

Infection Prevention Press

September 2022

The Core Elements of Antibiotic Stewardship

By Pam Bennet, District 3 Infection Preventionist, and Hannah Gallion, Antimicrobial Resistance Epidemiologist

Antibiotic stewardship is designed to "optimize the treatment of infections while reducing the adverse events associated with antibiotic use." Up to 70% of LTC residents receive one or more courses of antibiotics during a year, making antibiotics one of the most frequently prescribed medications. More importantly, 40-70% of those antibiotic prescriptions have been found to be unnecessary in studies.

Why does that matter? Antibiotic overuse 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. Overuse can also result in increased resistance levels as bacteria adapt and develop new resistance methods.

As a national priority to improve antibiotic stewardship, CDC recommends that all LTC facilities take action to improve prescribing and reduce inappropriate use. The **core elements** of your program should include **leadership commitment**, **accountability**, **drug expertise**, **action**, **tracking**, **reporting and education**. Start with one or two strategies and add more over time to help reduce adverse events, prevent emergence of resistance and lead to better outcomes for residents.

The infection preventionist plays a vital role in a facility's antibiotic stewardship program, and they should be involved in the accountability, tracking, reporting and education core elements. Their expertise and data collection should be used to guide antibiotic use improvement strategies, including the tracking of antibiotic starts/ stops, reviewing antibiotic resistance patterns and monitoring adherence to evidence-based criteria during the diagnosis and management of infections.

Core Elements Explained

Leadership commitment:

Demonstrate safe and appropriate antibiotic use

Accountability: Identify physician, nursing and pharmacy leads responsible for promoting and overseeing antibiotic stewardship

Drug expertise: Establish access to consultant pharmacists or other individuals with experience or training in antibiotic stewardship

Action: Implement at least one policy or practice to improve antibiotic use

Tracking: Monitor at least one process measure and one outcome of antibiotic use

Reporting: Provide regular feedback on antibiotic use and resistance to prescribing clinicians, nursing staff and others

Education: Provide resources to clinicians, nursing staff, residents and families about antibiotic resistance and opportunities to improve antibiotic use

It's Fall Ya' Il! That Means Flu Vaccines, New COVID-19 Bivalent Boosters

By Jennifer Spivey, Infection Prevention Program Manager

CDC has approved the updated COVID-19 vaccines that add an Omicron BA.4/5 spike protein component to the previous monovalent composition. These bivalent booster doses help restore protection that has waned since previous vaccination by targeting more transmissible and immune-evading variants. These boosters also broaden the spectrum of variants that the immune system is ready to respond to. Vaccination and being up-to-date with scheduled doses have still been successful in keeping the geriatric patient population out of hospitals and experiencing long COVID complications up to and including death.

COVID-19 Vaccine Quick Facts:

- FDA authorized Aug. 31, followed by ACIP/CDC recommendation Sept. 1:
 - o Moderna COVID-19 vaccine, bivalent authorized for use in people ages 18 years and older
 - o Pfizer-BioNTech COVID-19 vaccine, bivalent authorized for use in people ages 12 years and older
- Authorized as single booster dose administered at least 2 months after either:
 - Completion of primary vaccination with any authorized or approved monovalent COVID-19 vaccine,
 or
 - Receipt of the most recent booster dose with any authorized or approved monovalent COVID-19 vaccine
- Monovalent mRNA COVID-19 vaccines no longer authorized as booster doses for individuals ages 12 years and older, meaning monovalent booster doses can no longer be given to people ages 12 years and older, even if the person had not previously received a monovalent booster dose.
- Novavax has requested FDA approval to be administered as a booster dose for anyone eligible who has completed the mRNA series (Moderna or Pfizer)
- CDC: COVID-19 Vaccines Clinical Considerations
- CDC: Bivalent Booster Considerations

Timing of COVID-19 Vaccine Doses:

At a minimum, defer any COVID-19 vaccination, including bivalent booster vaccination, at least until recovery from the acute illness (if symptoms were present) and criteria to discontinue isolation have been met.

In addition, people who recently had a COVID-19 infection may consider delaying any COVID-19 vaccination, including bivalent booster vaccination, by 3 months from symptom onset or positive test (if infection was asymptomatic).

Vaccination history	—	Next dose
Primary series	At least 2 months	1 bivalent booster dose
Primary series + 1 booster	At least 2 months	1 bivalent booster dose
Primary series + 2 booster	At least 2 months	1 bivalent booster dose

Individual factors such as risk of COVID-19 severe disease, COVID-19 community level and characteristics of the predominant COVID-19 strain should be taken into account when determining whether to delay getting a COVID-19 vaccination after infection.

Flu information on the next page

Its Fall Ya' all! That Means Flu Vaccines, New Covid-19 Bivalent Boosters Continued...

Influenza and You:

Just this week as I write you this article, I was made aware of a positive test for flu B virus in our state. Seasonal influenza (flu) vaccines are designed to protect against the four main groups of flu **Type A and B viruses** that research indicates are most likely to spread and cause illness among people during the upcoming flu season. All U.S. flu vaccines protect against a flu A(H1) virus, a flu A(H3) virus, a flu B/Yamagata lineage virus and a flu B/Victoria lineage virus. Each of these four vaccine virus components is selected based on the following:

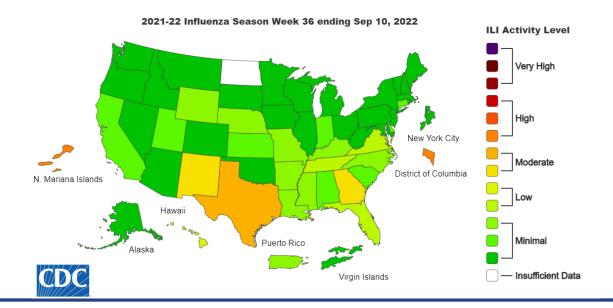
- Which flu viruses are making people sick prior to the upcoming flu season,
- The extent to which those viruses are spreading prior to the upcoming flu season,
- How well the previous season's vaccines may protect against those flu viruses, and
- The ability of vaccine viruses to provide cross-protection against a range of related flu viruses of the same type or subtype/lineage.

The recommended timing of vaccination is similar to last season. For most people in our LTC facilities who need only one dose for the season, September and October are generally good times to get vaccinated.

For the 2022-23 flu season, three flu vaccines are preferentially recommended for people 65 years and older. These are Fluzone High-Dose Quadrivalent vaccine, Flublok Quadrivalent recombinant flu vaccine and Fluad Quadrivalent adjuvanted flu vaccine.

Flu FAQS for 2022-2023:

- Can residents get both the flu and COVID-19 shot at the same time? Yes, because "the flu and COVID-19 are caused by different viruses," explains Dr. Stanley Martin, system director of infectious diseases at Geisinger. "Both can result in serious illness, hospitalizations and even death."
- What has LTC flu reporting data shown us? Reporting of influenza among residents of long-term care facilities^{§§} was added to the national influenza surveillance system for the 2021–22 season. The weekly percentage of facilities reporting at least one influenza-positive test result among residents ranged from 0.1% to 1.4%.
- Can I get other vaccines, like COVID-19 at the same time? You can get a COVID-19 vaccine and other vaccines, including a flu vaccine, at the same visit. Experience with other vaccines has shown that the way our bodies develop protection, known as an immune response, and possible side effects after getting vaccinated are generally the same when given alone or with other vaccines.
- CDC Flu Weekly Map
- Updated 2022-23 CDC Flu Vaccine Recommendations





Infection Prevention Job Aides

Speak Up for Your Care
Clean Your Hands
Know Safe Injection Practices
Ask About Your Medication
Ask About Vaccination
Learn About HAIs
Be a Good Visitor
Break the Chain of Infection

International Infection Prevention Week (IIPW): Oct. 16 - Oct. 22

By Janene Gumz-Pulaski, District 1 IP/Assistant Program Manager

Thank you for your role in the battle against the global pandemic and your tireless efforts to improve patient safety.

We, as infection preventionists (IPs), play a crucial role in keeping our residents, healthcare workers and visitors free from infections. How do we do this? By breaking the chain of infection. How do we do that? By ensuring proper hand hygiene, environmental cleaning and disinfection, up-to-date vaccinations and providing education for resident and healthcare personnel regarding infection prevention. Further, as IPs, we advocate for the residents' health by encouraging residents and family members to be involved in their care.

How can your IDOH District IP help? We are a resource for providing the most updated information, best practices and onsite assessments and act as a supportive contact to help you problem-solve difficult situations regarding infection prevention.

Upcoming: Please watch for information and examples you can share during International Infection Control Week from your IDOH District IP:

- Use the IIPW Toolkit to access additional information, games and social websites related to IIPW.
- Share with your facility throughout the week to celebrate Infection Prevention Week.
- Share your pictures or activities your facility had during **International Infection Control Week**.

What's Bugging You?

Can you guess this germ?

This mystery germ is a bacteria that is often transmitted through contaminated food. Most people recover without specific treatment and should not take antibiotics. Antibiotics are typically used only to treat people who have severe illness or who are at risk for severe illness. Some people's illness may be so severe that they need to be hospitalized. One serotype of this bacteria causes typhoid fever.

Symptoms: Diarrhea, fever and stomach cramps are the most common symptoms and occur 6 hours to 6 days after the person is infected. Symptoms typically last 4 to 7 days.

Risks: Anyone can get this bacterial infection, but children younger than 5; older adults; and people with immune systems weakened from a medical condition, such as diabetes, liver or kidney disease, and cancer or its treatment, are at a higher risk of developing serious illness. This bacteria can be found in animals and many foods (sprouts, vegetables, eggs, chicken, pork, fruits and even processed foods such as nut butters and stuffed chicken entrees). Be sure to refrigerate or freeze perishable foods in a timely manner.

Testing: Infection is diagnosed from stool, body tissue or fluids samples. The test could be a culture that isolates the bacteria or a culture-independent diagnostic test (CIDT) that detects genetic material of the bacteria. It is approximated that only 1 in 30 individuals who are infected with this bacteria obtain testing, as symptoms typically resolve quickly.





WUSMEL: 2011/2010

September is Sepsis Awareness Month

By Victor Zindoga, District 2 IP and Mary Enlow, District 10 IP

Sepsis is a medical emergency. Every **caregiver in LTC** plays a critical role in sepsis prevention. As an IP in LTC, you can protect your residents by ACTING FAST. Educate your CNAs and Pt Care Techs to know the signs and symptoms of sepsis. They interact most with the residents daily and should not be afraid to alert the nursing staff and providers to intervene early and make a difference in the outcome of the resident's life. It is important to know your facility's existing guidance for diagnosing and managing sepsis. Posting reminders at the nursing stations can bring these critical signs and symptoms to mind quickly so that fast recognition and treatment can increase your residents' chances of survival. Without timely treatment, sepsis can rapidly lead to tissue damage, organ failure and death.

What is sepsis?

- Sepsis is the body's extreme response to an infection.
- It is a life-threatening medical emergency.
- Sepsis happens when an infection you already have triggers a chain reaction throughout your body.
- Infections that lead to sepsis most often start in the lung (44% adults), urinary tract (21% adults), skin (6% adults) or gastrointestinal tract (21% adults).

What causes sepsis?

• Infections can put your residents at risk for sepsis. When germs get into a person's body, they can cause an infection. If you don't stop that infection, it can cause sepsis. Bacterial infections cause most cases of sepsis. Sepsis can also be a result of other infections, including viral infections, such as COVID-19 or influenza, or fungal infections and urinary tract infections, which are common in the geriatric population.

What are the signs and symptoms?

- High heart rate or weak pulse
- Confusion or disorientation
- Extreme pain or discomfort
- Fever, shivering or feeling very cold
- Shortness of breath
- Clammy or sweaty skin

How can I get ahead of sepsis as an LTC nurse or LTC CNA?

- Know sepsis signs and symptoms.
- ACT FAST.
- Prevent infections.
- Learn more at Sepsis.org.

When it comes to sepsis, remember IT'S ABOUT TIME™. Watch for: **TEMPERATURE INFECTION MENTAL DECLINE EXTREMELY ILL** higher or lower may have signs confused, sleepy, severe pain, than normal and symptoms of difficult to rouse discomfort, an infection shortness of breath If you experience a combination of these symptoms: seek urgent medical care, call 911, or go to the hospital with an advocate. Ask: "Could it be sepsis?" SEPSIS ©2020 Sepsis Alliance sepsis.org

What should I do if I suspect sepsis?

- Know your facility's existing guidance for diagnosing and managing sepsis.
- Immediately alert the healthcare professional overseeing care of the resident if it is not you.
- Start antibiotics as soon as possible in addition to other therapies appropriate for the patient. If a specific bacterial cause of sepsis is known, therapy should be targeted to optimize treatment and broad-spectrum antibiotics might not be needed.
- Check the resident's progress frequently.
- Use IDOH's **SBAR tool** to help transfer septic patients.

Treatment requires urgent medical care, usually in an intensive care unit in a hospital, and includes careful monitoring of vital signs and often antibiotics.

Rub-a-dub-dub: We Must Disinfect Showers and Tubs

By Mary Land, District 9 IP

While all resident care areas should be properly disinfected, our shared shower rooms pose a higher risk of cross-contamination than many other areas of the facility. Due to the higher risk posed, facility IPs are encouraged to take a moment to audit shared shower rooms and work processes. The most common areas of concern in shared shower rooms are as follows: shared personal items, personal items stored in one container, no cabinet for disinfectants, linens not properly covered, no soiled linen basket, no trashcan or trashcans that are small and overflowing, no PPE available and storing inappropriate supplies or equipment in these rooms. Facilities should have **clear work processes** and supplies in place to empower staff to play an active role in decreasing cross contamination and the spread of multidrug-resistant organisms (MDROs).

Maintaining proper disinfecting practices in shared shower rooms helps decrease the spread of germs, specifically MDROs. Many residents may have colonized organisms and may not show signs or symptoms of illness. This does not mean that disinfecting practices are less important. The most effective way to maintain a clean environment is to create a standard cleaning protocol (a process that is completed the same way every time).

Disinfecting the environment and shared equipment between residents is essential. Staff should disinfect the shower and equipment between residents every time. This would be a great opportunity for the facility IP to observe current practices and modify, as needed. Further, choosing the correct disinfectant is very important. There are several disinfectants on the market for healthcare facilities. With the rising cases of *C. auris*, it may be time to change to a disinfectant that is effective for a wider range of MDROs. Some disinfectants commonly used in healthcare settings are not effective against *C. auris*. The **EPA has a list** of registered antimicrobial products effective against *C. auris*, and the **CDC has guidance** on infection control activities for *C. auris*.

Appropriate storage is essential in shared shower rooms. Residents' personal items should not be shared with other residents and should be stored individually in a specified area (this area may vary depending upon each resident's cognitive assessment).

Space plays a factor in many facilities; therefore, your facility IP may need to be creative when addressing this issue. Many facilities have a designated locked cabinet in shared shower rooms to ensure resident safety when storing disinfectants. Trash cans and soiled linen containers with a foot pedal lid opener have been used in healthcare for several years and are highly recommended when staff are touching body fluids.

While this seems like a simple concept, many facilities struggle to maintain this environment well without cross contaminating. I hope that this article enables facility IPs to feel confident to make necessary changes and empowers other staff to be confident about their role in infection control. Your district IDOH IP would be happy to assist with you with your infection control practices in this area.







"Environmental cleaning and disinfection:
Clean and disinfect the resident's care environment and shared equipment with agents effective against the identified organism or products on an EPAregistered antimicrobial list recommended by public health authorities."

-- CMS' QSO-20-03-nh

Long Term Care Infection Prevention Team Districts

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Total 737 Facilities



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Full Links and References

If you are viewing this newsletter online, you can open the links by clicking on the **bold blue links** within the articles. If you are viewing this newsletter in printed form and would like to view the links or resources, the full URLs are: below:

The Core Elements of Antibiotic Stewardship

- 1. Core Elements: https://www.cdc.gov/antibiotic-use/core-elements/pdfs/core-elements-antibiotic-stewardship-H.pdf
- 2. <u>Reference</u>: https://www.cdc.gov/antibiotic-use/core-elements/index.html

It's Fall Ya'll: That means Flu Vaccines, New Covid-19 Bivalent Boosters

- 1. <u>COVID-19 Vaccines Clinical Considerations</u>: https://www.cdc.gov/vaccines/covid-19/clinical-considerations/covid-19-vaccines-us.html
- 2. <u>Bivalent Booster Considerations</u>: https://www.cdc.gov/vaccines/acip/meetings/downloads/slides-2022-09-01/09-COVID-Hall-508.pdf
- 3. Type A and B viruses: https://www.cdc.gov/flu/about/viruses/types.htm
- How well the next season's vaccines will protect: https://www.cdc.gov/flu/vaccines-work/vaccineeffect.htm
- 5. <u>Fluzone:</u> https://www.cdc.gov/flu/prevent/qa_fluzone.htm
- 6. <u>Flublok:</u> https://www.cdc.gov/flu/prevent/qa_flublok-vaccine.htm
- 7. <u>Fluad:</u> https://www.cdc.gov/flu/prevent/adjuvant.htm
- 8. Flu FAQs: https://www.cdc.gov/flu/season/faq-flu-season-2022-2023.htm
- 9. Flu Weekly Map: https://www.cdc.gov/flu/weekly/usmap.htm
- 10. Flu Vaccine Recommendations: https://www.cdc.gov/flu/index.htm

International Infection Prevention Week 2022

- 1. <u>IIPW Toolkit</u>: http://infectionpreventionandyou.org/iipw/promotional-toolkit
- 2. International Infection Prevention Week website: https://infectionpreventionandyou.org/iipw/
- Speak Up for Your Care: https://infectionpreventionandyou.org/infection-prevention-basics/speak-upfor-your-care/
- 4. <u>Clean Your Hands:</u> https://infectionpreventionandyou.org/infection-prevention-basics/clean-your-hands-often/
- 5. <u>Know Safe Injection Practices</u>: https://infectionpreventionandyou.org/infection-prevention-basics/know-safe-injection-practices/
- Ask About Your Medication: https://infectionpreventionandyou.org/infection-prevention-basics/ask-about-your-medication/
- 7. Ask About Vaccination: https://infectionpreventionandyou.org/infection-prevention-basics/ask-about-vaccination/
- 8. <u>Learn About HAIs:</u> https://infectionpreventionandyou.org/infection-prevention-basics/learn-about-hais/
- Be a Good Visitor: https://infectionpreventionandyou.org/infection-prevention-basics/be-a-good-visitor/
- 10. <u>Break the Chain of Infection</u>: https://infectionpreventionandyou.org/infection-prevention-basics/break-the-chain-of-infection/

What's Bugging you?

I. Images and reference: https://www.cdc.gov/salmonella/index.html

September is Sepsis Awareness Month

- 1. <u>Caregiver in LTC:</u> https://www.sepsis.org/sepsisand/sepsis-long-term-care/
- 2. <u>Sepsis:</u> https://www.cdc.gov/sepsis/what-is-sepsis.html
- 3. <u>Signs & symptoms:</u> https://www.cdc.gov/sepsis/what-is-sepsis.html
- LTC Nurse: https://www.cdc.gov/sepsis/pdfs/Factsheet-Longterm-care-sepsis-nurses-508.pdf?ACSTrackingID=USCDC_1181-DM88748&ACSTrackingLabel=This%20Sepsis%20Awareness%20Month%2C%20Learn%20How%20You%20Can%20Help%20Save%20a%20Life&deliveryName=USCDC_1181-DM88748
- 5. <u>LTC CNA:</u> https://www.cdc.gov/sepsis/pdfs/Factsheet-Longterm-care-sepsis-residents-508.pdf?ACSTrackingID=USCDC_1181-DM88748&ACSTrackingLabel=This%20Sepsis%20Awareness%20Month%2C%20Learn%20How%20You%20Can%20Help%20Save%20a%20Life&deliveryName=USCDC_1181-DM88748
- 6. <u>Sepsis.org:</u> https://www.sepsis.org/get-involved/sepsis-awareness-month/
- 7. <u>Diagnosing sepsis:</u> https://www.cdc.gov/sepsis/diagnosis/index.html
- 8. <u>IDOH SBAR tool:</u> https://www.in.gov/health/files/INTERACT_SBAR_Form.pdf

Rub-a-dub-dub: We Must Disinfect Showers and Tubs

- 1. Clear work processes and supplies in place and Images: https://www.cdc.gov/coronavirus/2019-ncov/community/disinfecting-building-facility-H.pdf
- 2. <u>Disinfecting the environment:</u> https://www.cdc.gov/coronavirus/2019-ncov/community/disinfecting-building-facility.html
- 3. EPA C. Auris List: https://www.epa.gov/pesticide-registration/list-p-antimicrobial-products-registered-epa-claims-against-candida-auris
- 4. CDC C. Auris Guidance: https://www.cdc.gov/fungal/candida-auris/c-auris-infection-control.html
- 5. <u>CMS QSO</u>: https://www.cms.gov/files/document/qso-20-03-nh.pdf

To **promote**, **protect**, and **improve** the health and safety of all Hoosiers

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If you have any suggestions

or requests for what you

would like to see in future

editions of the IPP, please

email **Bethany Lavender or**

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