

NEBRASKA

Good Life. Great Mission.

DEPT. OF HEALTH AND HUMAN SERVICES

Acute Care & Outpatient Settings Webinar Series

March 12, 2025



NEBRASKA INFECTION CONTROL ASSESSMENT AND PROMOTION PROGRAM

Presenters & Panelists & Moderator

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Margaret Deacy

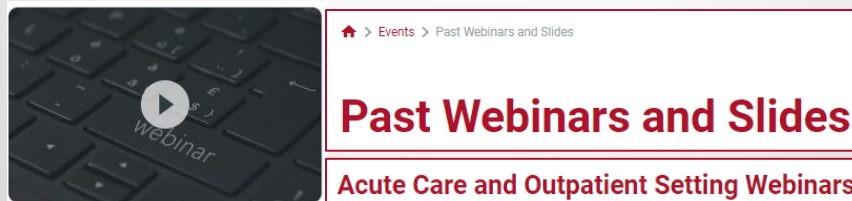
mdeacy@nebraskamed.com

Questions & Answer Session

- Please use the Q&A box in the webinar platform to type a question to be read aloud.
 - If your question is not answered during the webinar, please call (402) 552-2881 Monday – Friday 8:00 am – 4:00 pm CST to speak with one of our Infection Preventionists or e-mail your question to nebraskaicap@nebraskamed.com

Slides & Webinar Recordings Available

- During this webinar, slides are available on the [NE ICAP Acute Care webpage](#)
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Continuing Education Disclosures

- 1.0 Nursing Contact Hour is awarded for the LIVE viewing of this webinar
- Nebraska Infection Control Assessment and Promotion Program is approved as a provider of nursing continuing professional development by the Midwest Multistate Division, an accredited approver by the American Nurses Credentialing Center's Commission on Accreditation.
- To obtain nursing contact hours, you must attend the entire live activity and complete the post-course survey form.
- No relevant financial relationships were identified for any member of the planning committee or any presenter/author of the program content.

Respiratory Season Update

Juan Teran, MD

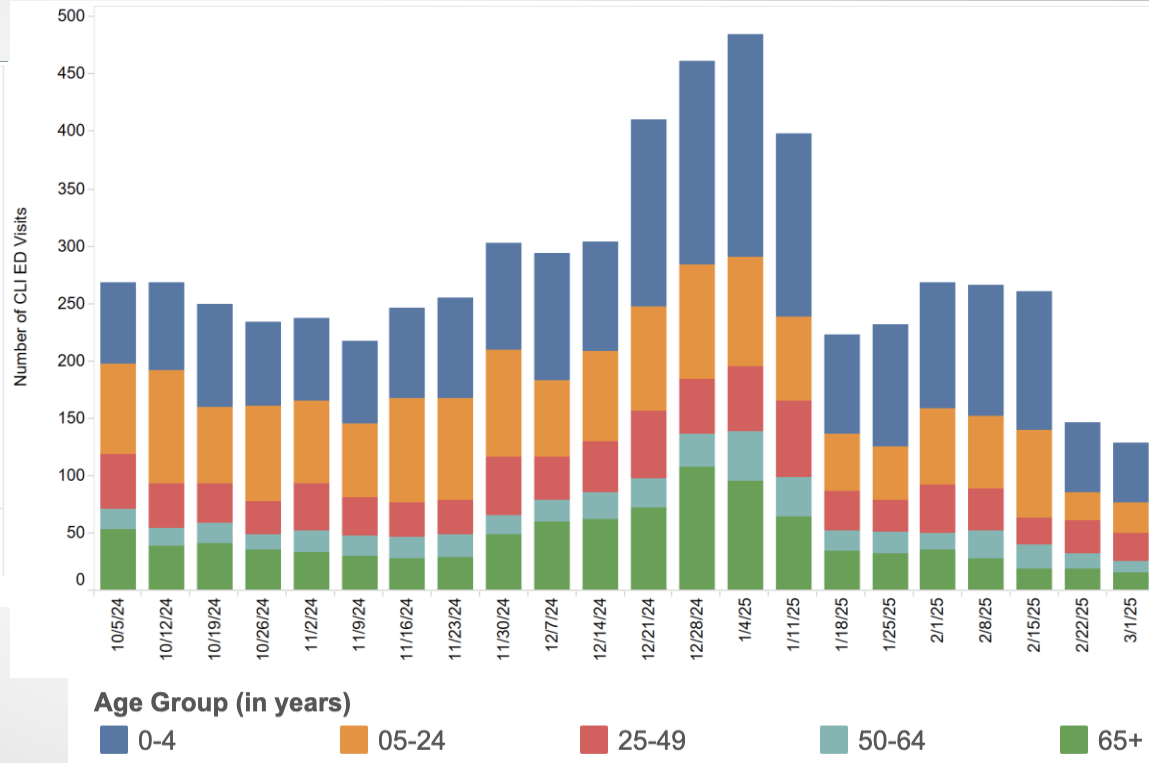
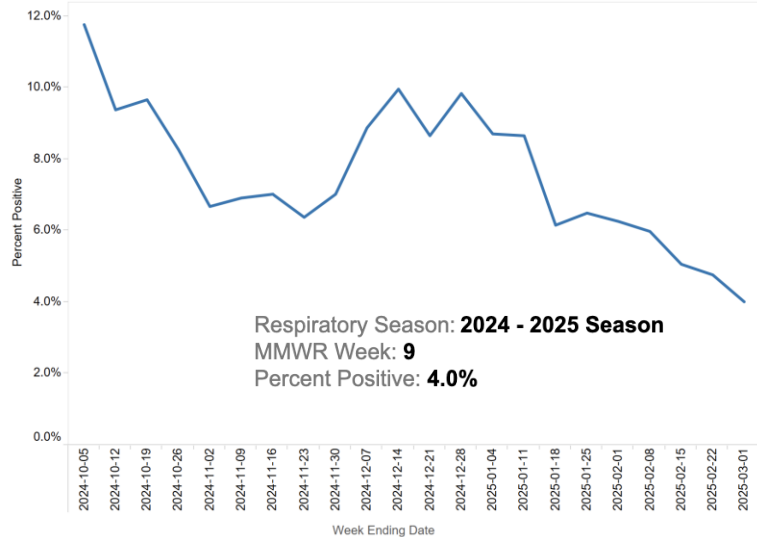
Medical Director, NE ICAP



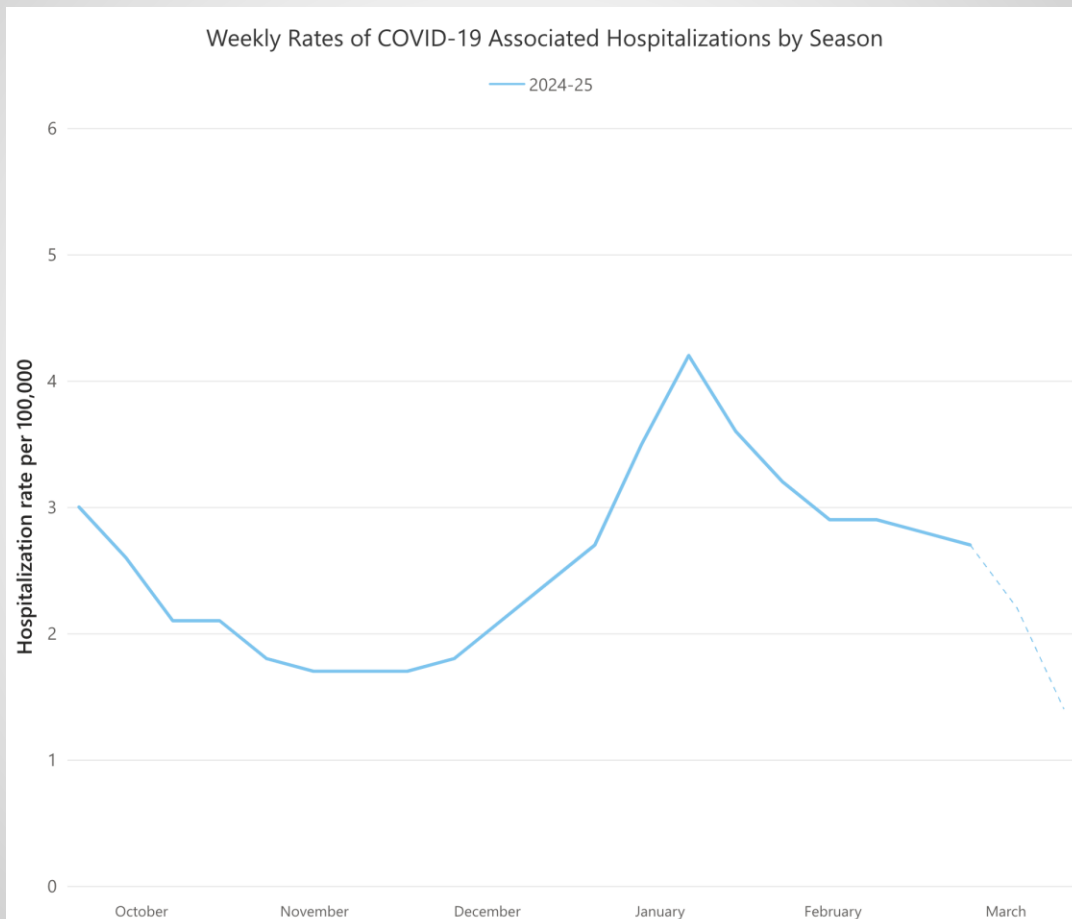
Key points

- COVID, flu, and RSV activity is decreasing
- **Measles** cases are increasing nationwide
- There is a rise in tuberculosis cases

NE DHHS COVID Data



COVID Rate of Hospitalizations US



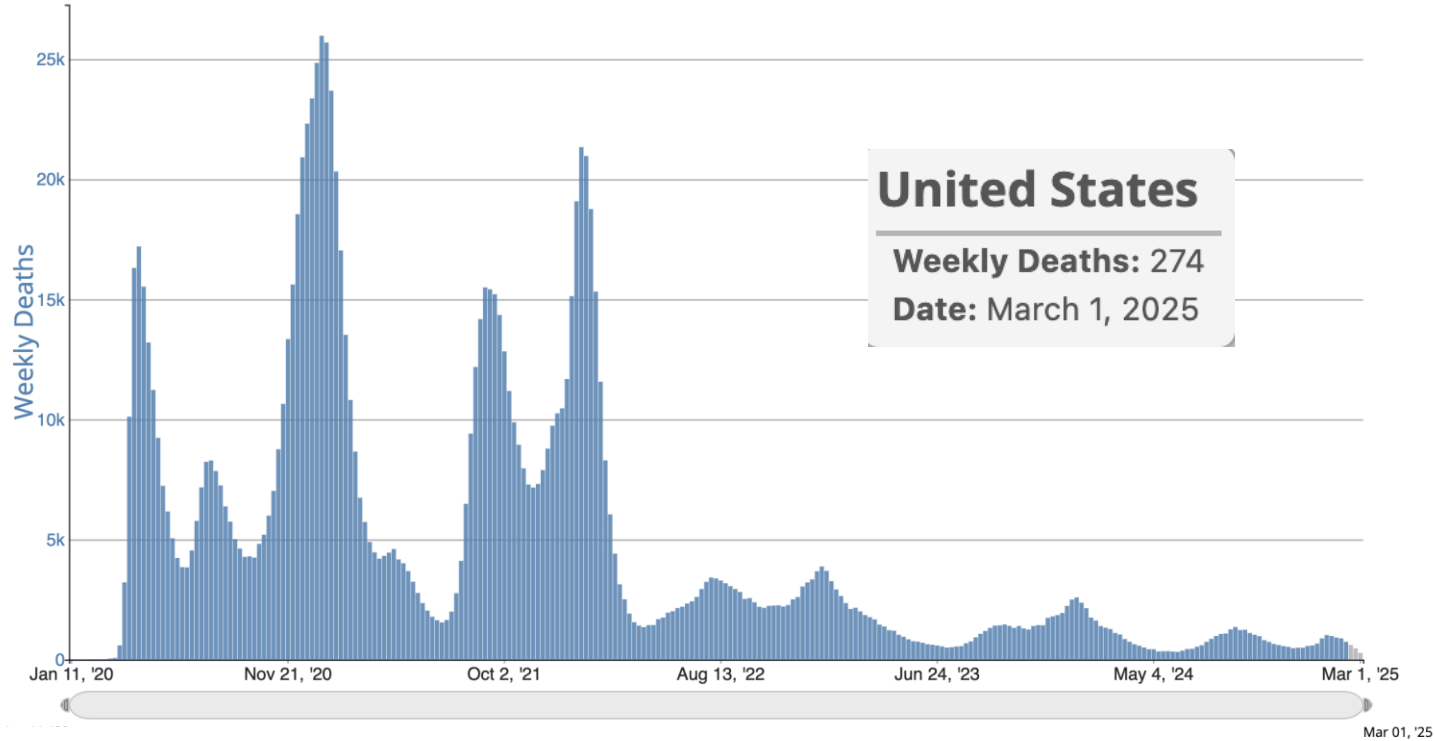
For **2024-25** season:
MMWR Week 9

Week End Date **3/1/2025**

2024-25 1.4

COVID Deaths

Provisional COVID-19 Deaths, by Week, in The United States, Reported to CDC



Nowcast:** Model-based projected estimates of variant proportions

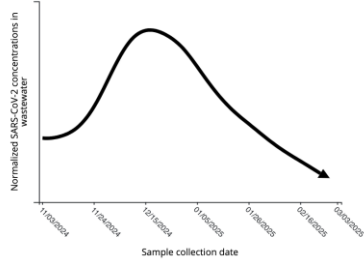


Centers for Disease Control and Prevention
CDC 24/7: Saving Lives. Protecting People™

COVID Waste-water activity

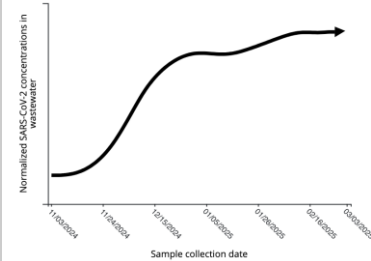
Counties: Scotts Bluff

SARS-CoV-2 Concentrations in Wastewater Over Time



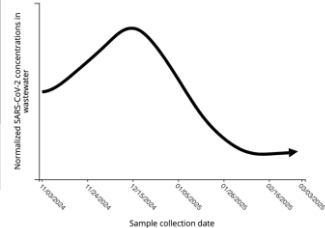
Counties: Douglas, Sarpy

SARS-CoV-2 Concentrations in Wastewater Over Time



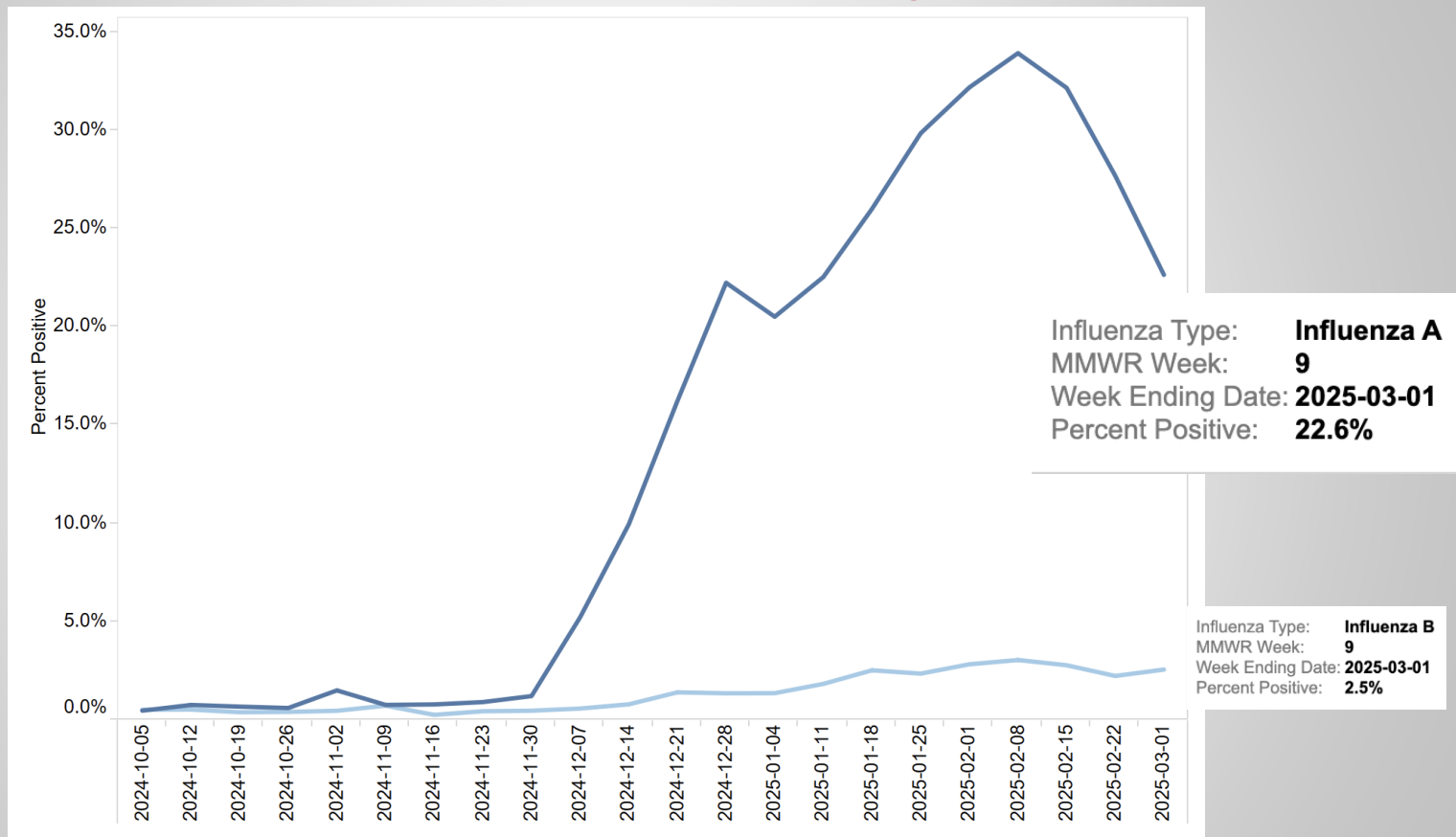
Counties: Lincoln

SARS-CoV-2 Concentrations in Wastewater Over Time



Centers for Disease Control and Prevention
CDC 24/7: Saving Lives, Protecting People™

Influenza NE DHHS report



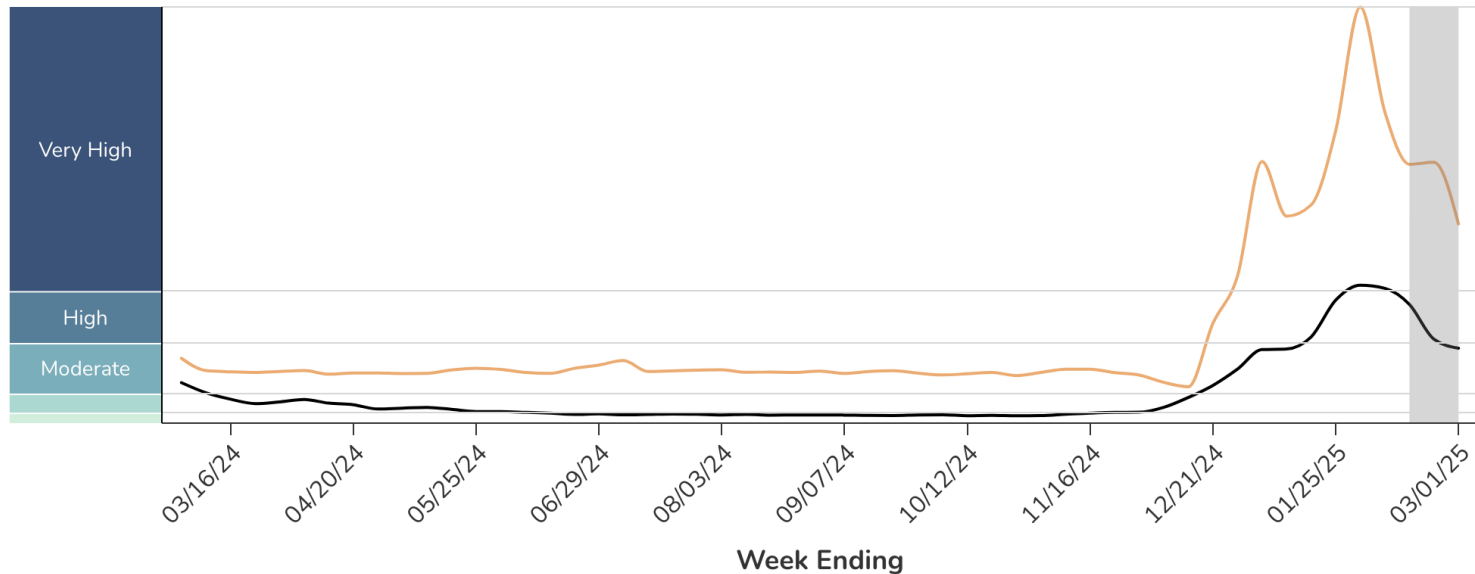
Influenza Wastewater Activity

In Nebraska, the wastewater viral activity level for influenza A is currently **Very High**.

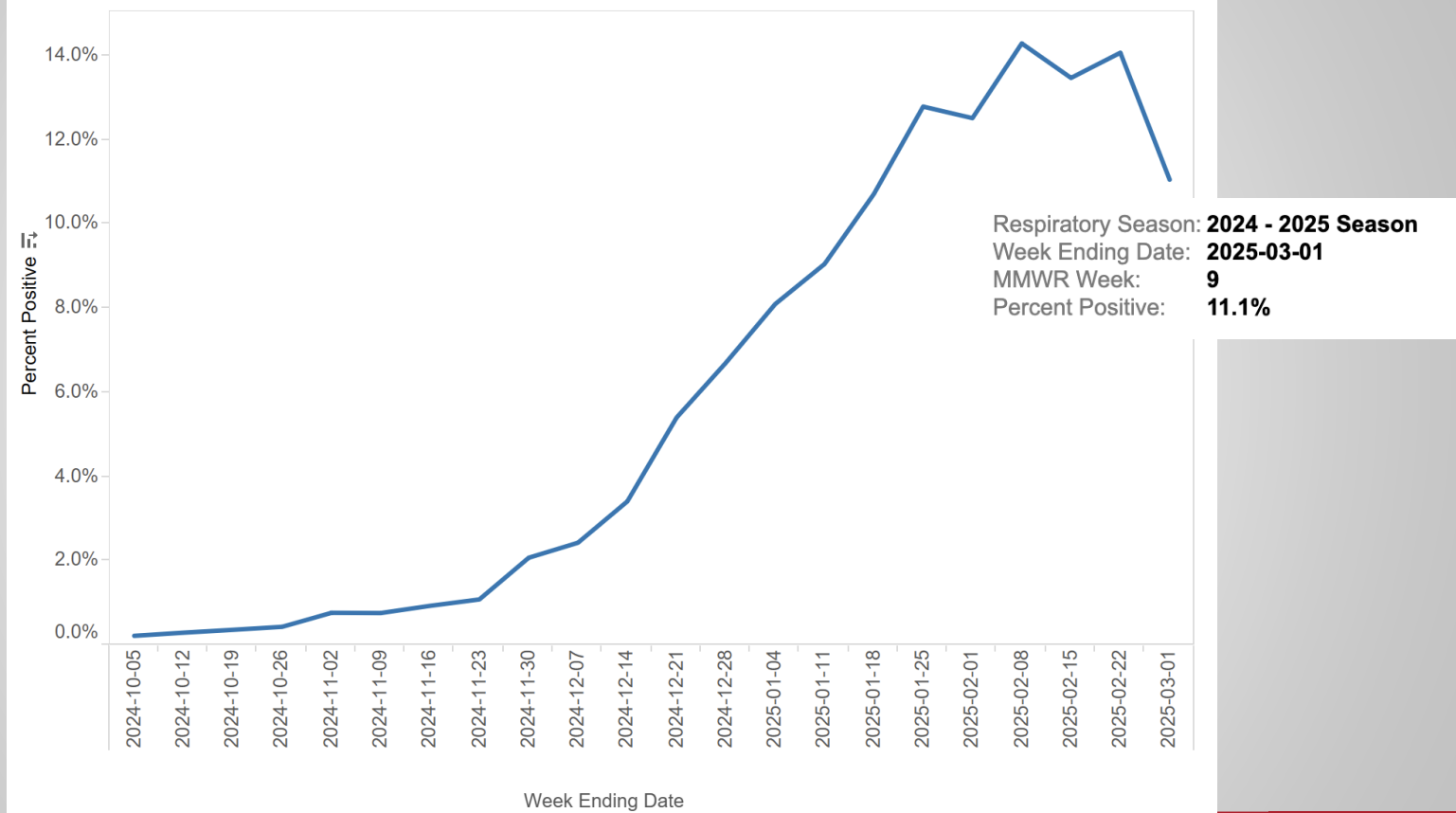
Sites reporting in the last week: 16

Sites reporting in the last 30 days: 16

**VERY
HIGH**



RSV

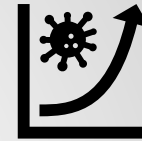


Increase in Measles Cases & Outbreaks

Nebraska Department of Health and Human Services

Health Alert Network ADVISORY

**Increase in Global and Domestic Measles Cases and Outbreaks:
Ensure Children in the United States and Those Traveling
Internationally Six Months and Older are Current on MMR
Vaccination**



Measles is serious
and can be fatal.

Summary

Texas is currently experiencing a measles outbreak in Gaines County and surrounding counties. As of March 4, 2025, Texas has 159 cases, including one pediatric death. There are also measles cases in New Mexico, Kentucky, New Jersey, and Pennsylvania. Nebraska does not currently have any cases. Most cases reported in 2025 have been among children aged 12 months and older who had not received the measles-mumps-rubella (MMR) vaccine. Many countries, including travel destinations such as Thailand, India, and Indonesia, are also experiencing measles outbreaks. To prevent measles infection and reduce the risk of community transmission from importation, all U.S. residents traveling internationally, regardless of destination, should be current on their MMR vaccinations. Healthcare providers should ensure children are current on routine immunizations, including MMR. Given the currently high population immunity against measles in most U.S. communities, the risk of widescale spread is low. However, pockets of low coverage leave some communities at higher risk for outbreaks.

[Increase in Global and Domestic Measles Cases and Outbreaks 2025.03.07](#)



Get vaccinated if
not up to date and
see travel
recommendations

[CDC Measles Vaccination](#)

Measles is an acute respiratory viral illness

• Initial Symptoms

- Fever (may spike to more than 104° F)
 - Malaise (overall feeling of illness and discomfort)
 - Cough
 - Coryza (runny nose)
 - Conjunctivitis (red watery eyes)
- } the 3 “C”s
- 2 – 3 days after symptoms begin: Koplik’s spots
 - 3 – 5 days after symptoms begin: Maculopapular rash
 - Usually appears 14 days after exposure
 - Spreads from head to trunk to lower extremities
 - It usually begins as flat red spots that appear on the face at the hairline.
 - Spreads downward to the neck, trunk, arms, legs, and feet.
 - Small raised bumps may also appear on top of the flat red spots.



2 – 3 days after symptoms begin, Koplik's spots can appear

Koplik's spots are tiny white macular (flat) spots that may appear inside the mouth including hard and soft palate – especially opposite lower premolars.



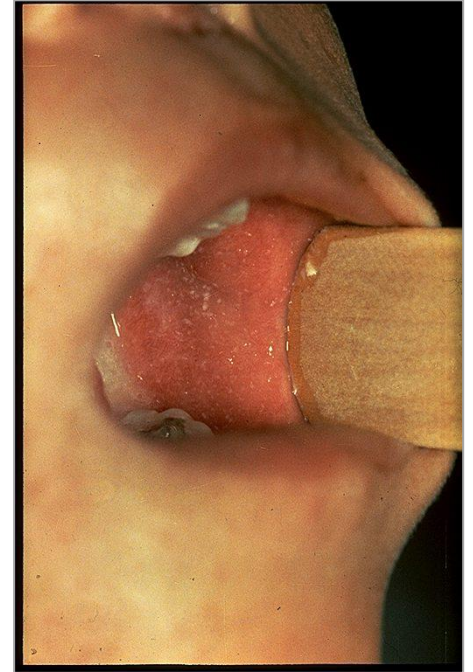
This was a patient who presented with Koplik's spots on palate due to pre-eruptive measles on day three of the illness.

Source: [CDC/PHIL](#)



This patient presented on the third pre-eruptive day with "Koplik spots" indicative of the beginning onset of measles.

Source: [CDC/PHIL](#)



[Photo Courtesy of vaccineinformation.org](#)

[CDC Photos of Measles](#)

3 – 5 days after symptoms begin: Maculopapular rash appears

Maculopapular rash usually appears 14 days after exposure

- Spreads from head to trunk to lower extremities
- It usually begins as flat red spots that appear on the face at the hairline.
- Spreads downward to the neck, trunk, arms, legs, and feet.
- Small raised bumps may also appear on top of the flat red spots.



Young child with moderate illness: runny nose, teary eyes caused by measles infection.
Source: "Measles Clinical Features" video



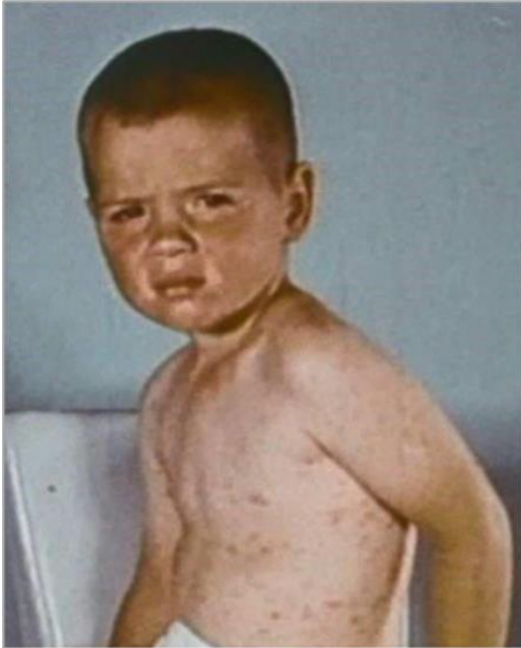
Eyes of a child with measles
Source: [CDC/PHIL](#)



Young, dark-skinned child with watery eyes, runny nose, and raised rash.
Source: "Measles Clinical Features" video

[CDC Photos of Measles](#)

Photos of Measles Skin Rashes



Young boy five to six days into illness with rash and cough.

Source: "Measles Clinical Features" video



Face of boy after three days with measles rash.

Source: [CDC/PHIL](#)

[CDC Photos of Measles](#)



Child with a classic measles rash after four days.

Source: [CDC/PHIL](#)

Incubation period

- 7 to 21 days with an average of 11 to 12 days to symptom onset and 14 days to rash onset

Infectious period

- 4 days before through 4 days after rash appearance

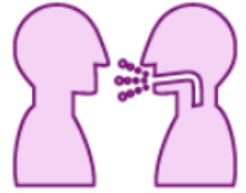
Transmission

- Airborne spread when an infectious person coughs, sneezes, or breathes
- Measles remains infectious in the air for up to two hours after an infected person leaves an area
- Direct contact with infectious droplets

Isolate Immediately

- Do not allow patients with suspected measles to remain in the waiting room or other common areas! Isolate patients with suspected measles immediately, ideally in a single-patient airborne infection isolation room (AIIR) if available, or in a private room with a closed door until an AIIR is available. Healthcare providers should be adequately protected against measles and should adhere to standard and airborne precautions when evaluating suspect cases, regardless of their vaccination status.

[Increase in Global and Domestic Measles Cases and Outbreaks 2025.03.07](#)
[NE ICAP Clinic Guidance for Suspected Measles Cases](#)



It spreads when an infected person coughs or sneezes.

[Clinical Overview of Measles](#)



The virus can live for up to two hours in an airspace.

Update on Tuberculosis in Nebraska

Nebraska Department of Health and Human Services

Health Alert Network

Update

2/14/2025

Tuberculosis in Nebraska

Nebraska reported 34 tuberculosis cases in 2023 and provisional data shows 41 Tuberculosis (TB) cases in 2024. Although Nebraska maintains a low incidence for TB, the 41 cases do represent a 20-year high.

Since early, 2024, counties around Kansas City, Kansas have been affected by a TB outbreak. As of January 31, 2025, the Kansas Department of Health and Environment is [reporting](#) 67 patients have been identified with active TB as part of this outbreak. Furthermore, 79 patients have been confirmed with latent TB. No recent Nebraska TB cases have been linked to the Kansas TB outbreak.

- Consider active TB disease as a possible diagnosis for people who have symptoms consistent with TB disease.
- Asymptomatic people who reports exposure to someone with TB or are at higher risk for TB (either because of their exposure risks or weakened immune system due to certain medications or health conditions) should be evaluated for latent TB.
- [Treatment for patients with Latent TB](#) is strongly encouraged to prevent the development of active TB disease.

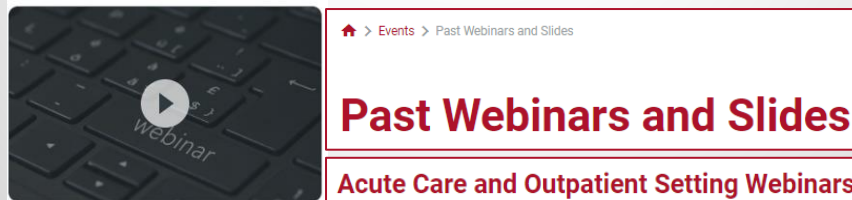
NE DHHS HAN Update - TB in Nebraska 2024.02.14

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Antimicrobial Prophylaxis for Surgical Site Infections (SSI)



Josh Lechner, PharmD, MT (ASCP)^{CM}
PGY-2 Infectious Diseases Pharmacy Resident
Nebraska Medicine

Link to recorded presentation:

<https://echo360.org/media/e26fa574-6be9-4825-bee2-78900e727298/public>

Objectives



Recall patient, surgical, and environmental risk factors for SSI



Describe antimicrobial prophylaxis selection, administration, and appropriate re-timing intervals

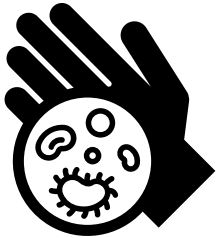


Identify key auditing targets in SSI

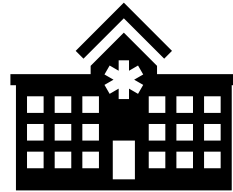


Background

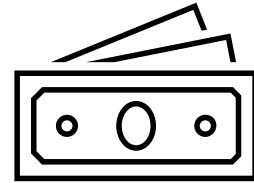
- **Surgical site infection** – infection following an operation at an incision site or adjacent to the surgical incision



0.5% to 3% of patients experience SSI



Patients remain hospitalized 7 to 11 days longer than patients without SSI



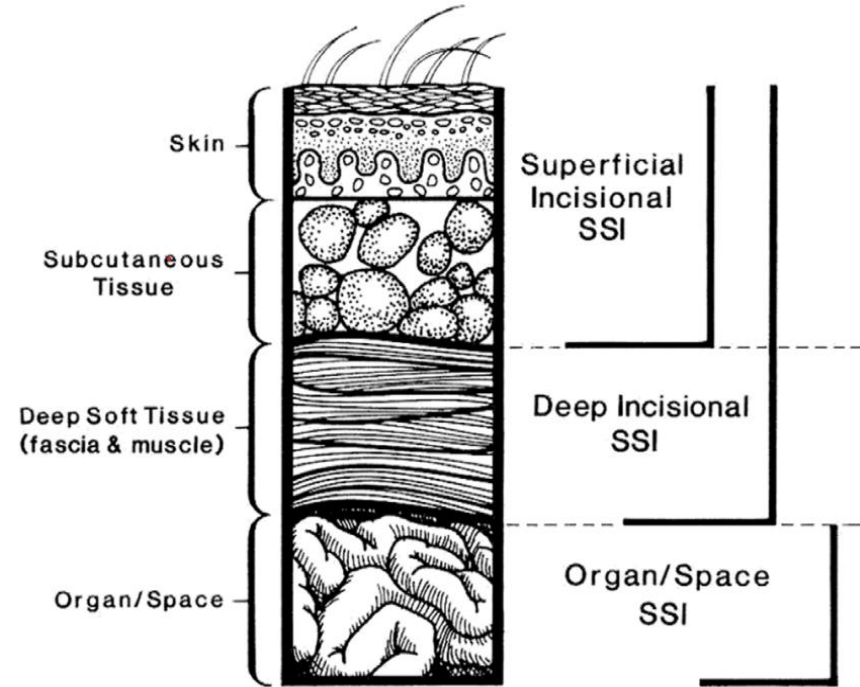
Estimated \$3 to \$10 billion in US healthcare costs



Background

NHSN definitions

- Superficial incision (skin or subcutaneous)
- Deep incisional (involving fascia and/or muscular layers)
- Organ-space – any body part opened or manipulated during procedure excluding skin, fascia or muscle layers

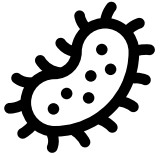


Background



Onset

- Within 30 – 90 days
- Often diagnosed within 14 days from procedure



Pathogens

- *Staphylococcus aureus* (MSSA & MRSA)
- *Escherichia coli*
- *Enterococcus spp*
- Coagulase negative staphylococci
- Polymicrobial



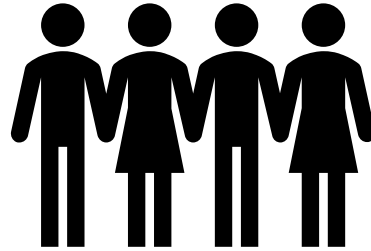
Procedures with higher incidence of SSI

- Colon/small bowel
- Craniotomy
- Breast
- Open fracture reduction



Patient Risk Factors

- *S. aureus* colonization
- Age
- Obesity
- Smoking
- Diabetes, especially uncontrolled
- Immunosuppressed patients
- Malnutrition



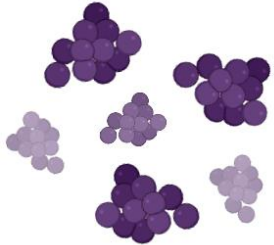
Surgical Risk Factors



– Inadequate surgical scrub



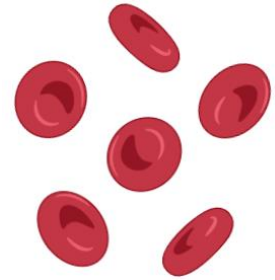
– Antiseptic preparation of skin



– Antimicrobial prophylaxis



– Surgery duration



– Blood transfusion



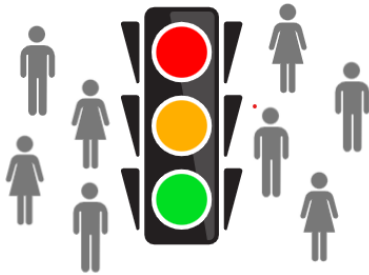
Environmental Risk Factors



– Environmental surfaces



– Surgical Equipment
Sterilization



– Operating Room Traffic

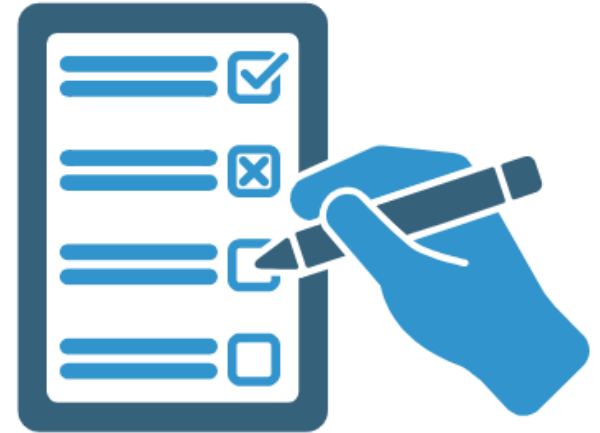


– Ventilation



SSI Prevention

- **Glucose control**
 - Control for all surgical patients including without diabetes
 - Goal <150 mg/dL
 - Delayed wound healing
- **Smoking cessation**
- ***S. aureus* colonization**



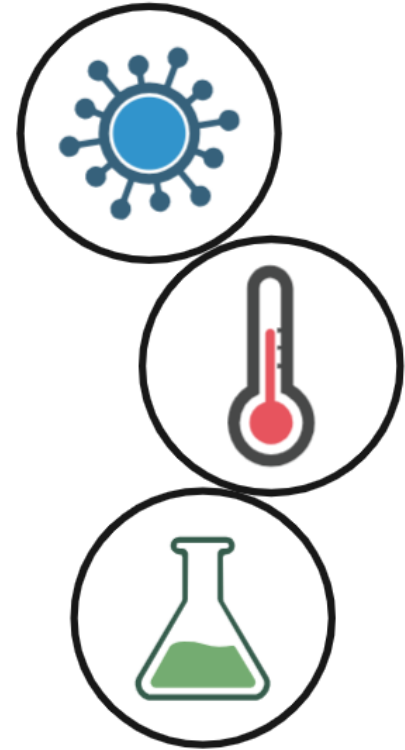
SSI Prevention

- **Decolonization** – reduce or eliminate certain types of bacteria, specifically *Staphylococcus aureus*
 - Especially in cardiothoracic and orthopedic procedures or procedures involving hardware
 - Decreases risk of surgical site infections
- Intranasal mupirocin and chlorhexidine bathing
 - Mupirocin twice daily, chlorhexidine once daily up to 5 days
- Can consider povidone-iodine immediately before surgery



SSI Prevention

- **Shaving hair**
 - Avoid, if possible
 - Use clippers, if necessary (avoid razors)
- **Use alcohol-containing skin agents combined with antiseptic**
 - Chlorhexidine gluconate with alcohol
- **Maintain normothermia when possible**

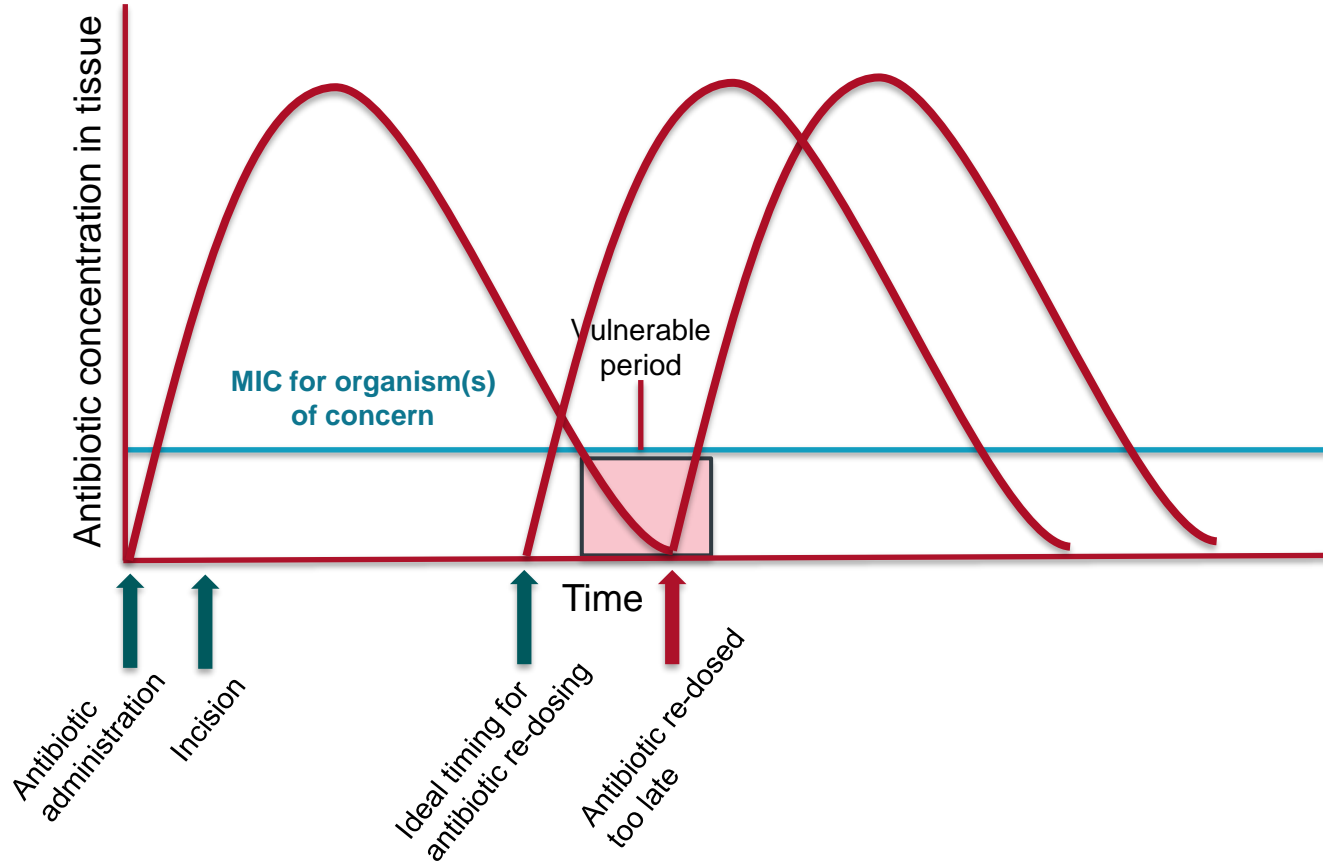


Antimicrobial Prophylaxis

- **Administer within 1 hour prior to incision to maximize tissue concentration**
 - Goal is to ensure serum and tissue concentrations above MIC for likely organisms to cause SSI
- **If using vancomycin or fluoroquinolone (levofloxacin or ciprofloxacin) administer within 2 hours prior to incision**
 - Vancomycin usually infused over 1-1.5 hours
 - Fluoroquinolones infused over 1 hour



Antimicrobial Prophylaxis



Antimicrobial Prophylaxis

When should the patient be re-dosed?

2

**Half lives
of drug
have
elapsed**



**Large
volume
blood loss
(>1.5L/1,500 mL)**

Measure time to re-dose from the time the pre-op antibiotic was administered (not the time the procedure started)



Antimicrobial Prophylaxis

- Redosing of common antimicrobials

Antimicrobial	Half-life* (h)	Redosing Interval*
Cefazolin	1.2-2.5	4 hours
Cefuroxime	1-2	4 hours
Cefoxitin	0.5-1.1	2 hours
Piperacillin/tazobactam	0.7-1.2	2 hours
Clindamycin	2-4	6 hours
Metronidazole	6-8	8 hours
Levofloxacin	6-8	n/a
Vancomycin	4-6	n/a

*With normal renal function



Antimicrobial Prophylaxis



0745

Pre-operative
cefazolin



0830

Procedure
starts



1145

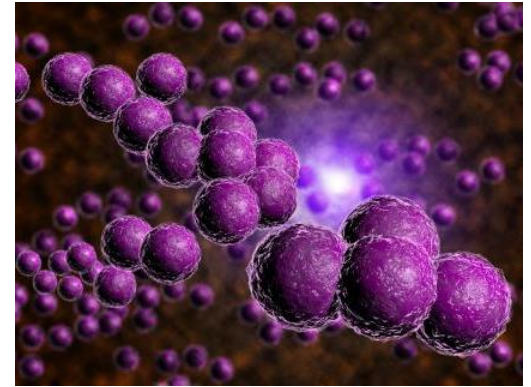
Next dose
cefazolin due



Antimicrobial Prophylaxis - MRSA

**Not recommended to routinely use
vancomycin**

- Consider if MRSA colonized
- Strongly consider especially if surgery involves prosthetic material
 - At Nebraska Medicine – cardiac pacemaker, valve replacement, LVAD, joint replacement, craniotomy, spinal hardware placement



Beta Lactam Allergies

- Cephalosporins are commonly used for surgical antimicrobial prophylaxis
- Cross reactivity between cephalosporins and penicillins is rare
 - Not usually class effect
 - More common if similar side chain
- ☆ **Cefazolin does not share similar side chain to any other beta-lactam and can be safely given**
- If severe IgE mediated reaction (anaphylaxis) avoid beta lactam class that caused allergy



Beta Lactam Allergies

- Pre-operative assessment
 - PEN-FAST tool
- Nebraska Med Study
 - Penicillin allergy suppressed in patients prescribed cephalosporins where cefazolin is preferred SSI prophylaxis
 - 25% increase in cefazolin use
 - 1 of 175 patients had allergic reaction to cefazolin requiring intervention
 - Fewer patients developed AKI

Penicillin Allergy Decision Rule (PEN-FAST)

Identifies low-risk penicillin allergies.

When to Use ▾	Pearls/Pitfalls ▾	Why Use ▾
Five years or less since reaction	No 0	Yes/unknown +2
Anaphylaxis or angioedema OR Severe cutaneous adverse reaction	No 0	Yes +2
Treatment required for reaction	No 0	Yes/unknown +1

0 points
PEN-FAST Score

<1 %
Very low risk of positive penicillin allergy test

Copy Results 📄

Next Steps >>>



Antimicrobial Prophylaxis

What if the patient is already on antibiotics?

- Surgical antimicrobial prophylaxis should still be given within one hour of incision (or two hours if vancomycin or fluoroquinolone)
- Continue treatment antibiotics at regularly scheduled interval



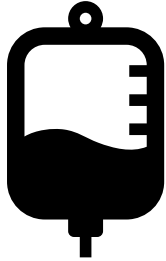
Antimicrobial Prophylaxis

How long should antibiotics continue?

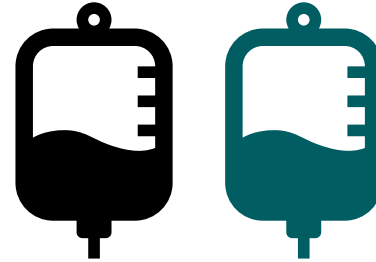
- Discontinue after incisional closure in operating room
 - No evidence antimicrobials given after incisional closure results in reduced SSI except in rare circumstances
- Patient may need treatment antibiotics post-procedure
 - Pus, abscess, phlegmon, osteomyelitis
- Some benefit to continue oral antibiotics for high-risk patients after joint replacement up to 7 days



Cefazolin + Vancomycin



- Add vancomycin if history of MRSA colonization



- Cefazolin provides better coverage of MSSA, other gram-positive organisms, and select gram-negative organisms



General Surgery Prophylaxis

- **Cefazolin 2g once 1 hour prior to procedure**
 - 3g if body weight >120 kg
- Severe beta lactam allergy: Vancomycin 15 mg/kg within 2 hours of procedure

Known MRSA Colonization

- If implanting hardware or prosthetic device: cefazolin 2g once 1 hour prior to procedure PLUS vancomycin 15 mg/kg within 2 hours of procedure



Hysterectomy Prophylaxis

- **Cefazolin 2g once 1 hour prior to procedure**
 - 3g if body weight >120 kg
- Severe beta lactam allergy: clindamycin 900 mg IV + levofloxacin 750 mg IV once



Colorectal Surgery Prophylaxis

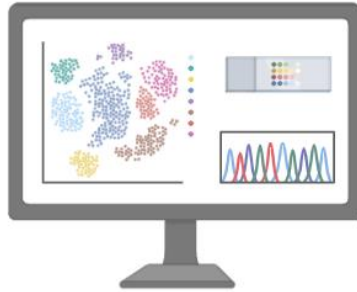
- **Cefoxitin 2g IV once 1 hour prior to procedure**
- **-or-**
- **Cefazolin 2g IV once + Metronidazole 500 mg IV 1 hour prior to procedure**
- **Severe beta lactam allergy: Levofloxacin 500 mg IV once + Metronidazole 500 mg IV once**



ASP in Surgical Prophylaxis



Standardize
order sets



Intra-operative
EHR flags for
antibiotic re-
administration




Default auto-
stop surgical
prophylaxis or
one time dose
only



Best Practice

- Surgical safety checklist/bundles to reduce SSI
- Ensure best practice occurs with each surgery

Surgical Safety Checklist			 World Health Organization	Patient Safety <small>A World Alliance for Safer Health Care</small>
Before induction of anaesthesia <small>(with at least nurse and anaesthetist)</small>	Before skin incision <small>(with nurse, anaesthetist and surgeon)</small>	Before patient leaves operating room <small>(with nurse, anaesthetist and surgeon)</small>		
Has the patient confirmed his/her identity, site, procedure, and consent? <input type="checkbox"/> Yes	<input type="checkbox"/> Confirm all team members have introduced themselves by name and role.	Nurse Verbally Confirms: <input type="checkbox"/> The name of the procedure <input type="checkbox"/> Completion of instrument, sponge and needle counts <input type="checkbox"/> Specimen labelling (read specimen labels aloud, including patient name) <input type="checkbox"/> Whether there are any equipment problems to be addressed		
Is the site marked? <input type="checkbox"/> Yes <input type="checkbox"/> Not applicable	<input type="checkbox"/> Confirm the patient's name, procedure, and where the incision will be made.			
Is the anaesthesia machine and medication check complete? <input type="checkbox"/> Yes	Has antibiotic prophylaxis been given within the last 60 minutes? <input type="checkbox"/> Yes <input type="checkbox"/> Not applicable			
Is the pulse oximeter on the patient and functioning? <input type="checkbox"/> Yes	Anticipated Critical Events	To Surgeon, Anaesthetist and Nurse: <input type="checkbox"/> What are the key concerns for recovery and management of this patient?		
Does the patient have a:	To Surgeon: <input type="checkbox"/> What are the critical or non-routine steps? <input type="checkbox"/> How long will the case take? <input type="checkbox"/> What is the anticipated blood loss?			
Known allergy? <input type="checkbox"/> No <input type="checkbox"/> Yes	To Anaesthetist: <input type="checkbox"/> Are there any patient-specific concerns?			
Difficult airway or aspiration risk? <input type="checkbox"/> No <input type="checkbox"/> Yes, and equipment/assistance available	To Nursing Team: <input type="checkbox"/> Has sterility (including indicator results) been confirmed? <input type="checkbox"/> Are there equipment issues or any concerns?			
Risk of >500ml blood loss (7ml/kg in children)? <input type="checkbox"/> No <input type="checkbox"/> Yes, and two IVs/central access and fluids planned	Is essential imaging displayed? <input type="checkbox"/> Yes <input type="checkbox"/> Not applicable			

This checklist is not intended to be comprehensive. Additions and modifications to fit local practice are encouraged.

Revised 1 / 2009

© WHO, 2009

SSI Reporting

Required to be reported to NHSN

1. SSI following colon surgery
2. SSI following abdominal hysterectomy



SSI Trends in Nebraska

- Overall, among **Acute Care Hospitals**, there was a 22% **increase** in colon SSIs between 2022 and 2023
 - 2021 SIR 1.291
 - 2022 SIR 0.918
 - 2023 SIR 1.116**

NHSN Acute Care Hospitals Surgical site infections (SSI) following colon surgery in adults, ≥ 18years						
Year	SIR	ALL US SIR	# of Facilities Reporting	# of Infections	# of Infections Predicted	Rank
2016	1.392	0.933	22	72	52	49
2017	1.142	0.906	21	55	48	41
2018	1.107	0.887	22	58	52	41
2019	1.199	0.855	21	60	50	47
2020	0.931	0.81	22	42	45	38
2021	1.291	0.831	22	72	56	51
2022	0.918	0.858	23	49	53	32
2023	1.116	0.879	22	61	54	43



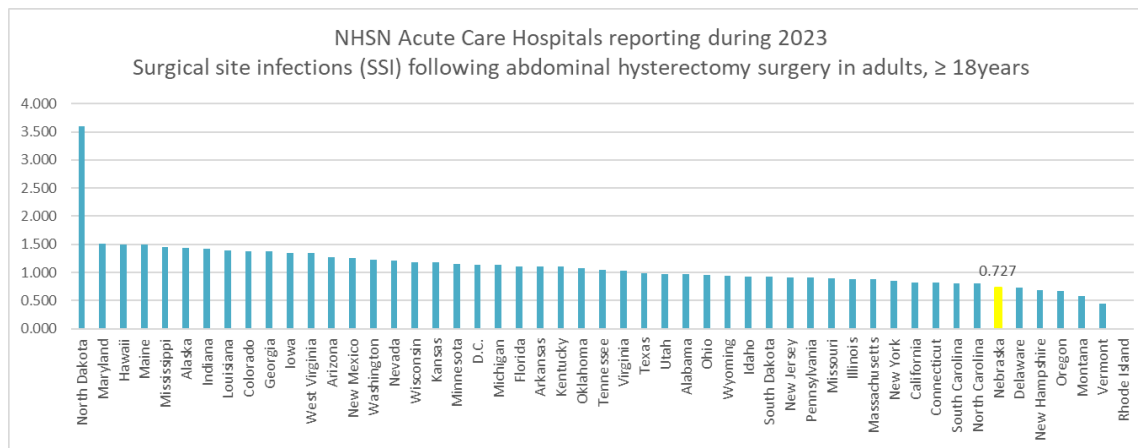
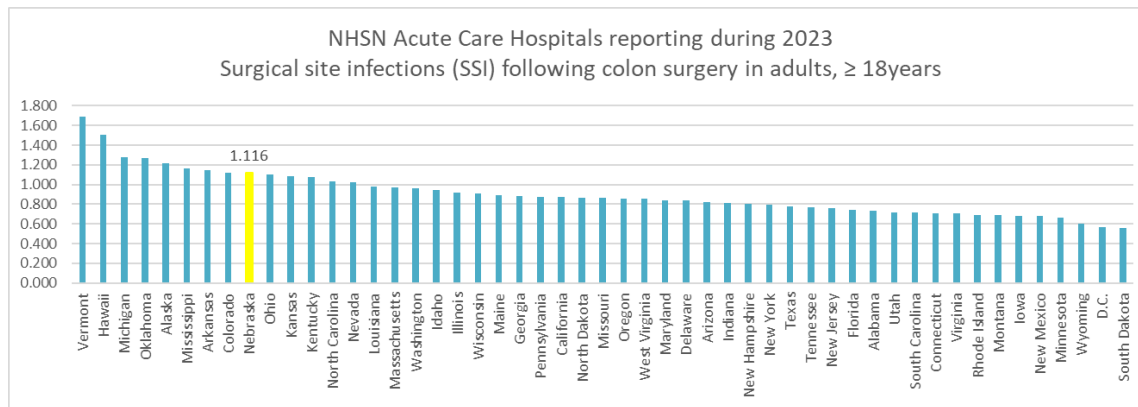
SSI Trends in Nebraska

- Overall, among **Acute Care Hospitals**, there was a 44% **decrease** in hysterectomy SSIs between 2022 and 2023
 - 2021 SIR 1.581
 - 2022 SIR 1.299
 - 2023 SIR 0.727**

NHSN Acute Care Hospitals Surgical site infections (SSI) following abdominal hysterectomy surgery in adults, ≥ 18years						
Year	NE SIR	ALL US SIR	# of Facilities Reporting	# of Infections	# of Infections Predicted	National Rank
2016	1.176	0.874	21	15	13	42
2017	1.167	0.89	22	13	11	40
2018	1.001	0.938	22	12	12	33
2019	1.28	0.979	21	18	14	44
2020	1.617	0.892	21	16	10	50
2021	1.581	0.993	22	19	12	48
2022	1.299	0.951	22	15	12	44
2023	0.727	1.031	22	9	12	7



SSI Trends in Nebraska



2022 National and State
Healthcare-Associated
Infections Progress Report
2023 National and State
Healthcare-Associated
Infections Progress Report



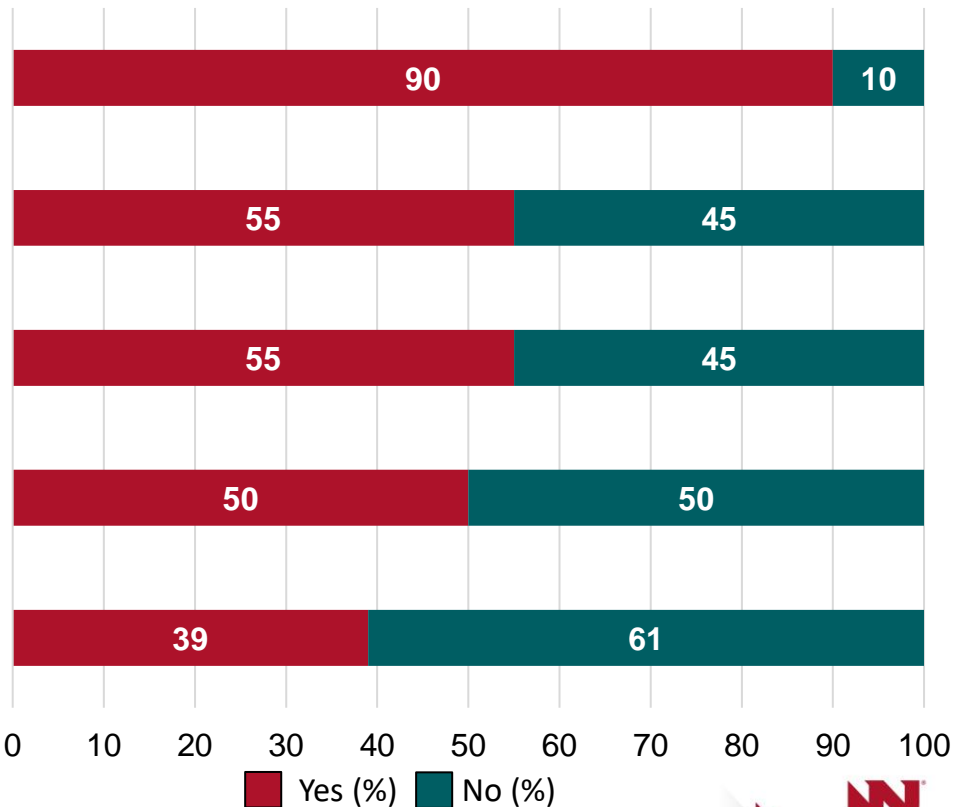
SSI Survey

- Online survey of Nebraska hospitals conducted by Nebraska HAI/Antimicrobial Resistance Advisory council to assess implementation of evidence-based practice recommendations
- Infection preventionists completed survey in collaboration with perioperative teams regarding surgical protocols
 - ✓ Procedural
 - ✓ Antimicrobial Prophylaxis
 - ✓ Operating Room Design
 - ✓ Patient Preparation
 - ✓ Auditing



SSI Survey – Antimicrobial Prophylaxis

The antibiotic dose is given within 1 hour prior to cut time (unless vancomycin or fluoroquinolone). (n=49)



Antibiotic re-dosing is performed as indicated based on duration of surgical case and blood loss. (n=49)

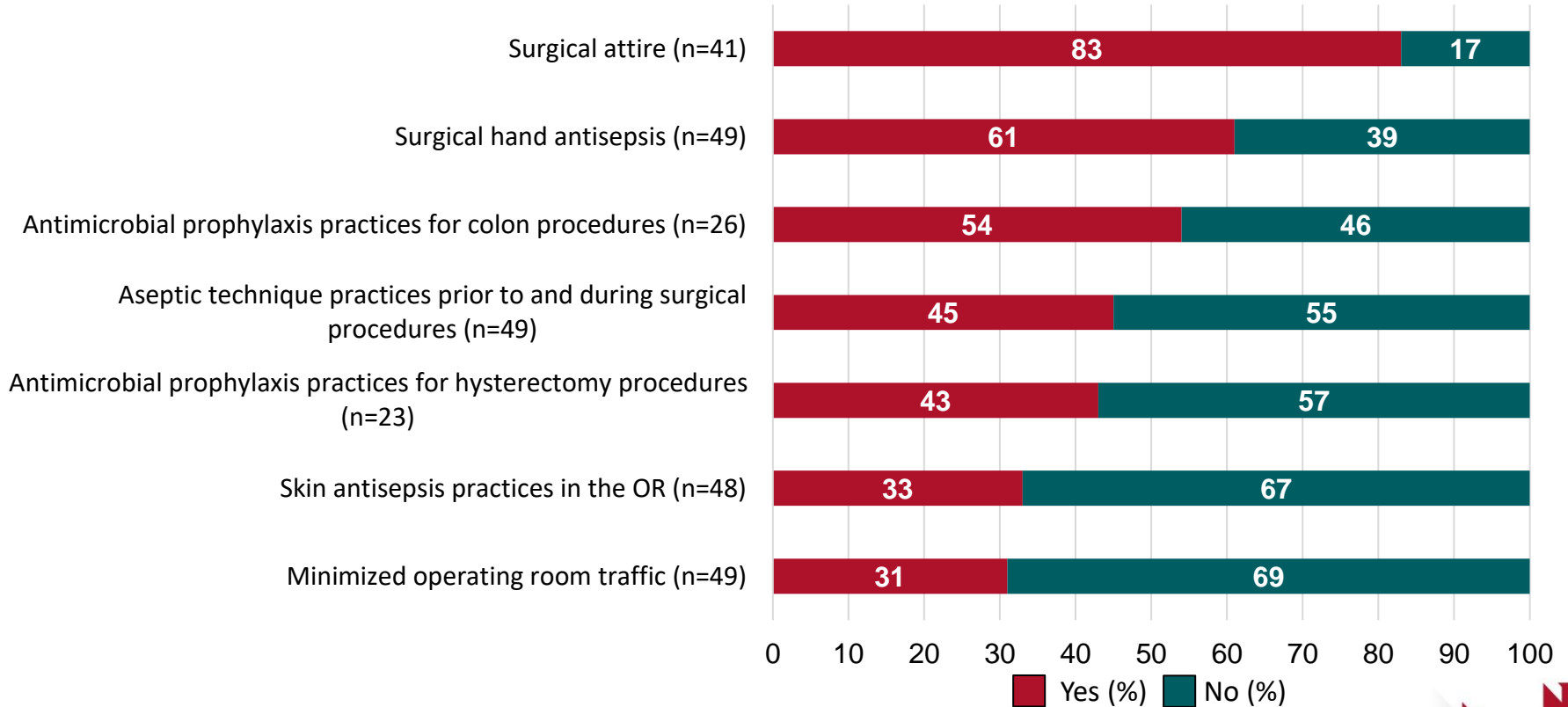
Antibiotic prophylaxis is adjusted for the planned procedure (addition of anaerobic coverage in pelvic cancer or bowel surgery). (n=49)

The facility has protocols for pre- and intraoperative agent selection for colon procedures. (n=26)

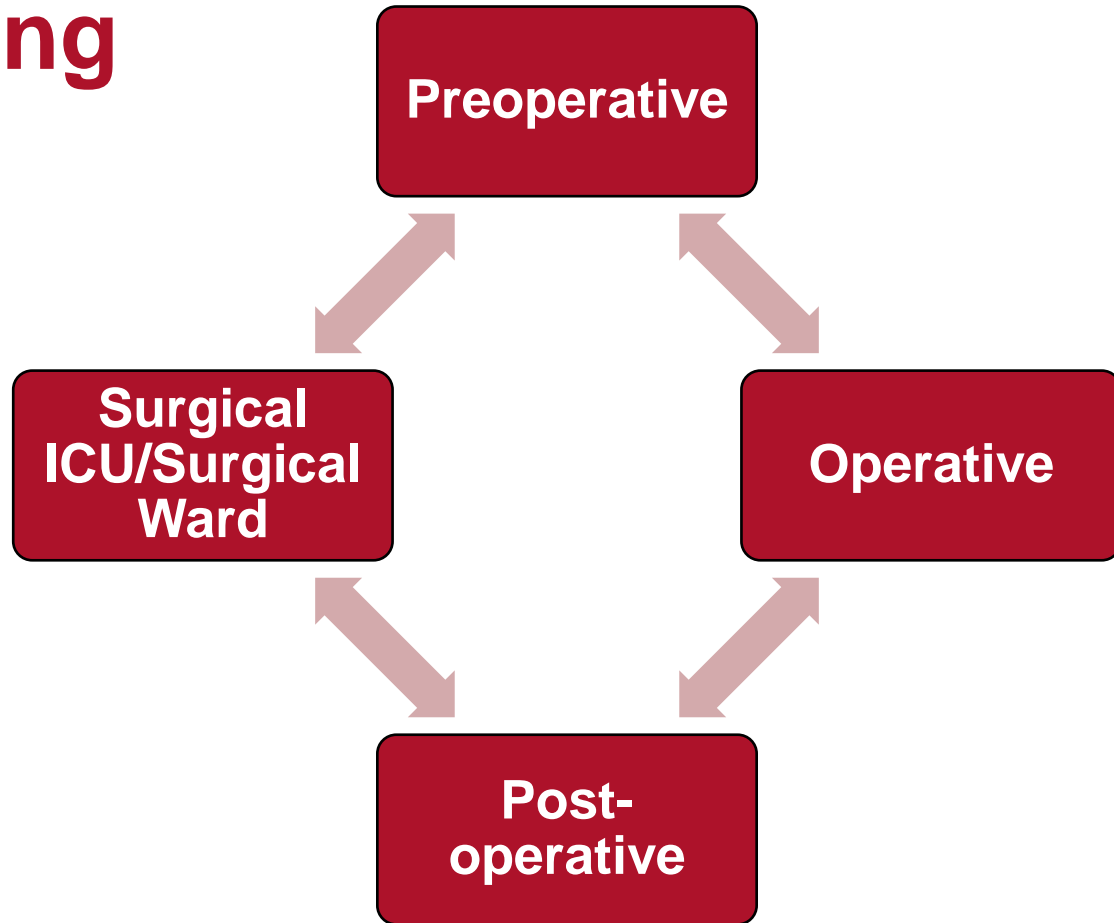
The facility has protocols for pre- and intraoperative agent selection for hysterectomy procedures (abdominal or vaginal). (n=23)



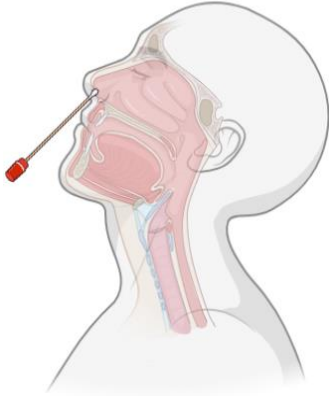
SSI Survey - Auditing



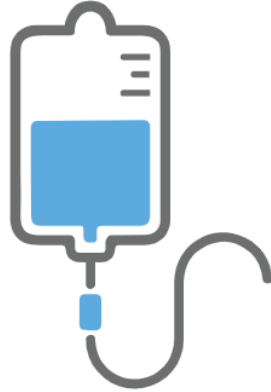
Auditing



Auditing – Pre-operative



**MRSA
decolonization**



**Antimicrobial
prophylaxis**



Hand Hygiene



Auditing – Intra-operative

- ☐ Hand hygiene
- ☐ Surgical PPE
- ☐ Aseptic practice throughout procedure
- ☐ Operating Room traffic
- ☐ Operating Room environmental factors
- ☐ Antimicrobial prophylaxis re-administration



Auditing – Post-operative



**Glucose control
(<150 mg/dL)**



Hand Hygiene



Auditing – Antimicrobial Prophylaxis

Correct



Discontinue antibiotic
after closure



Auditing

- Provide SSI audit and feedback to key stakeholders
 - Surgical and perioperative personnel
 - Hospital leadership
- Perform continual SSI surveillance
 - Target high-risk and high-volume operative procedures
- Track trends in audits



Review

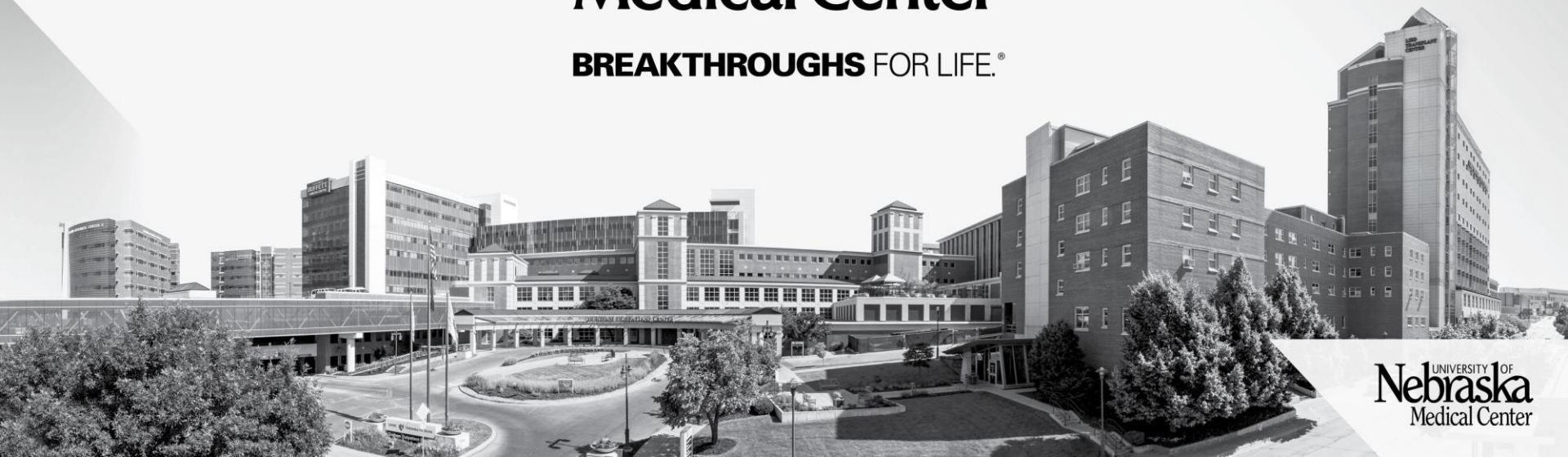
- Variety of patient, surgical, and environmental risk factors for development of SSI
- Antimicrobial prophylaxis should be given 1 hour prior to incision (2 hours if vancomycin or fluoroquinolone)
 - Re-dose after 2 half lives of antibiotic timed from first dose (not procedure start time)
 - Use vancomycin for MRSA colonized patients if prosthetic material being placed
- Auditing for SSI should include pre-operative, operative, and post-operative phases of care





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References

1. Calderwood MS, Anderson DJ, Bratzler DW, Dellinger EP, Garcia-Houchins S, Maragakis LL, et al. Strategies to prevent surgical site infections in acute-care hospitals: 2022 Update. *Infect Control Hosp Epidemiol*. 2023;44(5):695-720. Epub 20230504. doi: 10.1017/ice.2023.67. PubMed PMID: 37137483; PubMed Central PMCID: PMC10867741.
2. Seidelman JL, Baker AW, Lewis SS, Advani SD, Smith B, Anderson D. Surgical site infection trends in community hospitals from 2013 to 2018. *Infect Control Hosp Epidemiol*. 2023;44(4):610-5. Epub 20220718. doi: 10.1017/ice.2022.135. PubMed PMID: 35844062; PubMed Central PMCID: PMC10194399.
3. Seidelman JL, Mantyh CR, Anderson DJ. Surgical Site Infection Prevention: A Review. *Jama*. 2023;329(3):244-52. doi: 10.1001/jama.2022.24075. PubMed PMID: 36648463.
4. Bratzler DW, Dellinger EP, Olsen KM, Perl TM, Auwaerter PG, Bolon MK, et al. Clinical practice guidelines for antimicrobial prophylaxis in surgery. *Am J Health Syst Pharm*. 2013;70(3):195-283. doi: 10.2146/ajhp120568. PubMed PMID: 23327981.
5. Berríos-Torres SI, Umscheid CA, Bratzler DW, Leas B, Stone EC, Kelz RR, et al. Centers for Disease Control and Prevention Guideline for the Prevention of Surgical Site Infection, 2017. *JAMA Surg*. 2017;152(8):784-91. doi: 10.1001/jamasurg.2017.0904. PubMed PMID: 28467526.
6. Bogus A, McGinnis K, Vergin J, May SM, Hankins RJ, Stohs E, et al. Perioperative cefazolin prescribing rates following suppression of alerts for non-IgE-mediated penicillin allergies. *Infect Control Hosp Epidemiol*. 2024;1-5. Epub 20240509. doi: 10.1017/ice.2024.80. PubMed PMID: 38721757.
7. Kheir MM, Dilley JE, Ziembra-Davis M, Meneghini RM. The AAHKS Clinical Research Award: Extended Oral Antibiotics Prevent Periprosthetic Joint Infection in High-Risk Cases: 3855 Patients With 1-Year Follow-Up. *J Arthroplasty*. 2021;36(7s):S18-s25. Epub 20210123. doi: 10.1016/j.arth.2021.01.051. PubMed PMID: 33589279; PubMed Central PMCID: PMC9161732.
8. Pavlovsky L, Kanishka F, Preusker J, Baker M, Hill T, Hoogestraat LA, et al. Assessing Implementation of Evidence-Based Practice Recommendations for Prevention of Surgical Site Infections Through a Statewide Survey of Nebraska Hospitals. *Open Forum Infect Dis*. 2025 Jan 29;12(Suppl 1):ofae631.587. doi: 10.1093/ofid/ofae631.587. PMCID: PMC11778148.

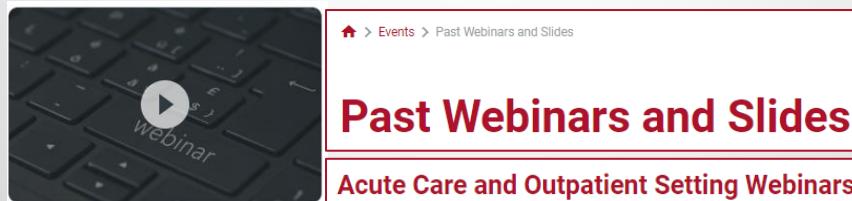


Questions & Answer Session

- Please use the Q&A box in the webinar platform to type a question to be read aloud.
 - If your question is not answered during the webinar, please call (402) 552-2881 Monday – Friday 8:00 am – 4:00 pm CST to speak with one of our Infection Preventionists or e-mail your question to nebraskaicap@nebraskamed.com

Slides & Webinar Recordings Available

- During this webinar, slides are available on the [NE ICAP Acute Care webpage](#)
- Visit the [NE ICAP Past Webinars and Slides webpage](#)
 - The slides and a recording of this webinar will be posted soon after the webinar
 - Also, various recent NE ICAP webinar slides and recordings are available



Misc. Updates & Upcoming Educational Opportunities

Kate Tyner, BSN, RN, CIC

Team Supervisor

Infection Preventionist, NE ICAP

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2025 Nebraska ASAP Antimicrobial Stewardship Summit

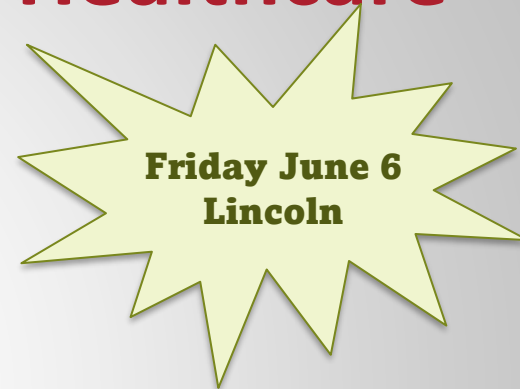


This year's general session topics include:

- 2025 Nebraska Antimicrobial Stewardship Update
- DHHS Healthcare Associated Infections Update
- Keynote Address: Diagnostic Stewardship
- Hot Topics in Antimicrobial Stewardship
- Implementation Science in Antimicrobial Stewardship
- Communicating with Patients about Antibiotic Use
- Whole Genome Sequencing
- Approach to Immunocompromised Patients with Infectious Diseases
- Newly Approved Antibiotic Therapies

[Click Here to Register! 2025 Nebraska Antimicrobial Stewardship Summit](#)

Register Now: Workshop for Healthcare Facility Water System Safety



8 am	Welcome by Nebraska DHHS
8:15	From Plumbing to Patients: Christine Yount
8:45	Pathophysiology of Waterborne Pathogens: Richard Hankins
10:20	Water Treatment Basics: Mike Ballmer
12:20	Plumbing Basics: Jeffrey Bergers
1:20	Ensuring Safe Water: Comprehensive Strategies for Legionella Prevention in Healthcare Facilities: Jen Vogelsberg
3 pm	Uh-oh, Mitigation Approaches and Technology to Remediate When Your Water System is Implicated: Dr. Brooke Decker
4 pm	Closing: Lacey Pavlovsky

[Registration Link](#)

To register, click on or
scan the QR code!



NICN: Primary Infection Prevention

April 3 and 4, Omaha



**Offered
only once
in 2025!**

Track One: Acute Care, Ambulatory Care, and Surgical Centers

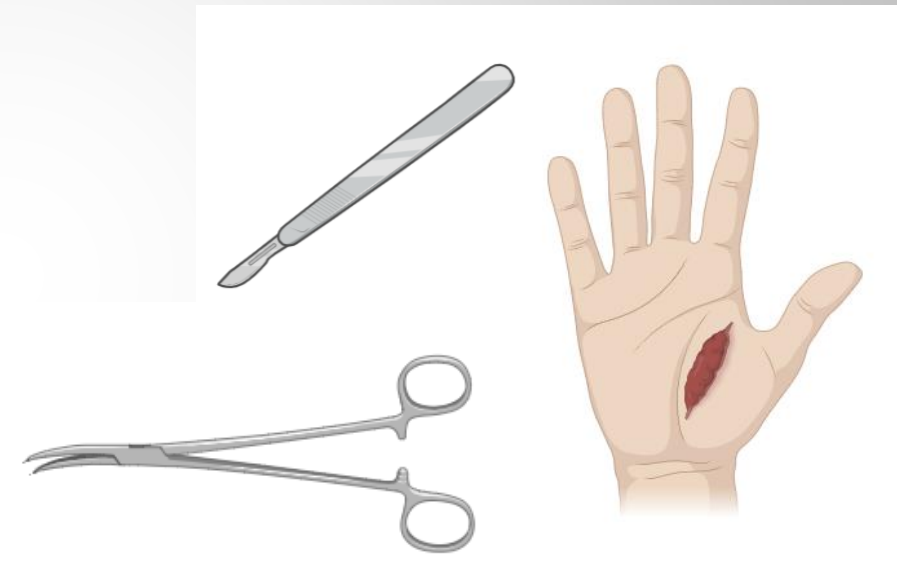
https://reg.learningstream.com/reg/event_page.aspx?ek=0009-0021-e9602b3592d14a05b2d74ca416d3a795

Track Two: Long-Term Care and Assisted Living Facilities

https://reg.learningstream.com/reg/event_page.aspx?ek=0009-0021-e9602b3592d14a05b2d74ca416d3a795

Join Us - Upcoming ICAP Webinars

- **April 9, 2025**
 - 12:00 – 1:00 PM (CST)
 - IPC Practices for SSI Prevention – Reducing Gaps & Validating Practices
- **May 14, 2025**
 - 12:00 – 1:00 PM (CST)
 - MDRO decolonization and role of CHG bathing
 - Dr. Richard Hankins



Images Courtesy of bioRENDER

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Office Hours are Monday – Friday
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Weekends and Holidays 10:00-4:00

On-call hours are available for emergencies only



Scan the QR Code to be taken to
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You can request to be connected to an
Infection Preventionist that specializes in your area,
get added to our setting specific communication list
for webinar and training invites,
sign up for newsletters and reminders,
or request an ICAR review for your facility.



Webinar CE Process

1 Nursing Contact Hour is awarded by Nebraska ICAP

- Nebraska Infection Control Assessment and Promotion Program is approved as a provider of nursing continuing professional development by the Midwest Multistate Division, an accredited approver by the American Nurses Credentialing Center's Commission on Accreditation.

CNE Nursing Contact Hours:

- ✓ Completion of survey is required.
 - The survey must be specific to the individual obtaining credit (i.e.: 2 people cannot be listed on the same survey)
 - Survey functionality is lost on mobile devices
- ✓ One certificate is issued quarterly for all webinars attended
 - Certificate comes directly from ICAP via email