N	U	
			MD N CNA RT HSKP Oth	Y	N	U	Y	N	U	Y	N	U	
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			MD N CNA RT HSKP Oth	Y	N	U	Y	N	U	Y	N	U	
			MD N CNA RT HSKP Oth	Y	N	U	Y	N	U	Y	N	U	
			MD N CNA RT HSKP Oth	Y	N	U	Y	N	U	Y	N	U	
			MD N CNA RT HSKP Oth	Y	N	U	Y	N	U	Y	N	U	
			MD N CNA RT HSKP Oth	Y	N	U	Y	N	U	Y	N	U	
			MD N CNA RT HSKP Oth	Y	N	U	Y	N	U	Y	N	U	
			MD N CNA RT HSKP Oth	Y	N	U	Y	N	U	Y	N	U	
			MD N CNA RT HSKP Oth	Y	N	U	Y	N	U	Y	N	U	
			MD N CNA RT HSKP Oth	Y	N	U	Y	N	U	Y	N	U	
			MD N CNA RT HSKP Oth	Y	N	U	Y	N	U	Y	N	U	
			MD N CNA RT HSKP Oth	Y	N	U	Y	N	U	Y	N	U	

Y = Hand Hygiene performed    N = No hand hygiene performed    U = Unable to observe or unable to determine if hand hygiene was performed or not.  
MD = Physician    N = RN, LPN, APN    CNA = Certified Nursing Assistant    RT = Respiratory Therapist    HSKP = Housekeeping    Oth = Therapy Services, Social Work

Return completed form to (Insert facility contact) by the fifth of the following month. For example, June 5 for May observations.

Created: 5/31/18, Revised: 6/11/18

# ★ A clean hand is a caring hand








# Antimicrobial Stewardship Programs in Chicago SNFs

**Amy Hanson, PharmD, BCPS AQ-ID**

**Project Administrator, Antimicrobial Stewardship**

**Chicago Department of Public Health**

# CDPH Roundtables on Antimicrobial Stewardship Topics

Date	Antimicrobial Stewardship for SNFs Topic
1.28.21	COVID and Antimicrobial Resistance (AMR): Antibiotics are Indicated to Treat a Virus
2.4.21	Clarify Penicillin (and Beta-lactam) Allergies; Reduce Use of Fluoroquinolones
2.18.21	Urinary Tract Infection Education and Get Your #ShotofHope Reminder 
3.11.21	IDPH Survey's Assessment of SNF ASPs
4.1.21	Baseline Survey Review of Chicago SNF ASP Compliance
5.13.21	GAIN Collaborative Pilot Results – Pre- vs- Post- ASP
6.10.21	Tour of Resources Available on the Chicago HAN

# New Chicago HAN Antimicrobial Stewardship Website



Home Diseases & Conditions COVID-19 COVID-19 Vaccine **Programs** Data & Resources About Us

## Antimicrobial Stewardship Program

[HAN Home](#) > [Programs](#) > Antimicrobial Stewardship Program

### Overview

**\*\*\*Featured Programs:\*\*\***  
<https://www.chicagohan.org/antimicrobialstewardship/outpatienttoolkit>  
and <https://safetyprogram4antibioticstewardship.org/>

! Visit this new sub-site to learn more about current Outpatient Antimicrobial Stewardship Efforts from two campaigns: Chicago Department of Public Health (local) and AHRQ (national)

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#### Introduction to General Practice Principles of Antimicrobial Stewardship

Improving antibiotic use is a medication-safety and patient safety issue. Research indicates that 30-50% of antibiotics prescribed in hospitals is either not indicated or not appropriate. Overprescribing and misprescribing is contributing to the growing challenges posed by *Clostridioides difficile* infections and antibiotic-resistant bacteria. Studies have demonstrated that improved prescribing practices in hospitals can not only help reduce rates of *C. difficile* infections and antibiotic resistance, but can also improve patient outcomes, all while reducing healthcare costs. Interventions to improve antibiotic use can be implemented in any healthcare setting - from the smallest to the largest. This site contains resources to build and sustain antimicrobial stewardship programs in a variety of healthcare settings, including long-term care, acute care, and outpatient clinics.

**New Gain Collaborative: Generating Antimicrobial Stewardship Initiatives In Chicago Nursing Homes** +

**Antimicrobial Stewardship Resources** +

### Antimicrobial Stewardship Reporting

For questions related to Healthcare Associated Infection/Antibiotic Resistance, please contact the Chicago Department of Public Health at: [CDPHAIAR@cityofchicago.org](mailto:CDPHAIAR@cityofchicago.org)

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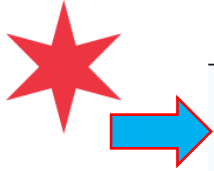
### Upcoming Events

[View All](#)

## Antimicrobial Stewardship Resources

### Additional Antimicrobial Stewardship Resources for Nursing Homes

Title ↑↓	Source ↑↓	Type ↑↓
<a href="#">Agency for Healthcare Research and Quality (AHRQ): Nursing Home Antimicrobial Stewardship Guide</a>	AHRQ	Website
<a href="#">Alberta Health Services (AHS) and British Columbia Center for Disease Control (BC CDC)</a>	Do Bugs Need Drugs?	Website
<a href="#">CDC Core Elements of Antimicrobial Stewardship for Nursing Homes</a>	CDC	Website
<a href="#">CDC Core Elements of Antimicrobial Stewardship for Nursing Homes - main.pdf</a>	CDC	PDF
<a href="#">CDC Core Elements of Antimicrobial Stewardship for Nursing Homes - Checklist</a>	CDC	PDF
<a href="#">Massachusetts Coalition: Improving Evaluation and Treatment of UTI in the Elderly</a>	Macoalition	Website
<a href="#">Minnesota Department of Public Health Antimicrobial Stewardship Program Toolkit for Long-term Care Facilities</a>	Minnesota Department Of Health	Website
<a href="#">Nebraska Antimicrobial Stewardship Assessment and Promotion Program (ASAP) Tool and Templates for Long-Term Care</a>	Nebraska Medicine	Website
<a href="#">Rochester Patient Safety Clostridium difficile Prevention Collaborative – Resources for Nursing Homes</a>	Rochester Patient Safety	Website
<a href="#">Telligen: Antimicrobial Stewardship in Long-term Care Resources</a>	Telligenqinqio	Website



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## Upcoming Events

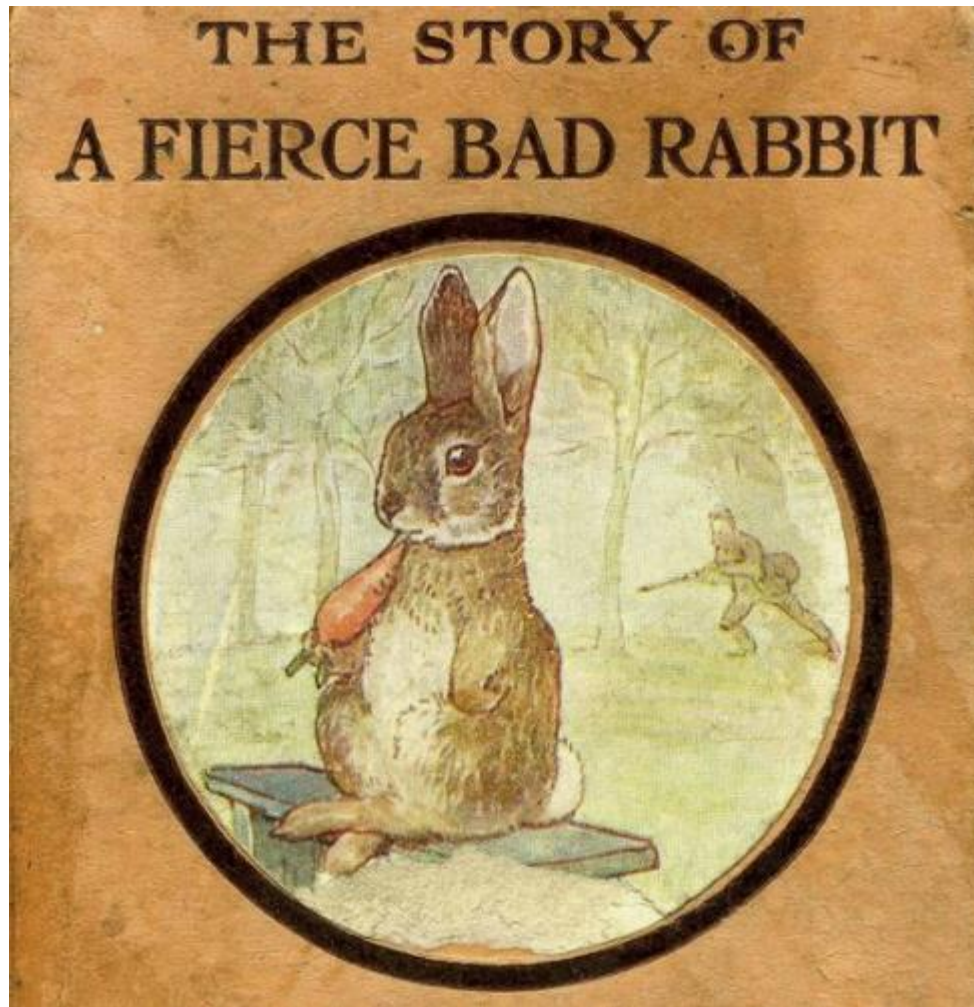
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## Antimicrobial Stewardship Contacts

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Department of Public Health

# A Road Map to Navigate What Could Easily Become Getting Lost Down A Rabbit Hole



# AHRQ Website to Assist SNFs with ASP



Topics ▾ Programs ▾ Research ▾ Data ▾ Tools ▾ Funding & Grants ▾ News ▾ About ▾

Home > Nursing Home Antimicrobial Stewardship Guide

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## Nursing Home Antimicrobial Stewardship Guide



### Overview of the Guide

The Nursing Home Antimicrobial Stewardship Guide provides toolkits to help nursing homes optimize their use of antibiotics.

### Browse Antimicrobial Stewardship Toolkits

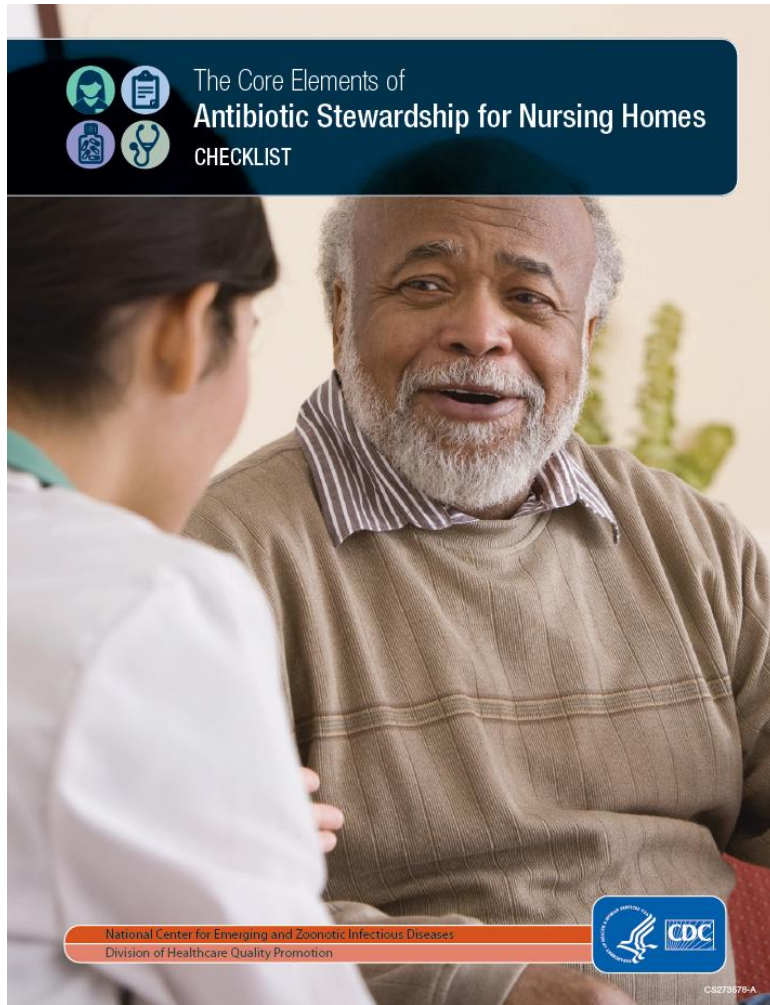
Toolkits on four topic areas are available.

### Implement, Monitor, and Sustain a Program

Two toolkits help nursing homes start and maintain antimicrobial stewardship programs.

[Back to Top](#)

# 7 CDC Core Elements for Antimicrobial Stewardship Programs in Nursing Homes



## Summary of Core Elements for Antibiotic Stewardship in Nursing Homes

- **Leadership commitment**  
Demonstrate support and commitment to safe and appropriate antibiotic use in your facility
- **Accountability**  
Identify physician, nursing and pharmacy leads responsible for promoting and overseeing antibiotic stewardship activities in your facility
- **Drug expertise**  
Establish access to consultant pharmacists or other individuals with experience or training in antibiotic stewardship for your facility
- **Action**  
Implement **at least one** policy or practice to improve antibiotic use
- **Tracking**  
Monitor **at least one process** measure of antibiotic use and **at least one outcome** from antibiotic use in your facility
- **Reporting**  
Provide regular feedback on antibiotic use and resistance to prescribing clinicians, nursing staff and other relevant staff
- **Education**  
Provide resources to clinicians, nursing staff, residents and families about antibiotic resistance and opportunities for improving antibiotic use



# CDC Core Element Checklist for SNF ASPs



## Checklist for Core Elements of Antibiotic Stewardship in Nursing Homes

### TRACKING: MONITORING ANTIBIOTIC PRESCRIBING, USE, AND RESISTANCE

7. Does your facility monitor one or more measures of antibiotic use?  Yes  No

If yes, indicate which of the following are being tracked (select all that apply)

- Adherence to clinical assessment documentation (signs/symptoms, vital signs, physical exam findings)
- Adherence to prescribing documentation (dose, duration, indication)
- Adherence to facility-specific treatment recommendations
- Performs point prevalence surveys of antibiotic use
- Monitors rates of new antibiotic starts/1,000 resident-days
- Monitors antibiotic days of therapy/1,000 resident-days
- Other: \_\_\_\_\_

8. Does your facility monitor one or more outcomes of antibiotic use?  Yes  No

If yes, indicate which of the following are being tracked (select all that apply)

- Monitors rates of *C. difficile* infection
- Monitors rates of antibiotic-resistant organisms
- Monitors rates of adverse drug events due to antibiotics
- Other: \_\_\_\_\_

### REPORTING INFORMATION TO STAFF ON IMPROVING ANTIBIOTIC USE AND RESISTANCE

9. Does your facility provide facility-specific reports on antibiotic use and outcomes with clinical providers and nursing staff?  Yes  No

If yes, indicate which of the following are being tracked (select all that apply)

- Measures of antibiotic use at the facility
- Measures of outcomes related to antibiotic use (i.e., *C. difficile* rates)
- Report of facility antibiotic susceptibility patterns (within last 18 months)
- Personalized feedback on antibiotic prescribing practices (to clinical providers)
- Other: \_\_\_\_\_



# AHRQ for Core Element 1: Leadership Commitment



## Nursing Home Antimicrobial Stewardship Guide Implement, Monitor, & Sustain a Program

### Toolkit 1. Start an Antimicrobial Stewardship Program

#### Tool 1. Gather a Team

1. **Choose members to serve on the antimicrobial stewardship program team.** Depending on the size of the nursing home, the team may be very small (two or three members) or large (five or six members). At a minimum, the antimicrobial stewardship program team should

# AHRQ for Core Element 2: Accountability



## Toolkit 1. Start an Antimicrobial Stewardship Program

### Tool 2. Roles and Responsibilities for Antimicrobial Stewardship

This table provides an example role and responsibility. Each nursing home should consider what the team needs to accomplish and how best to assign roles and responsibilities.

Name	Title	Roles, Responsibilities, and Tasks	Phone & Email
<i>Example</i>	<i>Assistant Director of Nursing</i>	<i>Co-champion and infection control lead. Co-develop agendas. Lead trainings. Monitor the new intervention. Draft policies and procedures; obtain necessary review and approval for new policies and procedures. Help develop staff training. Review whether materials are used. Develop findings related to monitoring the new intervention.</i>	<i>000-000-0000, name@organization.net</i>

# AHRQ for Core Element 3: Drug Expertise

## Concise Antibiogram Toolkit Comprehensive Antibiogram Template

Gram (-)	Number of Residents	Aminoglycosides			B-Lactams					Cephalosporins					Quinolones				Others								
		Amikacin	Gentamicin	Tobramycin	Ampicillin	Amoxicillin-Clavulanate	Ampicillin-Sulbactam	Imipenem	Meropenem (tested by MIC)	Piperacillin-Tazobactam	Cefazolin	Cefepime	Cefoxitin	Ceftazidime	Ceftriaxone	Ciprofloxacin	Gatifloxacin	Levofloxacin	Moxifloxacin	Ertapenem	Colistin	Nitrofurantoin	Polymixin B	Streptomycin	Tigecycline	Ticarcillin	TMP/SMX
Acinetobacter baumannii																											
Citrobacter freundii																											
Citrobacter koseri																											
Citrobacter sp																											
Enterobacter aerogenes																											
Enterobacter cloacae																											
Enterobacter sp																											
Escherichia coli																											
Klebsiella oxytoca																											
Klebsiella pneumoniae																											
Klebsiella sp																											
Morganella morganii																											
Proteus sp																											
Providencia sp																											
Pseudomonas aeruginosa																											
Salmonella sp																											
Serratia marcescens																											
Shigella sp																											

# AHRQ for Core Element 4: Data for Action



## Nursing Home Antimicrobial Stewardship Guide

Determine Whether To Treat



### Toolkit 3. Minimum Criteria for Common Infections Toolkit

**Tool 5. Nursing Staff Training on Importance and Use of SBAR Forms**

[Name]

[Organization]

# AHRQ for Core Element 5 & 6: Tracking & Reporting

## Nursing Home Antimicrobial Stewardship Guide

### Toolkit 2. Monitor and Sustain Stewardship



Tool 2. Antibiotic Use Tracking Sheet [11x17 format]

Month: \_\_\_\_\_

Resident Name/Identifier	Room #	Admit Date	Admit From	Onset Date	Infection Type			Gastrointestinal	Other Infection (Specify)	Signs & Symptoms	Indicate Diagnostic Tool Used and Whether Criteria Were Met	HAI/CAI/NAI/Other Nosocomial*	Lab Results (organism identified)	X ray	Other Contributing Factors	Prescribing Clinician (PC)	Prescription Date	Prescription Duration	Antibiotic Name	Dose	Change of Antibiotic (if needed)	Followup With PC	Followup With Resident/Family	Comments/Notes
					Urinary Tract Infection	Respiratory	Skin/Soft Tissue																	

### Summary Report of Infections and Antibiotic Use

(This example focuses on data for evaluating antibiotic use for suspected UTIs)

Month	Number of Resident Days	Number of Antibiotic Rx	Number of Antibiotic Rx Divided by Number of Resident Days	Number of Residents Receiving Antibiotics for UTI (incl. Repeats)	Number of UTI SBAR Forms Used	Number of UTIs That Met Diagnostic Criteria	Number of Negative Cultures
Jan							
Feb							
Mar							

# AHRQ for Core Element 7: Education



Topics ▾ Programs ▾ Research ▾ Data ▾ Tools ▾ Funding & Grants ▾ News ▾ About ▾

Home > Nursing Home Antimicrobial Stewardship Guide > Toolkits > Educate and Engage Residents and Family Members

Nursing Home Antimicrobial Stewardship Guide

About the Guide

Toolkits

Implement, Monitor, and Sustain an Antimicrobial Stewardship Program

Determine Whether It Is Necessary To Treat a Potential Infection With Antibiotics

Help Prescribing Clinicians Choose the Right Antibiotic

**Educate and Engage Residents and Family Members**

## Toolkit To Educate and Engage Residents and Family Members

### Overview of the Toolkit

#### Why Should a Nursing Home Use This Toolkit?

The Resident and Family Member Education toolkit helps the nursing home (1) encourage an open and respectful dialogue between nurses and prescribing clinicians and residents and their family members, and (2) help residents and family members participate in their care.

#### What Is Included In the Toolkit?

The toolkit provides ways to educate residents and their family members about antibiotics and the risks involved with taking antibiotics, including *Clostridium difficile* (or *C. diff*) and antibiotic resistance. The toolkit includes the following tools:

## Antimicrobial Stewardship Resources

Additional Antimicrobial Stewardship Resources for Nursing Homes



Title ↑↓	Source ↑↓	Type ↑↓
<a href="#">Agency for Healthcare Research and Quality (AHRQ): Nursing Home Antimicrobial Stewardship Guide</a>	AHRQ	Website
<a href="#">Alberta Health Services (AHS) and British Columbia Center for Disease Control (BC CDC)</a>	Do Bugs Need Drugs?	Website
<a href="#">CDC Core Elements of Antimicrobial Stewardship for Nursing Homes</a>	CDC	Website
<a href="#">CDC Core Elements of Antimicrobial Stewardship for Nursing Homes - main.pdf</a>	CDC	PDF
<a href="#">CDC Core Elements of Antimicrobial Stewardship for Nursing Homes - Checklist</a>	CDC	PDF
<a href="#">Massachusetts Coalition: Improving Evaluation and Treatment of UTI in the Elderly</a>	Macoalition	Website
<a href="#">Minnesota Department of Public Health Antimicrobial Stewardship Program Toolkit for Long-term Care Facilities</a>	Minnesota Department Of Health	Website
<a href="#">Nebraska Antimicrobial Stewardship Assessment and Promotion Program (ASAP) Tool and Templates for Long-Term Care</a>	Nebraska Medicine	Website
<a href="#">Rochester Patient Safety Clostridium difficile Prevention Collaborative – Resources for Nursing Homes</a>	Rochester Patient Safety	Website
<a href="#">Telligen: Antimicrobial Stewardship in Long-term Care Resources</a>	Telligenqinqio	Website

the Chicago Department of Public Health  
at: [CDPHHAIAR@cityofchicago.org](mailto:CDPHHAIAR@cityofchicago.org)

Amy Hanson, PharmD, BCPS AQ-ID  
Project Administrator, Antimicrobial Stewardship  
Infectious Disease Pharmacist, Chicago  
Department of Public Health  
West Side Center for Disease Control  
2160 West Ogden Ave  
Chicago, IL 60612  
Office: [312-746-0304](tel:312-746-0304)  
Email: [Amy.Hanson@cityofchicago.org](mailto:Amy.Hanson@cityofchicago.org)



## Upcoming Events

[View All](#)



## Antimicrobial Stewardship Contacts

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Project Administrator, Antimicrobial Stewardship  
Infectious Disease Pharmacist, Chicago  
Department of Public Health

# Core Element 1: Leadership Commitment Rochester Nursing Home Collaborative



## Changes to CMS Regulations: What you Need to Know

Ghinwa Dumyati, MD  
Professor of Medicine  
Center for Community Health  
University of Rochester Medical Center  
Ghinwa\_dumyati@urmc.rochester.edu  
February 28, 2018



### POLICY & IMPLEMENTATION

Antibiotic Stewardship Policy Template

Tools for Advancing Antimicrobial Stewardship in Nursing Homes

Adoption of ASP in Long Term Care

The Core Elements of ASP with CMS and QAPI Updates

Workshop 2.28.18 - CMS ASP Regulations

Workshop 2.28.18 - Implementing Stewardship in Rochester NH



MEDICINE of THE HIGHEST ORDER





# Core Element 2: Accountability

## Minnesota Department of Public Health

Appendix C: Antimicrobial Stewardship Gap Analysis Tool

### Antimicrobial Stewardship Gap Analysis Tool

Antimicrobial Stewardship Strategies	Antimicrobial Stewardship Strategy Audit
<b>Action Step: Identify antimicrobial stewardship champions</b>	
<p>A physician serves as antimicrobial stewardship (AS) champion to support following clinical practice guidelines for antimicrobial prescribing</p>	<p><input type="checkbox"/> <b>Yes</b>; name and position: _____</p> <p><input type="checkbox"/> <b>No</b> (if checked, complete questions below)</p> <p><u>Barriers:</u> _____ → <u>Action Steps to Address Barriers:</u></p>

# Core Element 3: Drug Expertise

## Minnesota Department of Public Health



Action Step: Incorporate antimicrobial stewardship issues into a committee/workgroup (Antimicrobial Stewardship Team)													
<p>A committee/workgroup (Antimicrobial Stewardship [AS] Team) is identified to incorporate AS issues</p>	<p><input type="checkbox"/> <b>Yes</b>; <input type="checkbox"/> AS Team formed <input type="checkbox"/> Existing committee/workgroup: _____</p> <p><u>Identify committee membership:</u></p> <table border="0"> <tr> <td><input type="checkbox"/> AS champion(s) pharmacist</td> <td><input type="checkbox"/> Consulting or in-house</td> </tr> <tr> <td><input type="checkbox"/> Nursing leadership</td> <td><input type="checkbox"/> Quality improvement</td> </tr> <tr> <td><input type="checkbox"/> AS Coordinator</td> <td><input type="checkbox"/> LTCF infection preventionist</td> </tr> <tr> <td><input type="checkbox"/> Senior leadership</td> <td><input type="checkbox"/> Information technologist</td> </tr> <tr> <td colspan="2"><input type="checkbox"/> Other: (e.g. members of collaborating hospital's AS Team, microbiology representative):</td> </tr> <tr> <td colspan="2">_____</td> </tr> </table> <p><input type="checkbox"/> <b>No</b></p> <p><u>Barriers:</u> _____ → <u>Action Steps to Address Barriers:</u></p>	<input type="checkbox"/> AS champion(s) pharmacist	<input type="checkbox"/> Consulting or in-house	<input type="checkbox"/> Nursing leadership	<input type="checkbox"/> Quality improvement	<input type="checkbox"/> AS Coordinator	<input type="checkbox"/> LTCF infection preventionist	<input type="checkbox"/> Senior leadership	<input type="checkbox"/> Information technologist	<input type="checkbox"/> Other: (e.g. members of collaborating hospital's AS Team, microbiology representative):		_____	
<input type="checkbox"/> AS champion(s) pharmacist	<input type="checkbox"/> Consulting or in-house												
<input type="checkbox"/> Nursing leadership	<input type="checkbox"/> Quality improvement												
<input type="checkbox"/> AS Coordinator	<input type="checkbox"/> LTCF infection preventionist												
<input type="checkbox"/> Senior leadership	<input type="checkbox"/> Information technologist												
<input type="checkbox"/> Other: (e.g. members of collaborating hospital's AS Team, microbiology representative):													
_____													

# Core Element 4: Data

## British Columbia CDC & Alberta Health Services



Home About Contact Us Search

### DO BUGS NEED DRUGS?

A Community Program for Wise Use of Antibiotics

Educational Resources Healthcare Professionals Other Internet Resources KIDS

Home » Healthcare Professionals » Antimicrobial Stewardship in Long Term Care Facilities

### Healthcare Professionals

BUGS & DRUGS

## Antimicrobial Stewardship in Long Term Care Facilities

### Antimicrobial Stewardship

#### in Continuing Care

*Urinary Tract Infections  
Clinical Checklist*

Alberta Health Services bugs drugs December 2014

### Antimicrobial Stewardship

#### in Continuing Care

*Nursing Home Acquired Pneumonia  
Clinical Checklist*

Alberta Health Services bugs drugs March 2015

# Core Element 4: Action

## Minnesota Department of Public Health

### Minimum Criteria for Initiation of Antibiotics in Long-Term Care Residents

#### Suspected Lower Respiratory Tract Infection

- Fever  $>38.9^{\circ}\text{C}$  [ $102^{\circ}\text{F}$ ]  
*and at least one of the following:*
  - Respiratory rate  $>25$
  - Productive cough
- or*
- Fever ( $>37.9^{\circ}\text{C}$  [ $100^{\circ}\text{F}$ ] or a  $1.5^{\circ}\text{C}$  [ $2.4^{\circ}\text{F}$ ] increase above baseline temperature, but  $\leq 38.9^{\circ}\text{C}$  [ $102^{\circ}\text{F}$ ])  
*and cough*  
*and at least one of the following:*
  - Pulse  $>100$
  - Rigors
  - Delirium
  - Respiratory rate  $>25$
- or*
- Afebrile resident with COPD and  $>65$  years  
*and new or increased cough with purulent sputum production*
- or*
- Afebrile resident without COPD and new cough with purulent sputum production  
*and at least one of the following:*
  - Respiratory rate  $>25$
  - Delirium
- or*
- New infiltrate on chest X-ray thought to represent pneumonia  
*and at least one of the following:*
  - Fever ( $>37.9^{\circ}\text{C}$  [ $100^{\circ}\text{F}$ ] or a  $1.5^{\circ}\text{C}$  [ $2.4^{\circ}\text{F}$ ] increase above baseline temperature)
  - Respiratory rate  $>25$
  - Productive cough

Chest X-ray and complete cell count with differential is reasonable for residents with fever, cough, and at least one of the following: pulse  $>100$ , worsening mental status, rigors.

#### Fever with Unknown Focus of Infection

- Fever ( $>37.9^{\circ}\text{C}$  [ $100^{\circ}\text{F}$ ] or a  $1.5^{\circ}\text{C}$  [ $2.4^{\circ}\text{F}$ ] increase above baseline temperature)  
*and at least one of the following:*
  - New onset delirium
  - Rigors

Note: fever + mental status changes that do not meet delirium criteria (e.g. reduced functional activities, withdrawal, loss of appetite) need to be investigated but empiric antibiotics are not needed.

#### Suspected Urinary Tract Infection

##### NO indwelling catheter:

- Acute dysuria
- or*
- Fever ( $>37.9^{\circ}\text{C}$  [ $100^{\circ}\text{F}$ ] or a  $1.5^{\circ}\text{C}$  [ $2.4^{\circ}\text{F}$ ] increase above baseline temperature)  
*and at least one of the following:*  
New or worsening:
    - Urgency
    - Frequency
    - Suprapubic pain
    - Gross hematuria
    - Costovertebral angle tenderness
    - Urinary incontinence

##### WITH indwelling catheter (Foley or suprapubic):

- *At least one of the following:*
  - Fever ( $>37.9^{\circ}\text{C}$  [ $100^{\circ}\text{F}$ ] or a  $1.5^{\circ}\text{C}$  [ $2.4^{\circ}\text{F}$ ] increase above baseline temperature)
  - New costovertebral tenderness
  - Rigors
  - New onset of delirium

Note: Foul smelling or cloudy urine is not a valid indication for initiating antibiotics. Asymptomatic bacteriuria should not be treated with antibiotics.

#### Suspected Skin and Soft-tissue Infection

- New or increasing purulent drainage at a wound, skin, or soft-tissue site
- or*
- *At least 2 of the following:*
    - Fever ( $>37.9^{\circ}\text{C}$  [ $100^{\circ}\text{F}$ ] or a  $1.5^{\circ}\text{C}$  [ $2.4^{\circ}\text{F}$ ] increase above baseline temperature)
    - Redness
    - Tenderness
    - Warmth
    - New or increasing swelling

# Core Element 4: Action

## Nebraska Antimicrobial Stewardship Assessment & Promotion Program (ASAP)



SBAR for Suspected UTI with Treatment Recommendations

Facility Logo	Resident Label		
<p><b>S Situation</b> I am concerned about a suspected UTI for the above resident.</p>			
<p><b>B Background</b>                  Indwelling catheter <input type="checkbox"/> Yes <input type="checkbox"/> No      If yes, <input type="checkbox"/> Urethral <input type="checkbox"/> Suprapubic                  Incontinence <input type="checkbox"/> Yes <input type="checkbox"/> No      If yes, is this new or worsening <input type="checkbox"/> Yes <input type="checkbox"/> No                  UTI in last 6 months <input type="checkbox"/> Yes <input type="checkbox"/> No      If yes, Date: _____ Organism: _____ Treatment: _____                  Active diagnosis (especially bladder, kidney, genitourinary conditions; diabetes; receiving dialysis, anticoagulants): _____                  Advance directives for limiting treatment (especially antibiotic use): _____                  Medication allergies: _____</p>			
<p><b>A Assessment</b>                  Vital signs: BP _____ / _____ HR _____ Resp. rate _____ Temp. _____ O<sub>2</sub> Sat _____</p> <table border="1"> <tr> <td> <p><b>Resident WITH indwelling catheter</b> The criteria are met to initiate antibiotics if one of the following are selected:</p> <p>No Yes</p> <p><input type="checkbox"/> Fever of 100°F (38°C), or 2°F (1.1°C) above baseline, or repeated temperatures of 99°F (37°C)</p> <p><input type="checkbox"/> New back or flank pain</p> <p><input type="checkbox"/> Rigors / shaking / chills</p> <p><input type="checkbox"/> New onset delirium (new dramatic change in mental status)</p> <p><input type="checkbox"/> Hypotension (significant change in baseline BP or SBP &lt;90)</p> <p><input type="checkbox"/> Acute suprapubic pain</p> <p><input type="checkbox"/> Acute pain, swelling or tenderness of the scrotal area</p> </td> <td> <p><b>Resident WITHOUT indwelling catheter</b> Criteria are met to initiate antibiotics if one of the three situations are met:</p> <p>No Yes</p> <p><input type="checkbox"/> Any one of the following two:  <input type="checkbox"/> Acute dysuria alone (pain or burning while urinating)  <input type="checkbox"/> Acute pain, swelling or tenderness of the scrotal area</p> <p>OR</p> <p><input type="checkbox"/> Single temp of 100°F (38°C), or 2°F (1.1°C) above baseline, or repeated temperatures of 99°F (37°C) and at least one of the following new or worsening symptoms:  <input type="checkbox"/> Urgency <input type="checkbox"/> Suprapubic pain <input type="checkbox"/> Frequency  <input type="checkbox"/> Gross hematuria <input type="checkbox"/> Back or flank pain <input type="checkbox"/> Urinary incontinence</p> <p>OR</p> <p><input type="checkbox"/> No fever, but two or more of the following new or worsening symptoms:  <input type="checkbox"/> Urgency <input type="checkbox"/> Suprapubic pain <input type="checkbox"/> Frequency  <input type="checkbox"/> Gross hematuria <input type="checkbox"/> Urinary incontinence</p> </td> </tr> </table>		<p><b>Resident WITH indwelling catheter</b> The criteria are met to initiate antibiotics if one of the following are selected:</p> <p>No Yes</p> <p><input type="checkbox"/> Fever of 100°F (38°C), or 2°F (1.1°C) above baseline, or repeated temperatures of 99°F (37°C)</p> <p><input type="checkbox"/> New back or flank pain</p> <p><input type="checkbox"/> Rigors / shaking / chills</p> <p><input type="checkbox"/> New onset delirium (new dramatic change in mental status)</p> <p><input type="checkbox"/> Hypotension (significant change in baseline BP or SBP &lt;90)</p> <p><input type="checkbox"/> Acute suprapubic pain</p> <p><input type="checkbox"/> Acute pain, swelling or tenderness of the scrotal area</p>	<p><b>Resident WITHOUT indwelling catheter</b> Criteria are met to initiate antibiotics if one of the three situations are met:</p> <p>No Yes</p> <p><input type="checkbox"/> Any one of the following two:  <input type="checkbox"/> Acute dysuria alone (pain or burning while urinating)  <input type="checkbox"/> Acute pain, swelling or tenderness of the scrotal area</p> <p>OR</p> <p><input type="checkbox"/> Single temp of 100°F (38°C), or 2°F (1.1°C) above baseline, or repeated temperatures of 99°F (37°C) and at least one of the following new or worsening symptoms:  <input type="checkbox"/> Urgency <input type="checkbox"/> Suprapubic pain <input type="checkbox"/> Frequency  <input type="checkbox"/> Gross hematuria <input type="checkbox"/> Back or flank pain <input type="checkbox"/> Urinary incontinence</p> <p>OR</p> <p><input type="checkbox"/> No fever, but two or more of the following new or worsening symptoms:  <input type="checkbox"/> Urgency <input type="checkbox"/> Suprapubic pain <input type="checkbox"/> Frequency  <input type="checkbox"/> Gross hematuria <input type="checkbox"/> Urinary incontinence</p>
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<p><b>R<sub>1</sub> Recommendation when criteria are NOT met but ACTIVE MONITORING is being initiated</b>                  Resident <b>DOES NOT</b> need immediate antibiotic but may need the following active monitoring protocol measures:  <input type="checkbox"/> Give / encourage liquid intake: _____ oz/mL _____ times / day, until symptoms resolve  <input type="checkbox"/> Record fluid intake and output until symptoms resolve (output can also be measured from urinals or by weighing diapers)  <input type="checkbox"/> Regular assessment of vital signs (temp, BP, heart rate, respiratory rate) every _____ hours for _____ hours  <input type="checkbox"/> Monitor and notify if S &amp; S worsen or are unresolved in _____ hours  <input type="checkbox"/> Contact consultant pharmacist to review medication regimen for possible explanation of S &amp; S  <input type="checkbox"/> Contact you (the provider) with an update of resident's condition in _____ hours/day  <input type="checkbox"/> Other (specify): _____</p>			
<p><b>D Documentation</b>                  Nurse's Signature: _____ Date/Time: _____  <input type="checkbox"/> Notification of Family/POA Name: _____ Date/Time: _____  <input type="checkbox"/> Faxed or <input type="checkbox"/> Called to: _____ By: _____ Date/Time: _____</p>			

Physician Signature: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Please Fax Back To: \_\_\_\_\_ or  Telephone Order

File Under Physician Order/Progress Notes



Complete the reverse side if criteria are met to start antibiotic

SBAR for Suspected UTI with Treatment Recommendations

<p><b>R<sub>2</sub> Recommendation when criteria ARE met and SIMPLE CYSTITIS is suspected</b>                  Resident MET criteria for UTI and appear to have cystitis requiring the following measures:  <input checked="" type="checkbox"/> Urinalysis and urine culture (obtained under Medical Director standing order)  <input checked="" type="checkbox"/> Initiate empiric antibiotic therapy using the options for cystitis below</p> <p><b>Provider: Please select an antibiotic regimen</b></p> <p><input type="checkbox"/> Initiate empiric antibiotic therapy based on Linden Court antibiotic susceptibilities:  <input type="checkbox"/> Nitrofurantoin (Macrobid) 100mg PO BID if estimated creatinine clearance (eCrCl) &gt;30 mL/min x _____ Days  <input type="checkbox"/> Cephalexin (Keflex) 500mg PO BID if eCrCl ≥10 mL/min x _____ Days  <input type="checkbox"/> Cephalexin 250mg PO BID if eCrCl &lt;10 mL/min x _____ Days  <input type="checkbox"/> SMX-TMP (Bactrim) 1 double-strength PO BID if eCrCl &gt;30 mL/min x _____ Days  <input type="checkbox"/> SMX-TMP (Bactrim) 1 single-strength PO BID if eCrCl 15-30 mL/min x _____ Days  <input type="checkbox"/> Fosfomycin (Monural) 3g PO once (for female residents)  <input type="checkbox"/> Fosfomycin 3g PO once every 3 days for 3 doses (for male residents)  <input type="checkbox"/> If above cannot be used, ciprofloxacin 250mg PO BID eCrCl &gt;30 mL/min x _____ Days  <input type="checkbox"/> If above cannot be used, ciprofloxacin 250mg PO daily eCrCl ≤30 mL/min x _____ Days</p> <p><input type="checkbox"/> Initiate empiric antibiotic therapy based on resident's urine culture(s) within the past 6 months</p> <p>Antibiotic: _____ Dose: _____ Route: _____ Frequency: _____ Duration: _____ Days</p>
<p><b>R<sub>3</sub> Recommendation when criteria ARE met and COMPLICATED UTI is suspected</b>                  Resident MET criteria for UTI and appear to have complicated UTI (e.g., pyelonephritis) requiring the following measures:  <input checked="" type="checkbox"/> Urinalysis and urine culture (obtained under Medical Director standing order)  <input type="checkbox"/> Obtain blood culture  <input checked="" type="checkbox"/> Initiate empiric antibiotic therapy using the options for complicated UTI below</p> <p><b>Provider: Please select an antibiotic regimen</b></p> <p><input type="checkbox"/> Initiate empiric antibiotic therapy based on Linden Court antibiotic susceptibilities:  <input type="checkbox"/> Ceftriaxone 1g IM once [strongly consider if resident is clinically unstable AND/OR received any of the antibiotics below within the previous 3 months]</p> <p>_____ FOLLOWED BY _____</p> <p><input type="checkbox"/> SMX-TMP (Bactrim) 1 double-strength PO BID eCrCl &gt;30 mL/min x _____ Days  <input type="checkbox"/> SMX-TMP (Bactrim) 1 single-strength PO BID eCrCl 15-30 mL/min x _____ Days  <input type="checkbox"/> Ciprofloxacin 500mg PO BID eCrCl &gt;30 mL/min x _____ Days  <input type="checkbox"/> Ciprofloxacin 500mg PO daily eCrCl ≤30 mL/min x _____ Days</p> <p><input type="checkbox"/> Oral beta-lactam—Name: _____ Dose: _____ Frequency: _____ Duration: _____ Days</p> <p><input type="checkbox"/> Initiate empiric antibiotic therapy based on resident's urine culture(s) within the past 6 months</p> <p>Antibiotic: _____ Dose: _____ Route: _____ Frequency: _____ Duration: _____ Days</p>
<p><b>D Documentation</b>                  Nurse's Signature: _____ Date/Time: _____  <input type="checkbox"/> Notification of Family/POA Name: _____ Date/Time: _____  <input type="checkbox"/> Faxed or <input type="checkbox"/> Called to: _____ By: _____ Date/Time: _____</p>

Physician Signature: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Please Fax Back To: \_\_\_\_\_ or  Telephone Order

File Under Physician Order/Progress Notes

Duration of Therapy for SIMPLE CYSTITIS		Duration of Therapy for COMPLICATED UTI	
Sex	Number of Days	Condition	Number of Days
Women	3 for SMX-TMP and Ciprofloxacin; 5 for nitrofurantoin and cephalexin	Pyelonephritis	7 for ciprofloxacin; 14 for SMX-TMP; 10-14 for beta-lactam
Men	7	Non-Pyelonephritis	7 if prompt improvement; 10-14 if delayed response



# Core Element 4: Action

## Rochester Nursing Home Collaborative



### IMPROVING ANTIBIOTIC USE

#### GUIDELINES:

Guidelines for Treatment of Urinary Tract Infections

Guidelines for Treatment of Pneumonia

Active Monitoring Pocket Card

Renal Dosing Guidelines for Common Antibiotics

Guidelines for the Diagnosis and Treatment of SSTI



ROCHESTER  
Nursing Home  
Collaborative

Cystitis /Lower UTI (complicated or uncomplicated)		
	Agent	Notes
1 <sup>st</sup> line	Nitrofurantoin	<ul style="list-style-type: none"> <li>Most active agent against <i>E. coli</i></li> <li>Avoid if CrCl &lt; 30 mL/min</li> <li><b>Avoid if systemic signs of infection/suspicion of pyelonephritis or prostatitis</b></li> <li><b>Does not cover Proteus</b></li> </ul>
	TMP-SMX	<ul style="list-style-type: none"> <li>Do not use for empiric treatment if resistance &gt;20%</li> <li>Drug-drug interactions with warfarin</li> <li>Monitor potassium level if concomitant use of spironolactone, angiotensin-converting enzyme inhibitors (ACEIs), angiotensin receptor blockers (ARBs)</li> <li>Renal dose adjustments, avoid if CrCl &lt; 15 mL/min</li> </ul>
2 <sup>nd</sup> line	Cephalexin	<ul style="list-style-type: none"> <li>Active against <i>E. coli</i>, <i>Proteus</i>, and <i>Klebsiella</i></li> </ul>
3 <sup>rd</sup> line	Fosfomycin <sup>†</sup>	<ul style="list-style-type: none"> <li>Active against <i>E. coli</i>, Enterococcus. Is also active against ESBL positive <i>E. coli</i>. <b>Fosfomycin susceptibility tests recommended.</b></li> </ul>
Pyelonephritis/ Upper UTI		
	Agent	Notes
1 <sup>st</sup> line	TMP-SMX	<ul style="list-style-type: none"> <li>Patient should receive 1 dose of IV/IM ceftriaxone prior to starting oral therapy</li> <li>Do not use for empiric treatment if resistance &gt;20%</li> </ul>
2 <sup>nd</sup> line	Ciprofloxacin	<ul style="list-style-type: none"> <li>If patient unable to tolerate Bactrim</li> </ul>
3 <sup>rd</sup> line	Beta-lactams	<ul style="list-style-type: none"> <li>Data suggests that oral beta-lactams are inferior to Bactrim or fluoroquinolones for pyelonephritis<sup>3</sup></li> <li>Initial dose of IV/IM ceftriaxone and longer treatment duration of 10-14 days are recommended</li> </ul>

\*Due to high levels of resistance in *E. coli* and high risk of *C. diff* infection, fluoroquinolones should be avoided for empiric therapy of cystitis

<sup>†</sup>Fosfomycin has poor insurance coverage

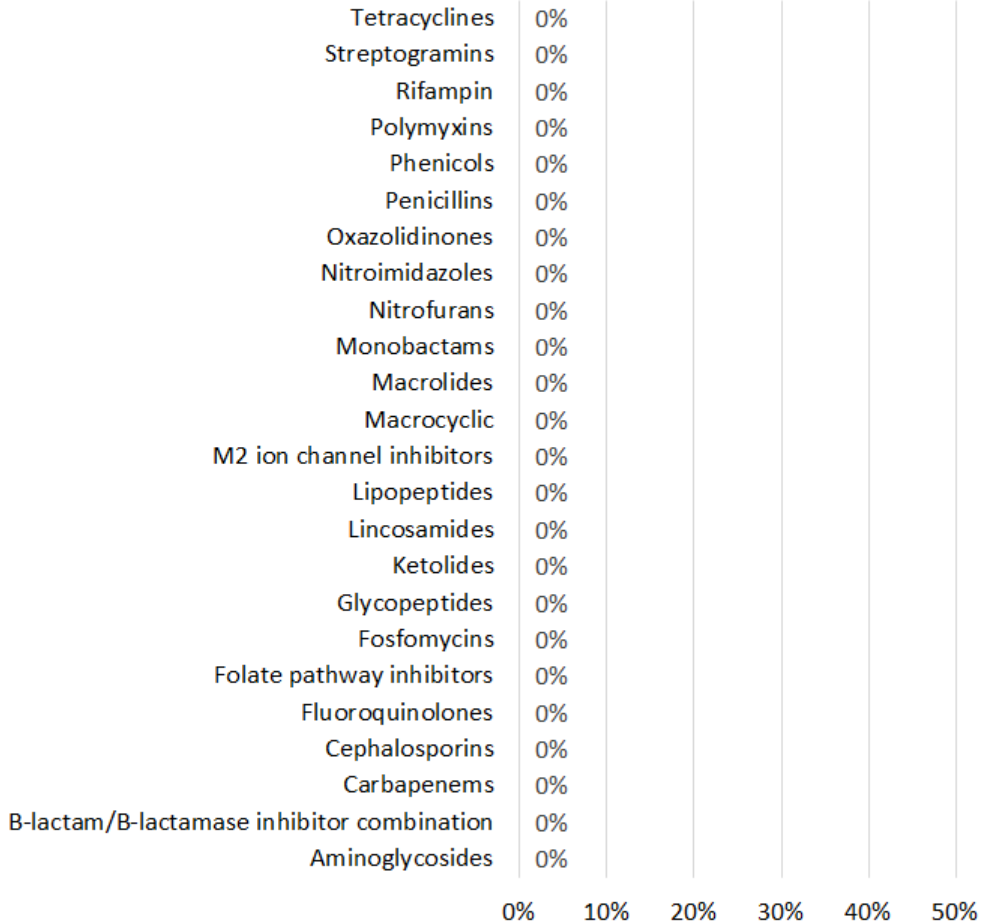
# Core Element 5: Tracking Minnesota Department of Public Health



Total Days of Therapy

Month	Total Days of Therapy per Month	Rate per 1,000 Resident Days	Total Days of Therapy per Month (Prophylaxis)	Rate per 1,000 Resident Days (Prophylaxis)
January	0	0.00	0.00	0.00
February	0	0.00	0.00	0.00
March	0	0.00	0.00	0.00
April	0	0.00	0.00	0.00
May	0	0.00	0.00	0.00
June	0	0.00	0.00	0.00
July	0	0.00	0.00	0.00
August	0	0.00	0.00	0.00
September	0	0.00	0.00	0.00
October	0	0.00	0.00	0.00
November	0	0.00	0.00	0.00
December	0	0.00	0.00	0.00

Antimicrobial Class Utilization



# Core Element 5: Tracking Nebraska ASAP

[Facility Logo]

Resident Label

## Adverse Drug Reaction Worksheet

Evaluation Date: \_\_\_\_\_ Evaluated By: \_\_\_\_\_ Date of Adverse Reaction: \_\_\_\_\_

Suspect Medication: \_\_\_\_\_ Dosing Regimen: \_\_\_\_\_ Is medication new?  Yes  No

Adverse Reaction: \_\_\_\_\_  
(Refer to a list of common adverse antimicrobial reactions in Table 1 on the next page)

Probability Reaction Related to Medication (from the Naranjo Probability Scale below):

Definite ( $\geq 9$ )     Probable (5-8)     Possible (1-4)     Doubtful (0)

Consequence of Adverse Reaction (check all that apply):

No change-therapy continued     Therapy changed to another agent     Therapy discontinued  
 Increased monitoring     Symptomatic medical treatment     Corrective surgical procedure  
 Disability     Permanent Damage     Delayed discharge  
 Hospitalization     Other (specify): \_\_\_\_\_

Reviewer: \_\_\_\_\_ Date: \_\_\_\_\_

### Naranjo Adverse Drug Reaction Probability Scale (with modifications)

The following scale is used to assess the likelihood a particular adverse reaction is related to a medication. Answer each of the 10 questions, calculate total score, and determine if an adverse drug reaction is Definitely, Probably, Possibly, or unlikely related to the drug in question. (Interpretation of the probability classification can be found in Table 2 on the next page)

Question	Yes	No	Do Not Know	Score
1. Are there previous CONCLUSIVE reports on this reaction? <i>Answer yes if 2 or more well-described case reports can be found in the literature</i>	+1	0	0	
2. Did the adverse reaction appear after the suspected drug was administered? <i>Answer yes if reaction occurs in close temporal relation (e.g., within 1-2 days) after drug administration</i>	+2	-1	0	
3. Did the adverse reaction improve when the drug was discontinued or a specific antagonist given? <i>Answer yes if reaction lessens or disappears after the suspect drug stops or a pharmacologic antagonist given</i>	+1	0	0	
4. Did the adverse reaction reappear when the drug was readministered? <i>Answer yes if reaction disappears after drug discontinuation but reappear when the drug was restarted</i>	+2	-1	0	
5. Are there alternative causes (other than the suspect drug) that could have caused the reaction? <i>Answer yes if the reaction can be explained by causes or medications other than the suspect drug</i>	-1	+2	0	
6. Did the reaction reappear when a placebo was given? <i>Answer yes if the reaction reappears after administration a placebo</i>	-1	+1	0	
7. Was the drug detected in blood or other fluids in concentrations known to be toxic? <i>Answer yes if drug concentration is in the toxic or supratherapeutic range</i>	+1	0	0	
8. Was the reaction more severe when dose was increased or less severe when dose was decreased? <i>Answer yes if the intensity of the reaction is stronger with higher dose or weaker with lower dose</i>	+1	0	0	
9. Did the patient have a similar reaction to the same or similar drugs in any previous exposure? <i>Answer yes if patient has a similar documented reaction when exposed to the suspect drug or related medication in the past</i>	+1	0	0	
10. Was the adverse reaction confirmed by any objective evidence? <i>Answer yes if the reaction can be confirmed by abnormal lab values, imaging, or physical examination</i>	+1	0	0	
<b>Total Score</b>				

Created by Phil Chung, PharmD, MS, BCPS, BCIDP  
Nebraska ASA is a cooperative effort of UNMC/Nebraska Medicine and the Nebraska DHHS



# Core Element 5: Tracking Rochester Nursing Home Collaborative



## TRACKING ANTIBIOTIC USE

EXCEL TRACKING WORKSHEETS AND INSTRUCTIONS:

Monthly Antibiotic Tracking Worksheet (NEW)

Summary Antibiotic Tracking Worksheet (NEW - Use with monthly tracking sheet)

Antibiotic Tracking Sheets Instructions (NEW)

Antibiotic start date	Days of therapy (DOT)	Resident code (no names)	New event (Y/N)	Unit/floor	Prescriber code (no names)	Antibiotic name (enter one ABX per row)	Reason for evaluation	Comments
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Fever (Y/N)	Leukocytosis ((14 x 10 <sup>9</sup> cells/L) or left shift > 6% or 1.5 x 10 <sup>9</sup> bands/L) (Y/N)	Rigors (Y/N)	New onset hypotension (Y/N)	Acute costo-vertebral angle pain (Y/N)	Suprapubic pain (Y/N)	Gross hematuria (Y/N)	Incontinence (new/marked increase) (Y/N)	Urgency (new/marked increase) (Y/N)	Frequency (new/marked increase) (Y/N)	Acute change in mental status/funct. decline, no alt dx (Y/N)	Purulent discharge @ catheter (Y/N)	Acute dysuria (Y/N)	Acute pain, swelling, or tenderness of testes, epididymis, prostate (Y/N)
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Indwelling catheter	WBC ((10 <sup>9</sup> cells/L) count within 48 hrs of symptoms)	Date of Urine Culture	Urine culture source	Culture Result #1	colony counts (CFU/mL) #1	Culture Result #2	colony counts (CFU/mL) #2	Re-Assessment within 48-72 hours of antibiotic start	Meets microbio logic criteria	Meets Revised Criteria A (no catheter)	Meets Revised Criteria B (has catheter)	Meets Revised McGeer Criteria
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## Antibiotic Statistical Trending Report

Month/Year-->	Jan-00
New ABX Starts for Month	
New ABX Start Rate (New ABX Starts for Month/1000 Resident Days)	
Days of Therapy Rate (Monthly Days of Therapy/1000 Resident Days)	
Did NOT Meet Facility-Adopted Criteria	
Not Re-Assessed within 48-72 hours of Facility-Start	



ROCHESTER  
Nursing Home  
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# Core Element 6: Reporting Nebraska ASAP



Cumulative Antimicrobial Use Summary Report for 20[XX]

Quarter	New Antibiotic Start / 1000 RD	DOT / 1000 RD	Top 3 Antibiotics with highest DOT / 1000 RD	Top 3 Indications for Starting Antibiotic Therapy	Met Criteria for Initiating Antibiotic Therapy
<b>First Quarter:</b> <i>January to March</i>	[cc]	[dd]	Ciprofloxacin (ff DOT/1000 RD)  Cephalexin (gg DOT/1000 RD)  Amoxicillin (hh DOT/1000 RD)	UTI (ii %)  SSTI (jj %)  ARI (kk %)	UTI (ll %)  SSTI (mm %)  ARI (nn %)  Overall [ee]%
<b>Second Quarter:</b> <i>April to June</i>					
<b>Third Quarter:</b> <i>July to September</i>					
<b>Fourth Quarter:</b> <i>October to December</i>					

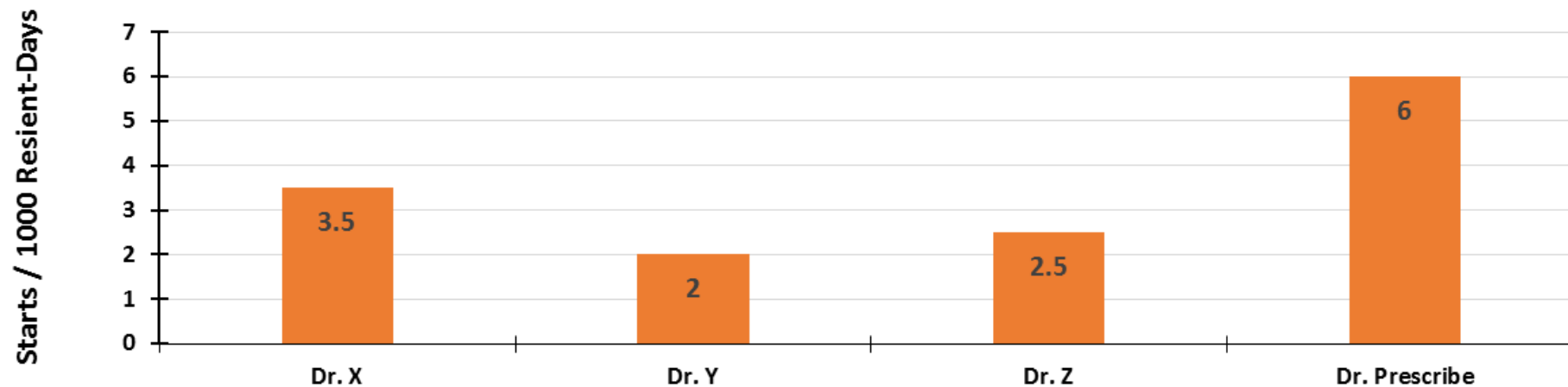
Abbreviations: RD = resident-day; DOT = days of therapy; UTI = urinary tract infection; SSTI = skin and soft tissue infection; ARI = acute respiratory infection



# Core Element 6: Reporting Nebraska ASAP

	Antibiotic Starts / 1000 Resident-Day		Days of Therapy / 1000 Resident-Day	
	20xx	20ww	20xx	20ww
All antimicrobials	14.17	14.88	121.68	130.20
Most frequently prescribed antimicrobials				
<i>Levofloxacin</i>	1.96	1.98	32.54	31.00
<i>Ciprofloxacin</i>	1.59	1.57	12.88	12.90
<i>Cephalexin</i>	1.38	1.40	13.62	11.05

Comparison of Antimicrobial Starts by Prescribers



# Core Element 7: Education (Patient) Massachusetts Coalition



Developed by the Massachusetts Infection Prevention Partnership

## Suspect a Urinary Tract Infection?

How Taking Antibiotics  
When You Don't Need Them  
Can Cause More Harm Than Good

*An Important Message for Seniors and their Families*



### Did You Know That...

- » Up to 50 percent of all antibiotics prescribed are not needed or are not prescribed appropriately?
- » Confusion or sudden behavior changes don't necessarily indicate a urinary tract infection (UTI)?
- » As many as half of seniors living in long-term care settings will test positive for bacteria in their urine, *without actually having a UTI?*

Learn Why The CDC is Sounding The Alarm  
About The Overuse of Antibiotics



Massachusetts Coalition  
for the  
Prevention of Medical Errors



Adapted by the  
Massachusetts Infection Prevention Partnership\*



Massachusetts Coalition  
for the  
Prevention of Medical Errors



## When Do You Need An Antibiotic?

Taking antibiotics when you don't need them is like leaving the lights on all the time.

- » The lights may burn out, leaving you in the dark when you most need them.
- » If you use antibiotics when you don't need them, they may not work when you get sick.



Read more inside...



# Core Element 7: Education

## Minnesota Department of Public Health

Appendix D: Nursing and Provider Antibiotic Use Attitudes and Beliefs Surveys

### Nursing and Provider Antibiotic Use Attitudes and Beliefs Surveys- Table of Contents:

Antibiotic Use Attitudes and Beliefs Survey Cover Letter Template for Nurses..... 2

Antibiotic Use Attitudes and Beliefs: Nursing Survey ..... 3

Antibiotic Use Attitudes and Beliefs: Nursing Survey Response Facilitator Guide ..... 6

Antibiotic Use Attitudes and Beliefs Survey Cover Letter Template for Providers ..... 16

Antibiotic Use Attitudes and Beliefs: Provider Survey..... 17

Antibiotic Use Attitudes and Beliefs: Provider Survey Response Facilitator Guide..... 20



# Core Element 7: Education

## Telligen QIN-QIO



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### Antibiotic Stewardship Program Development and Updates with a Long-Term Care Focus

Join Telligen and Dr. Sarah Kabbani, MD, MSc, the medical officer for the Centers for Disease Control and Prevention (CDC) Office of Antibiotic Stewardship, for an in-depth look at successful nursing home antibiotic stewardship programs. In this webinar recorded in August 2018, Dr. Kabbani defines the unique challenges faced in long-term care settings, identifies strategies ...

# Core Element 7: Education

## Rochester Nursing Home Collaborative



### EDUCATION

RESIDENTS AND FAMILIES:

Resident Family UTI Letter Template

Residents and Families UTI Pamphlet (English)

Residents and Families UTI Pamphlet (Spanish)



### Antibiotics for UTI in Older Adults

A urinary tract infection (UTI) may cause symptoms like:

- Burning with urination
- Increased urge to urinate
- Need to urinate more often

Several common symptoms do not necessarily indicate a UTI:

- Confusion
- Weakness
- Cloudy/foul-smelling urine

Urine should only be tested when UTI symptoms are present.

Antibiotics should only be given when UTI symptoms are present.

Giving antibiotics when not needed may lead to:

- Side effects (nausea, etc.)
- *C. difficile* diarrhea
- Drug-resistant germs

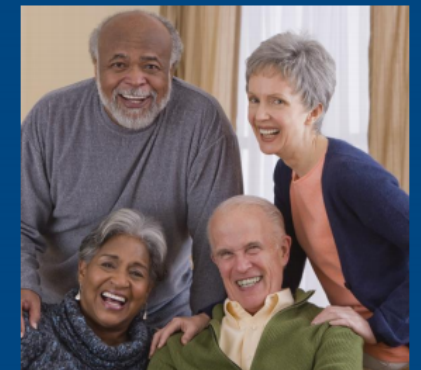


Center for Community Health  
46 Prince Street, Suite 1001  
Rochester, NY 14607

Funding provided by the New York State  
Department of Health












### Antibiotics for Urinary Tract Infections in Older Adults



*Information for patients and families*

## Antimicrobial Stewardship Resources

### Additional Antimicrobial Stewardship Resources for Nursing Homes

	Title ↑↓	Source ↑↓	Type ↑↓
	<a href="#">Agency for Healthcare Research and Quality (AHRQ): Nursing Home Antimicrobial Stewardship Guide</a>	AHRQ	Website
	<a href="#">Alberta Health Services (AHS) and British Columbia Center for Disease Control (BC CDC)</a>	Do Bugs Need Drugs?	Website
	<a href="#">CDC Core Elements of Antimicrobial Stewardship for Nursing Homes</a>	CDC	Website
	<a href="#">CDC Core Elements of Antimicrobial Stewardship for Nursing Homes - main.pdf</a>	CDC	PDF
	<a href="#">CDC Core Elements of Antimicrobial Stewardship for Nursing Homes - Checklist</a>	CDC	PDF
	<a href="#">Massachusetts Coalition: Improving Evaluation and Treatment of UTI in the Elderly</a>	Macoalition	Website
	<a href="#">Minnesota Department of Public Health Antimicrobial Stewardship Program Toolkit for Long-term Care Facilities</a>	Minnesota Department Of Health	Website
	<a href="#">Nebraska Antimicrobial Stewardship Assessment and Promotion Program (ASAP) Tool and Templates for Long-Term Care</a>	Nebraska Medicine	Website
	<a href="#">Rochester Patient Safety Clostridium difficile Prevention Collaborative – Resources for Nursing Homes</a>	Rochester Patient Safety	Website
	<a href="#">Telligen: Antimicrobial Stewardship in Long-term Care Resources</a>	Telligenqinqio	Website

the Chicago Department of Public Health  
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## Upcoming Events

[View All](#)



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# Thank You!

# What Questions Do You Have?



[Chicago.gov/Health](https://www.chicago.gov/Health)



[HealthyChicago@cityofchicago.org](mailto:HealthyChicago@cityofchicago.org)



[@ChicagoPublicHealth](https://www.facebook.com/ChicagoPublicHealth)



[@ChiPublicHealth](https://twitter.com/ChiPublicHealth)



# Questions & Answers

**A special thanks to:**

**CDPH HAI Team:**

Hira Adil  
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Shane Zelencik  
Christy Zelinski

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