Healthcare-Associated Infections and Nursing Homes

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Connecticut Department of Public Health Keeping Connecticut Healthy





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COVID-19 Nursing Home Data



Nursing Home Resident Incidence, statewide April 16, 2020 – September 14, 2022

Resident Census: 18,023



Nursing Home Resident Deaths Associated to COVID -19 4/15/2020 — 9/14/2022

#NH resident deaths due to COVID-19 —— Death Rate



Staff Cases in Connecticut Nursing Homes June 17, 2020 — September 14, 2022





Nursing Homes with Positive Staff or Residents June 17, 2020—September 14, 2022

#NH with cases among residents only
#NH with cases among both staff and residents
#NH with cases among staff only



COVID-19 Cases and Deaths in Nursing Homes

New cases and deaths (weekly)



All data are preliminary and subject to change.

Chart: Ver 4.6.2022 • Source: Connecticut Department of Public Health • Embed • Download image • Created with Datawrapper

COVID-19 in Nursing Home



Community Transmission

Map Metric:

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Community Transmission

Connecticut

State Health Department

7-day Metrics

| Cases | 4,191 |
|---|-------|
| % Positivity | N/A % |
| Deaths | 15 |
| % of Population ≥ 5 Years of Age Fully Vaccinated | 84.9% |
| New Hospital Admissions (7-Day Moving Avg) | 52.14 |

Data Type: Community Transmission *as of 09/21/2022



as of 09/21/2022



COVID-19 Bivalent Booster: Overview

Recommendations for Bivalent COVID-19 Booster Doses in People Ages 12 Years and Older (cdc.gov)

- Newly updated COVID-19 booster shot designed to target omicron's BA.4/BA.5 subvariant now available.
- Anyone who has received a primary series and has not had a primary series or booster shot in the past <u>2 months</u> will be eligible for the new bivalent booster.
- The previous monovalent boosters are no longer authorized.
- Facilities should start communications about this new booster with their residents and staff.
 - This new booster will provide the best protection for BA.4/BA.5 (the circulating variants).
- Facilities should reach out to their LTCF pharmacy and start preparing and scheduling clinics.

Bivalent COVID-19 vaccines:

What we know

COVID-19 vaccines have a high degree of safety

- Rare events of myocarditis seen after mRNA COVID-19 vaccines in post-authorization studies;
 cases of myocarditis attributed to the vaccine were detected in Novavax COVID-19 vaccines clinical trials
- COVID-19 vaccines provide high levels of protection against severe disease
 - Initially, COVID-19 vaccines also provided high levels of protection against infection and transmission
 - As the virus evolved, noted rapid waning of protection against asymptomatic or mild disease
- COVID-19 booster doses further increase protection against severe disease
- Bivalent COVID-19 vaccines expand immune response after vaccination
 - Vaccines that contain Omicron will improve antibody response to Omicron
 - Bivalent vaccines appear to provide more diverse response overall, likely improving response to future variants





- CDC recently sent notification that shipping of the Moderna bivalent booster will be delayed nationwide
 - Any Moderna bivalent orders placed after waves 1 and 2 closed (noon on August 29th) will be canceled
 - CDC stated that all wave 1 and 2 orders will be fulfilled, and that they anticipate availability of Moderna resuming the week of 9/19
 - Pfizer bivalent doses are still available for order and shipping as scheduled: please consider switching booster dose clinics to Pfizer bivalent to avoid delay

Reminder: For facilities with on site pharmacies, COVID-19 vaccine orders need to be placed via the <u>ordering</u> <u>portal</u> before Tuesday at noon. If you have any upcoming clinics, we strongly recommend placing an order by Tuesday to receive Pfizer doses beginning of next week.



- Everyone ages 12 and older is recommended to receive **one bivalent mRNA booster dose** after completion of any FDA-approved monovalent primary series or last monovalent booster dose to be considered up to date.
 - Doses should be administered at least **two months** following a primary series or the previously authorized booster vaccination.
 - People cannot get a bivalent booster without first completing at least a primary series.
- People are considered up to date after receiving all recommended doses of vaccines they are currently eligible for.
 - People ages 12 years and older should get the bivalent booster dose (if they are eligible) to be <u>up to date</u>.
 - Vaccine recommendations differ depending on a person's age, vaccines received for the primary series (mRNA or Janssen), and time since last dose. To determine the appropriate schedule for a particular individual, please visit: <u>At-A-Glance COVID-19 Vaccination Schedules (cdc.gov)</u>.



| Vaccination history | | Next dose |
|-------------------------------------|-------------------|-------------------------|
| Primary series | At least 2 months | 1 bivalent booster dose |
| Primary series + 1 booster dose | At least 2 months | 1 bivalent booster dose |
| Primary series + 2 booster doses | At least 2 months | 1 bivalent booster dose |

Staying Up to Date: How does this affect HCP?

• LTCF staff eligible and boosted with previously recommended boosters (monovalent mRNA COVID-19 vaccine) are no longer considered up to date; staff members need to receive the newly approved bivalent vaccine to be considered up to date.

• Work Restrictions:

- Staff who are eligible to receive the bivalent booster but have not yet received it will be considered not up to date and need to follow work restrictions for asymptomatic HCP with SARS-CoV-2 exposures shown below.
- Interim Guidance for Managing Healthcare Personnel with SARS-CoV-2 Infection or Exposure to SARS-CoV-2

• Testing:

- In <u>nursing homes</u>, HCP who are not up to date with all recommended COVID-19 vaccine doses should be routinely tested based on the level of <u>community transmission</u>.
- Additionally, CMS mandates testing of residents and staff based on specific parameters. Details of testing can be found on <u>QSO-20-38-NH</u>.

Staying Up to Date: How does this affect LTCF residents?

 LTCF residents eligible and boosted with previously recommended boosters (monovalent mRNA COVID-19 vaccine) are no longer considered up to date; residents need to receive the newly approved bivalent vaccine to be considered up to date.

• New Admissions and Readmissions:

- Being up to date on COVID-19 vaccine doses will determine if an asymptomatic individual requires quarantine upon admission or readmission. In general, all residents who are not up to date with all recommended COVID-19 vaccine doses and are new admissions and readmissions should be placed in quarantine, even if they have a negative test upon admission.
- Newly admitted residents and residents who have left the facility for >24 hours, regardless of vaccination status, should have a series of two viral tests for SARS-COV-2 infection: immediately and, if negative, again 5-7 days after their admission.
- <u>CDC Guidance on Recommendations to Prevent SARS-CoV-2 Spread in Nursing Homes</u>.



Fit Testing Updates

The CT DPH is offering the opportunity for Qualitative Fit Testing for the use of N95 respirators for staff working in a Skilled Nursing Facility

- Service is through a vendor, Safety Fit, Inc., at no cost to SNFs as part of a federal grant to promote infection control in nursing home settings
- Participation is not mandatory but is encouraged
- The contact person to speak with at Safety Fit, Inc. is Dylan Cauley and can be contacted at (774) 535-1017

Service will include:

- Respirator Fit Testing (N95 masks must be provided by the facility)
- Hard copies of staff's Fit Test results
- Certification cards to staff stating model, size and date tested
- Stickers with model and size for back of employee badges
- Initial medical forms to facility leadership for those not previously fit tested
- Licensed healthcare worker review of the OSHA forms for those previously Fit Tested

Blast Fax: Fit Testing



To make the most of this opportunity facilities must:

- Provide **a written schedule** of staff that will be fit tested.
 - The schedule needs to be in place and shared with HAI-AR at least 1-2 days before the visit. Email schedules at <u>DPH.HAIAR@CT.GOV</u>
 - If the schedule is not shared with Safety Fit, they will cancel the fit testing
 - Facilities should ensure that the staff with the highest risk of transmission are prioritized
- Safety Fit Inc. can accommodate 4 people every 20 minutes or 5 minutes per staff over an 8-hour period
- Assign a staff person to handle the schedule so the technicians can fully focus on fit testing
- Facilities will get one day of fit testing
 - If an additional visit is needed, it will need DPH approval



Lesson Learned: Infection Control Programs

- With COVID-19, many LTC facilities realized the importance of well-developed and managed Infection Prevention and Control (IPC) programs.
- It is very important to have an IPC program that is **facility-driven** and not person-driven.
 - With a strong program in place, any person should be able to come into a facility and pick up monitoring IPC where the last employee left off.
 - Building a strong infrastructure is the key to a good long-standing program.
- ICP programs should be based on trigger points for infection risk within a particular facility, and not based on a person's knowledge of infection prevention.
- Infection prevention flows through all the organization, not just in a department called "Infection Prevention and Control."
 - Every department head should be aware of what their infection prevention and control role is.



Infection Control Program

| Leadership | Expertise/training | Role(s) |
|---------------------------------|---|---|
| Infection Control Commi | ttee/Oversight Committee | |
| Core members | Administration, Nursing Representative, Medical Director, ICP | Identifies areas of risk |
| | | Establishes priorities |
| Ad hoc members | Food Service, Maintenance, Housekeeping, Laundry Services, | Plans strategies to achieve goals |
| | Clinical Services, Resident Activities, Employee Health | Implements plans |
| | | Develops policies/procedures |
| | | Allocates resources |
| | | Assesses program efficacy at least annually |
| Infection Control Professi | onal | |
| ICP Oualification via education | Qualification via education, experience, certification | Surveillance |
| | | Data collection and analysis |
| | | Implementation of policies, procedures |
| | | Education |
| | | Reporting to oversight group/ICC |
| | | Communication to public health |
| | | Communication to other agencies |
| | | Communication to other facilities |

Table 2. Long-term care facility infection control program: structure

Guideline: Infection Prevention and Control in the Long-Term Care Facility



Infection Control Program

- An active, effective, facility-wide infection control program should be established in the LTCF.
- The purpose of the program is to help prevent the development and spread of infectious diseases.
- The elements of a program generally include the following:
 - a. Surveillance—Systematic data collection to identify infections in residents
 - b. Outbreak Control—A system for detection, investigation, and control of epidemic infectious diseases in the LTCF
 - c. Isolation—An isolation and precautions system to reduce the risk of transmission of infectious agents
 - d. Policies and procedures-Relevant to infection control
 - e. Education—Continuing education in infection prevention and control
 - f. Resident health program
 - g. Employee health program
 - h. Antibiotic stewardship—A system for antibiotic review and control
 - i. Disease reporting to public health authorities
 - j. Facility management, including environmental control, waste management, product evaluation and disinfection, sterilization and asepsis
 - k. Performance improvement/resident safety
 - I. Preparedness planning
- The infection control program must be in compliance with federal, state, and local regulations

Guideline: Infection Prevention and Control in the Long-Term Care Facility



Infection Control Program

<u>Guideline: Infection Prevention and Control in the</u> <u>Long-Term Care Facility</u>

Table 3. Long-term care facility infection control program: elements

| Elements | Examples |
|--------------------------------------|----------------------------------|
| Infection control activities | |
| Establish and implement | Hand hygiene |
| routine infection control | Standard precautions |
| policies and procedures | Organism-specific isolation |
| | Employee education |
| Infection identification | Develop case definitions |
| | Establish endemic rates |
| | Establish outbreak thresholds |
| Identification, investigation, | |
| and control of outbreaks | |
| Organism-specific infection control | Influenza |
| policies and procedures | тв |
| | Scabies |
| | MDROs (eg, MRSA) |
| Disease reporting | Public health authorities |
| | Receiving institutions |
| | LTCF staff |
| Antibiotic stewardship | Review of antimicrobial use |
| Monitoring of patient care practices | Aspiration precautions |
| | Pressure ulcer prevention |
| | Invasive device care and use |
| Facility management issues | General maintenance |
| | Plumbing/ventilation |
| | Food preparation/storage |
| | Laundry collection/cleaning |
| | Infectious waste collection/ |
| | disposal |
| | Environment |
| | Housekeeping/cleaning |
| | Disinfection/sanitation |
| | Equipment cleaning |
| Product evaluation | Single use devices |
| Resident health program | TB screening |
| | Immunization program |
| Employee health program | TB screening |
| | Immunizations |
| | Occupational exposures |
| Other program elements | |
| Performance improvement | Serve on PI committee |
| Resident safety | Study preventable adverse events |
| Preparedness planning | Develop pandemic influenza |
| | preparedness plan |



Enhanced Barrier Precautions (EBP)

- Many nursing home residents are unknowingly colonized with an multi-drug resistant organism (MDRO), especially residents with risk factors like indwelling medical devices or wounds
- Residents who have an MDRO can develop serious infections, remain colonized for long time periods, and spread MDROs to others
- Healthcare personnel can spread MDROs through contaminated hands and clothing
- Historically, interventions in nursing homes have focused only on residents who are actively infected with an MDRO
- Need for a broader approach to reduce the spread of MDROs without isolating residents for long periods of time
- Recent studies have indicated the use of EBP can effectively reduce the spread of MDROs



MDRO Burden in Nursing Homes

| Facility Type | Documented MDRO | Actual MDRO |
|--|-----------------------------|--------------------------------|
| Nursing Homes (n = 14) | 17% ††††††††† † | 58% ††††††††††† † |
| Ventilator-Capable Nursing Homes (n = 4) | 20% İİİİİİİİİİİİİ | 76% **************** |

McKinnell JA et al, Clin Infect Dis. 2019; 69(9):1566-1573





- EBP are indicated for nursing home residents with any of the following:
 - Infection or colonization with an MDRO *when Contact Precautions do not otherwise apply*
 - Wounds and/or indwelling medical devices
- EBP is not limited to outbreaks or specific MDROs
 - Use of gown and gloves during high-contact resident care activities
 - No private room required
 - Residents can participate in group activities
 - Intended to be used for resident's entire length of stay





Clean their hands, including before entering and when leaving the room.

PROVIDERS AND STAFF MUST ALSO:



Wear gloves and a gown for the following High-Contact Resident Care Activities. Dressing Bathing/Showering Transferring



Transferring Changing Linens Providing Hygiene Changing briefs or assisting with toileting Device care or use: central line, urinary catheter, feeding tube, tracheostomy Wound Care: any skin opening requiring a dressing

Do not wear the same gown and gloves for the care of more than one person.



with and Human Service

and Prevention



Successful EBP Implementation:





Antibiotic Stewardship Programs

- Improving the use of antibiotics in healthcare to protect patients and reduce the threat of antibiotic resistance is a national priority.
- Antibiotic stewardship refers to a set of commitments and actions designed to "optimize the treatment of infections while reducing the adverse events associated with antibiotic use."
- Antibiotics are among the most frequently prescribed medications in nursing homes, with up to 70% of residents in a nursing home receiving one or more courses of systemic antibiotics when followed over a year.
- Studies have shown that 40–75% of antibiotics prescribed in nursing homes may be unnecessary or inappropriate.
- Harms from antibiotic overuse are significant for the frail and older adults receiving care in nursing homes.
 - These harms include risk of serious diarrheal infections from *Clostridium difficile*, increased adverse drug events and drug interactions, and colonization and/or infection with antibiotic-resistant organisms.









7 CORE ELEMENTS
 for antibiotic stewardship in nursing homes
 Leadership Commitment

 Accountability
 Drug Expertise
 Action
 Tracking
 Reporting
 Education

*Incorrectly = prescribing the wrong drug, dose, duration or reason 'AHCA Quality Report 2013. *Lim CJ, Kong DOM, Stuart RL. Reducing inappropriate antibiotic prescribing in the residential care setting: current perspectives. Clin Interven Aging. 2014; 9: 165–177. *Nicolie LE, Bentiey D, Garibaldi R, et al. Antimicrobial use in long-term care facilities. Infect Control Hosp Epidemiol 2000; 21:537–45.

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Centers for Disease Control and Prevention National Center for Emerging and Zoonotic Infectious Diseases



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



Leadership commitment

| (\Box) | |
|----------|---|
| VI/ | · |

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

Implementation Resources for Nursing Homes

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Monitor at least one process measure of antibiotic use and at least one outcome from antibiotic use in your facility



Reporting

Tracking

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





Resources:

- <u>Air | Appendix | Environmental Guidelines | Guidelines Library | Infection Control | CDC</u>
- <u>ACH-to-PAC-transfer-guidance-attachment-corrected-version.pdf</u>
- <u>COVID-19 Infection Prevention and Control Recommendation for Nursing Homes</u>
 - New Infection in Healthcare Personnel or Resident
 - <u>Testing</u>
 - Manage Residents with Close Contacts
- Interim Infection Prevention and Control Recommendations for Healthcare Personnel During COVID-19 Pandemic
- <u>COVID-19 Data Tracker</u>
- <u>CMS QSO-20-38</u>
- Plan Info (mutualaidplan.org)
- https://www.train.org/connecticut/admin/course/1099050/
- <u>Statewide Program for Infection Control & Epidemiology Education to prevent and</u> <u>control healthcare associated infections across the healthcare spectrum (unc.edu)</u>
- Evidence-Based Practice: What It Is and Why It Matters (cdc.gov)