



Nebraska Statewide Infectious Disease Updates

December 10, 2024



Nebraska Updates TUESDAY 12/10/2024



- Proposed new Bi-weekly Call Strategy-Shelly Schwedhelm
- International and National Updates- James Lawler
- > Pediatric Vaccine Update-Hepatitis B- Alice Sato
- > ICAP LTC & ALF Updates Juan Teran
- Public Health and Coalition Leader Updates
- > Other Updates All



Tiny Victories: Pediatric Burn Response in Disasters

December 11, 2024 | 1:00PM, CST

Presented by: Julia Slater, MD, FACS Judy Placek, MSN, APRN, FNP-BC, CBRN

Join Dr. Julia Slater and Judy Placek for an informative webinar focusing on how to effectively manage pediatric burn injuries and the specific challenges they present in disaster scenarios. This webinar will provide a deeper understanding of the unique characteristics of the pediatric burn patient and the specific challenges they present in disaster scenarios.

Objectives:

- Identify the unique characteristics of pediatric burns and the challenges they
 present in disasters.
- Describe the skills necessary to accurately assess and treat pediatric burn patients, and their relevance in disasters.
- Demonstrate how to effectively utilize available resources in disaster settings, focusing on prioritizing care for pediatric burn patients with limited supplies.

This webinar is designed for physicians, nurses, first responders, healthcare coalitions, public health, emergency managers, federal and state partners and other professionals throughout **Region 7** (IA, KS, MO, and NE) and beyond. Continuing education credits will be provided.



In support of improving patient care, University of Nebraska Medical Center is jointly accredited by the Accreditation Council for Continuing Medical Education (ACCME), the Accreditation Council for Pharmacy Education (ACPE), and the American Nurses Credentialing Center (ANCC), to provide continuing education for the healthcare team.

Scan the QR Code to Register



Cases Where EMS and Toxicology Intersect

When Emergency Medical Services (EMS) professionals encounter patients with toxicological emergencies, timely recognition and intervention are essential to improving patient outcomes.

This webinar will explore critical cases where EMS and toxicology intersect, providing insight into the complex nature of toxicological emergencies, how poison centers can assist in real time, and showing examples of where these two worlds meet to maximize patient safety.

Objectives

Describe how the poison center can assist pre-hospital and transport staff in real time.
 Discuss case examples where EMS/poison center helped each other keep patients safe.

This webinar is designed for physicians, nurses, first responders, healthcare coalitions, public health, emergency managers, federal and state partners and other professionals throughout **Region 7** (IA, KS, MO, and NE) and beyond. Continuing education credits will be provided.



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Cases Where EMS and Toxicology Intersect Presented by: Dan McCabe, MD, FACEP, FACMT

January 8, 2025 | 1:00PM, CST

Register Here

Scan the QR Code to Register



2025 NEBRASKA PREPAREDNESS SYMPOSIA

Join us for an engaging day-long Symposia tailored for professionals involved in Emergency Preparedness/Response in healthcare (including pre-hospital), public health, emergency management and other sectors. This day-long workshop offers a comprehensive overview of critical updates and best practices to enhance your preparedness strategies and response capabilities. The Symposia will cover the latest state preparedness updates, CMS

regulation updates, roles in tornado response, weather-related information resources, and integrating health equity into disaster planning and healthcare surge management. This year's symposia was designed to complement the upcoming healthcare coalitions' Regional

Medical Response Surge Exercise (MRSE).

CLICK ON LOCATION NAME FOR REGISTRATION LINK

Panhandle Region (PRMRS) Tuesday, January 14, 2025

Gering Civic Center, Gering, NE

Nebraska Plains Region (NPHCC)

Tuesday, January 28, 2025 Mid-Plains Community College, North Platte, NE

Southeast Nebraska Region (SENHCC)

Tuesday, February 11, 2025 Nebraska Innovation Campus, Lincoln, NE

Omaha Region (OMHCC) Tuesday, March 18, 2025 Bellevue University, Bellevue, NE

Central Nebraska Region (TRIMRS) Tuesday, March 25, 2025 The Archway, Kearney, NE

North Central & Northeast Nebraska Regional (RROMRS)

Tuesday, April 15, 2025 Divots Conference Center, Norfolk, NE



UNIVERSITY OF NEBRASKA MEDICAL CENTER" CENTER FOR PREPAREDNESS AND EMERGENCY RESPONSE SOLUTIONS



Scan the QR Code to Register



Proposed Changes: Statewide Infectious Disease Call

The GCHS & R7DHRE would like to expand the current Nebraska Statewide Infectious Disease call to other partners in Region 7.

• What would change:

- Name change
 - Currently: "Nebraska Statewide Infectious Disease Updates"
 - New: "Region 7 Infectious Disease Briefing Hosted by the R7DHRE and the GCHS"
- "Registration":
 - Currently: via invitation only
 - New: via registration for webinar
 - Only need to register once/year
- Slides & Recordings
 - Will be cross-posted on the R7DHRE and GCHS website
 - High level key points on actionable items will be captured
 - Link to minutes/recording emailed to registrants

• What stays the same:

- Focus remains on infectious diseases but can include broader preparedness topics if appropriate to current events and urgency
- Day/time remain the same (every other Tuesday at 9AM)
 - Next briefing would be January 7, 2025
- Current invitees are welcome to register/attend
- Ability to ask questions; put comments or updates in chat

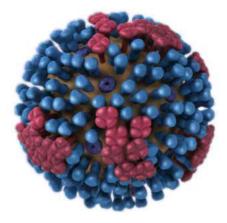
INTERNATIONAL & NATIONAL UPDATES

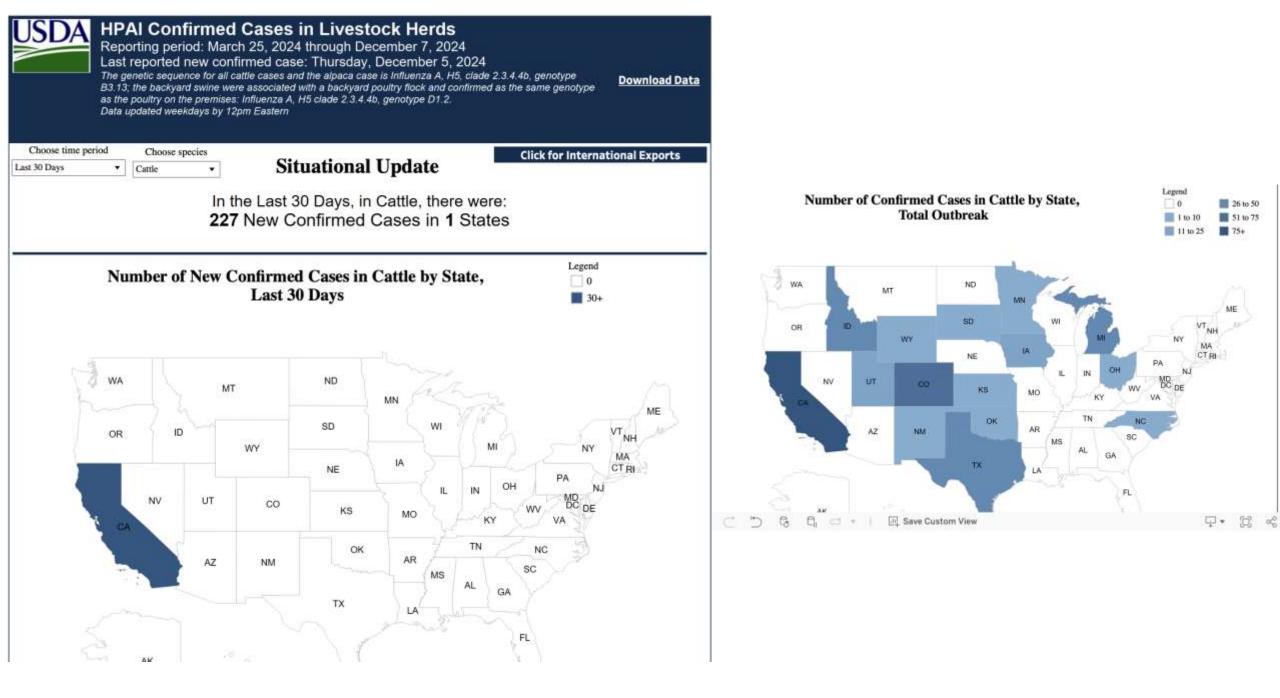
COVID-19 (and Other) Update

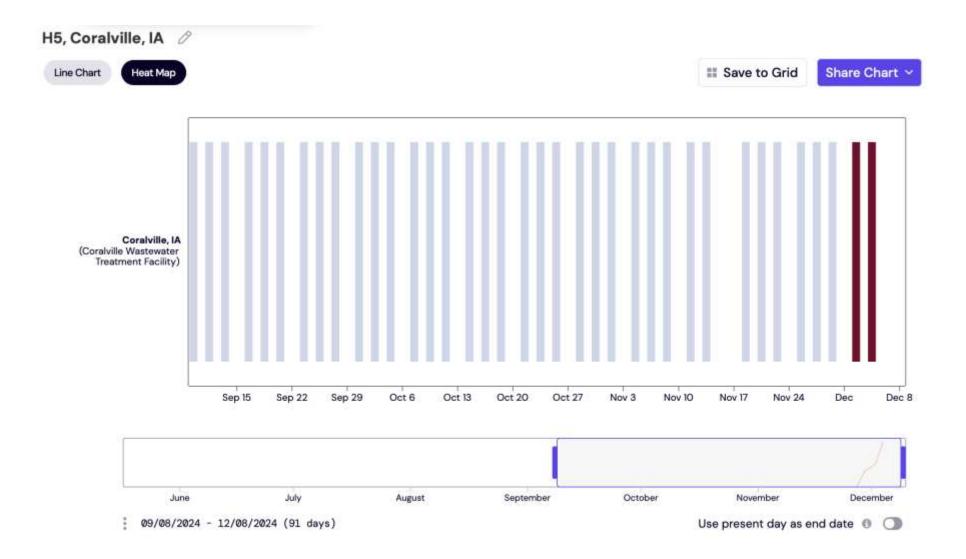
December 10, 2024



H5N1 Status









NEWS > HEALTH

Marin County officials report possible bird flu case in child

By CAMERON MACDONALD | cmacdonald@marinij.com UPDATED: December 9, 2024 at 10:50 AM PST



Exposure Source

State	Cattle	Poultry	Unknown	State Total
California	31	0	1	32
Colorado	1	9	0	10
Michigan	2	0	0	2
Missouri	0	0	1	1
Oregon	0	1	0	1
Texas	1	0	0	1
Washington	0	11	0	11
Source Total	35	21	2	58

USDA U.S. DEPARTMENT OF AGRICULTURE			GLOSSARY	ASKUSDA	RECALLS	CONTACT US	
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USDA Announces New Federal Order, Begins National Milk Testing Strategy to Address H5N1 in Dairy Herds

New Federal Order Will Require National Milk Testing and Support State Officials and Dairy Regulators; Builds on Actions to Protect Farms, Farmworkers and Communities from H5N1 Avian Influenza

Stage 1: Standing Up Mandatory USDA National Plant Silo Monitoring

USDA will immediately begin nationwide testing of milk silos at dairy processing facilities. This national sample will allow USDA to identify where the disease is present, monitor trends, and help states identify potentially affected herds.

Stage 2: Determining a State's H5N1 Dairy Cattle Status

Building on the results of silo monitoring, in collaboration with states, USDA will also stand up bulk tank sampling programs that will enable us to identify herds in the state that are affected with H5N1.

Stage 3: Detecting and Responding to the Virus in Affected States

For states with H5N1 detections, APHIS will work quickly to identify specific cases and implement rapid response measures, including enhanced biosecurity using USDA's existing incentives programs, movement controls and contact tracing.

Stage 4: Demonstrating Ongoing Absence of H5 in Dairy Cattle in Unaffected States

Once all dairy herds in a given state are considered to be unaffected, APHIS will continue regular sampling of farms' bulk tanks to ensure the disease does not re-emerge. Bulk tank sampling frequency will progressively decline as the state demonstrates continual silo negativity (e.g., weekly, monthly, quarterly if continually negative). If a state becomes affected, USDA will re-engage detection and response activities, and the state will return to Stage 3.

Stage 5: Demonstrating Freedom from H5 in U.S. Dairy Cattle

After all states move through Stage Four, APHIS will work with the states to begin periodic sampling and testing to illustrate long-term absence from the national herd.

As of this announcement, the following six states will be included in the first round of states brought into the program for testing: California, Colorado, Michigan, Mississippi, Oregon, and Pennsylvania.

DRC Outbreak

Forbes

FORBES > INNOVATION > HEALTHCARE

WHO Provides Update About Disease X In Democratic Republic Of The Congo





^	Health Topics 🗸	Countries ~	Newsroom 🗸	Emergencies ~	

Home / Disease Outbreak News / Item / Undiagnosed disease – Democratic Republic of the Congo

Disease Outbreak News

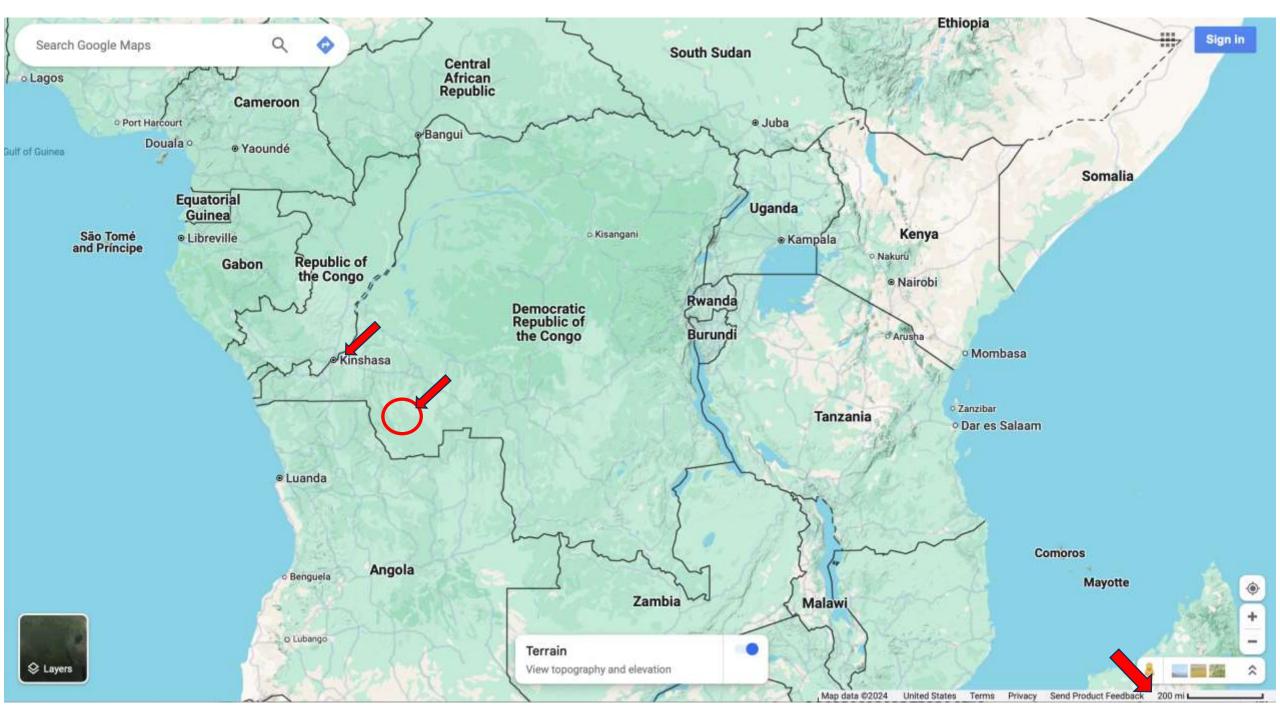
Undiagnosed disease -Democratic Republic of the Congo

8 December 2024

Situation at a glance

"Between 24 October and 5 December 2024, Panzi health zone in Kwango Province of Democratic Republic of the Congo recorded 406 cases of an undiagnosed disease with symptoms of **fever**, headache, cough, runny nose and body ache. All severe cases were reported to be **severely** malnourished. Among the cases, 31 deaths have been registered. The majority of cases reported are among children, particularly those under five years of age."

Bold added for emphasis



From WHO Update

- "...food insecurity, low vaccination coverage and very limited access to diagnostics and quality case management..."
- Possibilities include
 - Measles, influenza, acute pneumonia (respiratory tract infection), hemolytic uremic syndrome from *E. coli*, COVID-19, and malaria.

171st of 177 in GDP per Capita

# 11	Country 1	GDP (nominal, 2022) 🎵	GDP (abbrev.) 🎵	GDP growth 🎵	Population (2022) Iî	GDP per capita 🎝	Share of World GDP 1
135	Malawi	\$13,164,667,627	\$13.16 billion	0.92%	20,568,728	\$640	0.01%
85	DR Congo	\$58,065,953,573	\$58.07 billion	8.92%	102,396,968	\$567	0.06%
132	<u>Niger</u>	\$13,969,605,583	\$13.97 billion	11.50%	25,311,973	\$552	0.01%
120	<u>Mozambique</u>	\$17,851,491,428	\$17.85 billion	4.15%	32,656,246	\$547	0.02%
129	<u>Madagascar</u>	\$14,954,967,604	\$14.95 billion	3.80%	30,437,261	\$491	0.01%
151	Sierra Leone	\$3,970,343,852	\$3.97 billion	3.50%	8,276,807	\$480	0.00%
158	<u>Central</u> <u>African</u> <u>Republic</u>	\$2,382,618,615	\$2.38 billion	0.00%	5,098,039	\$467	0.00%
155	<u>Burundi</u>	\$3,073,414,678	\$3.07 billion	1.85%	13,321,097	\$231	0.00%

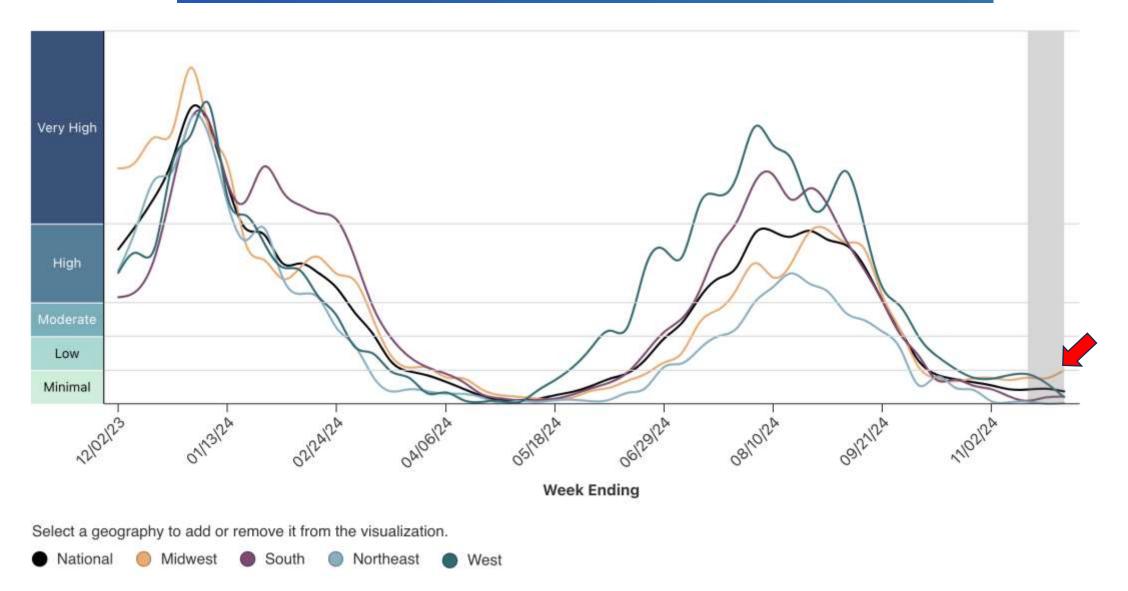
worldometer

COVID-19 Depressing News of the Week





National Wastewater Surveillance System (NWSS)



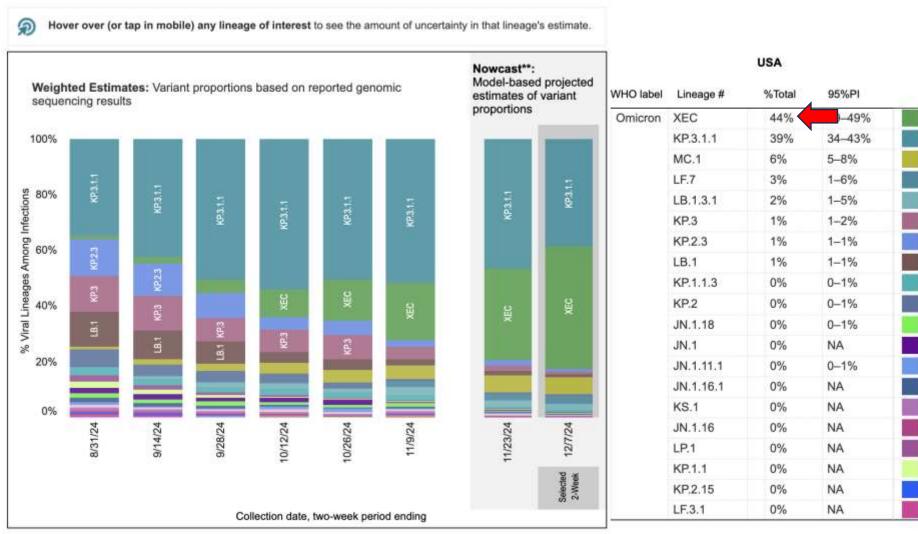


Centers for Disease Control and Prevention CDC 24/7: Saving Lives, Protecting People™

COVID Data Tracker

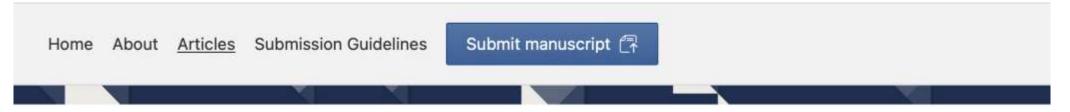
Weighted and Nowcast Estimates in United States for 2-Week Periods in 8/18/2024 – 12/7/2024

Nowcast Estimates in United States for 11/24/2024 – 12/7/2024



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Journal of Translational Medicine



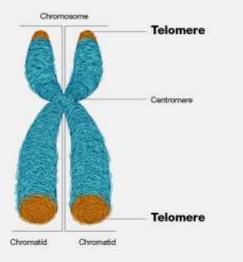
Research Open access Published: 21 November 2024

Maternal infection of SARS-CoV-2 during the first and second trimesters leads to newborn telomere shortening

Lina Wang, Junfeng Zhang, Fangfei Liu, Qixiang Shi, Fengchun Gao, Junmin Li, Yanhua Liu, Feng Kong

Journal of Translational Medicine 22, Article number: 1049 (2024) Cite this article

390 Accesses 37 Altmetric Metrics



National Human Genome Institute

"Telomere length shortens with age. Progressive shortening of telomeres leads to senescence, apoptosis, or oncogenic transformation of somatic cells, affecting the health and lifespan of an individual. Shorter telomeres have been associated with increased incidence of diseases and poor survival."

Shammas. Curr Opin Clin Nutr Metab Care. 2011 Jan;14(1):28–34. doi: <u>10.1097/MCO.0b013e32834121b1</u>



Table 1 Summary of maternal and newborn information

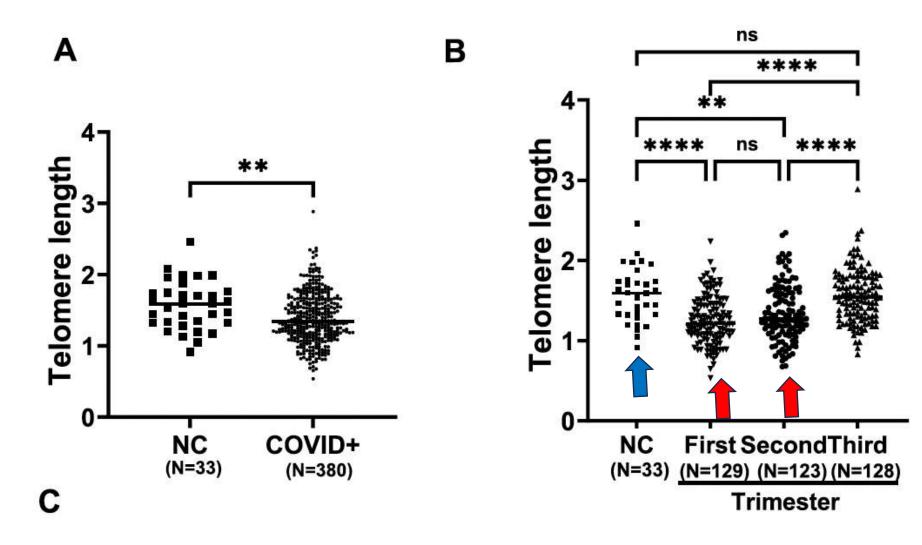
• 413 normally delivered newborns

- COVID +/COVID during pregnancy
- Measured telomere length in cord blood

	Uninfected	First-trimester	Second-trimester	Third-trimester	P-Value
	(N=33)	(N=129)	(N=123)	(N=128)	
	Mean ± SD	Mean±SD	Mean±SD	Mean±SD	
Maternal age (year)	30.00±4.18	29.31 ± 4.74	29.17±4.16	30.09±4.02	0.177
Spouse age (year)	31.17 ± 4.74	30.06 ± 4.43	30.12 ± 4.30	30.98 ± 4.44	0.228
Prepregnancy weight (kg)	58.32 ± 5.52	57.28 ± 7.36	59.27±8.42	59.42±11.09	0.244
Prepartum weight (kg)	73.36±6.59	71.82±8.42	74.48±8.87	73.90 ± 11.71	0.150
Height (cm)	163.94 ± 5.44	162.78±4.21	163.05 ± 5.56	162.89±4.70	0.797
Prepregnancy BMI (kg/m ²)	21.75±2.36	21.62±2.65	22.31 ± 3.16	22.35 ± 3.83	0.380
Prenatal BMI (kg/m ²)	27.37 ± 2.92	27.11±3.02	28.03±3.22	27.81±3.98	0.175
Abdominal circumference (cm)	102.31 ± 6.33	101.07±6.86	102.44 ± 5.93	102.16±7.10	0.289
Fundal height (cm)	34.31±1.95	34.65±2.77	34.30±1.72	34.23±2.06	0.665
White blood cell count (x 10 ⁹ /l)	9.95±2.65	9.38±2.31	9.46±2.27	9.12 ± 2.99	0.217
Percentage of neutrophil (%)	74.66±4.92	74.28±7.14	73.04±7.35	71.87±7.72	0.017
ALT (μ/l)	10.69 ± 4.40	11.05 ± 5.90	10.90 ± 5.19	13.77±9.27	0.053
AST (μ/l)	14.13 ± 3.17	14.15 ± 3.34	15.05 ± 10.24	15.94±6.25	0.165
Creatinine (µmol/l)	43.58 ± 6.23	45.80±7.67	44.51±6.95	45.05±11.25	0.119
Urea nitrogen (mmol/l)	2.98±0.73	3.09 ± 0.71	3.13±0.79	4.52 ± 14.40	0.799
Uric acid (µmol/l)	250.23±71.76	243.16±58.29	239.07±54.83	255.51±67.66	0.133
Weight of the newborn baby (g)	3382.35±501.34	3242.08±342.38	3311.46±433.84	3291,25±467,33	0.193
Gravidity	1.91±0.92	1.87±1.01	1.82±0.94	2.08±1.12	0.294
Parity	1.46±0.56	1.44±0.60	1.46±0.62	1.47±0.56	0.895
Sex of the newborn baby					0.344
Male	16 (48% ^a)	55 (43% ^a)	61 (50% ^a)	69 (54% ^a)	
Female	17 (53% ^a)	74 (57% ^a)	62 (50%)	59 (46% ^a)	

BMI body mass index, ALT Alanine transaminase, AST Aspartate transaminase, SD standard deviation

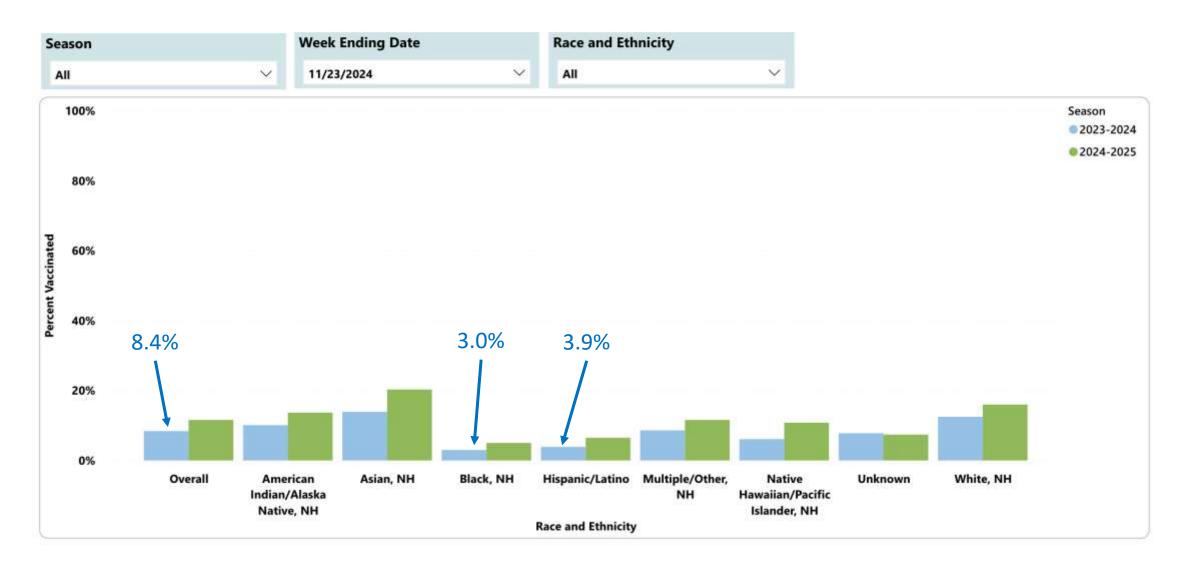
^a Represents the proportion of different sexes in each group



"We show that newborn TL is significantly shorter if maternal infection of SARS-CoV-2 occurs in the first and second trimesters of pregnancy."



Figure 2B. Percent of Pregnant Women Ages 18–49 Years Who Have Received a COVID-19 Vaccine by Week, Race and Ethnicity, and Season Data Source: Vaccine Safety Datalink



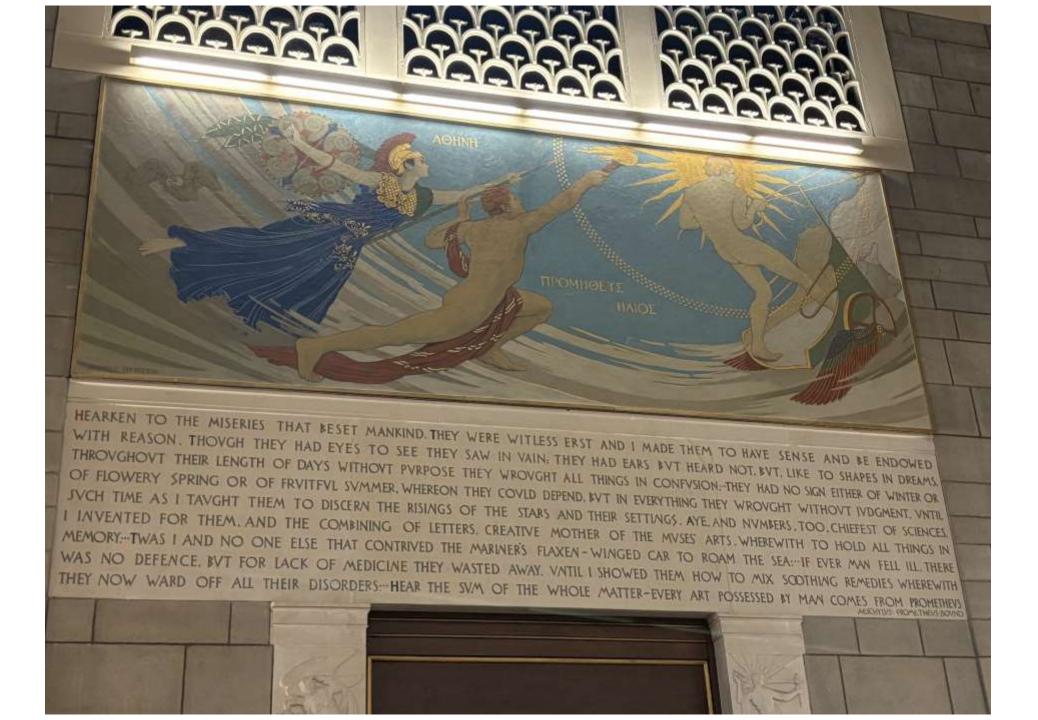


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Vaccines: Hepatitis B

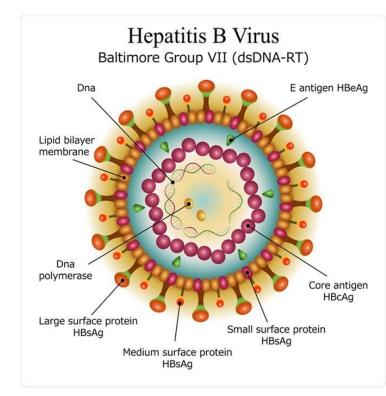
Alice Sato, MD PhD (she/her)

Associate Professor, UNMC Pediatric Infectious Disease Hospital Epidemiologist, Children's Nebraska 12/10/24



Hepatitis B

- Small enveloped DNA virus
- Causes both acute and chronic infections in humans
- Transmission: blood and body fluids
 - IVDU, sexual contact, perinatal exposure, blood transfusion, household contact
- Incubation period: 40-180 days





Acute HepB Infection

Typical symptoms of hepatitis B include:

- Fever
- Loss of appetite
- Nausea, stomach pain, throwing up
- Feeling tired, weak
- Joint pain
- Dark urine or clay-colored stools
- Yellow skin or eyes (jaundice)



Acute HepB Infection

Infection may be symptomatic or asymptomatic

 Spectrum from nonspecific nausea/malaise/anorexia to FHF (fulminant hepatic failure)

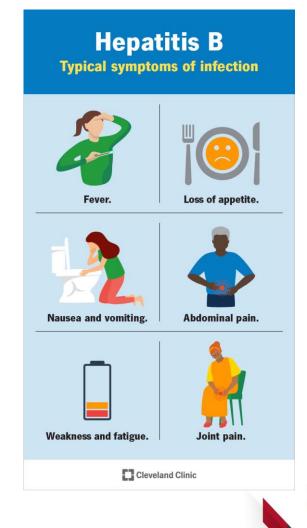
Extrahepatic complications

- aplastic anemia
- membranous>membranoproliferative glomerulonephritis
- polyarteritis nodosa



Acute HepB Infection

- Increasing chance of presenting with acute hepatitis with age in children or adults >30
 - infants <1%
 - age 1-5 5-15%
 - age >5 30-50%
- Almost all children 6 years and older and adults infected with acute HBV recover completely with no lasting liver damage



Hepatitis B infection

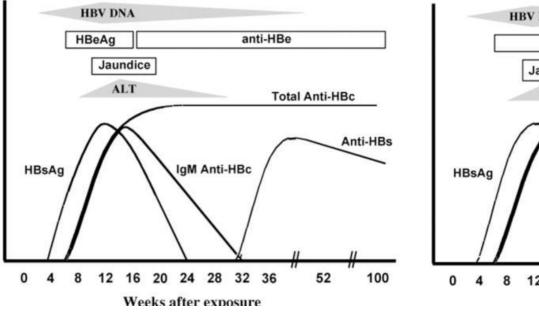
In adults, 5%–10% are unable to clear the virus and become chronically infected

- Many chronically infected persons have mild liver disease with little or no long-term morbidity or mortality
- Other individuals with chronic HBV infection develop active disease, which can progress to cirrhosis and liver cancer
 - causes of up to 50% of hepatocellular carcinomas

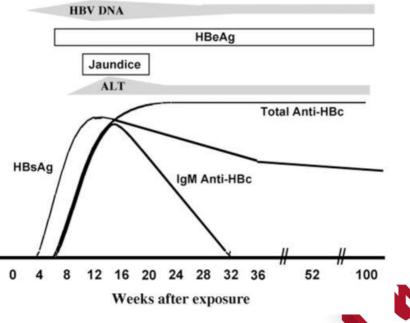


Acute vs Chronic

A Acute Hepatitis B



B Chronic Hepatitis B



Adults

ACIP now recommends HepB vaccination for

- adults age 19-59, including pregnant persons
- adults <u>>60</u> with risk factors
 - may offer to others <u>>60</u>

Vaccine	Dosing Schedule						
He	epatitis B						
Heplisav-B [®] (Dynavax)	2 doses (0 and 1 month)						
Engerix-B [*] (GSK)	3 doses (o, 1, and 6 months)*						
Recombivax HB® (Merck)	3 doses (0, 1, and 6 months)						
Her	patitis A/B						
Twinrix® (GSK)	3 doses (0, 1, and 6 months) ⁴						

Recombivax HB is available in a separate dialysis formulation that is given at 0, 1, and 6 months. This dosing schedule can also be considered for immunocompromised patients.

Twinrix can also be administered on an accelerated schedule, with doses given on day o, day 7, and days 21-30, and a booster dose given at month 12.

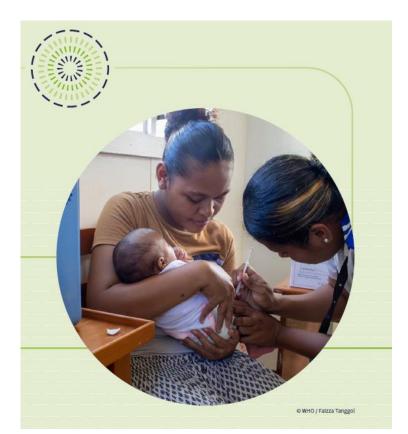
Sept 2024: FDA approved Heplisav-B for indication for pregnant persons

What are the implications for public health practice?

Providers can now administer Engerix-B, Heplisav-B, Recombivax HB, or Twinrix to pregnant persons needing HepB vaccination.



Are pediatricians just mean??





HepB prevention in infants

Table 1 Recommended Child and Adolescent Immunization Schedule for Ages 18 Years or Younger, United States, 2025

These recommendations must be read with the notes that follow. For those who fall behind or start late, provide catch-up vaccination at the earliest opportunity as indicated by the green bars. To determine minimum intervals between doses, see the catch-up schedule (Table 2).

Vaccine and other immunizing agents	Birth	1 mo	2 mos	4 mos	6 mos	9 mos	12 mos	15 mos	18 mos	19–23 mos	2–3 yrs	4–6 yrs	7–10 yrs	11–12 yrs	13–15 yrs	16 yrs	17–18 yrs
Respiratory syncytial virus (RSV-mAb [Nirsevimab])	1 dose depending on maternal RSV vaccination status (See Notes)					1 dose (8 through 19 months), See Notes											
Hepatitis B (HepB)	1st dose	∢ 2nd	dose>		۹		- 3rd dose		>								
Rotavirus (RV): RV1 (2-dose series), RV5 (3-dose series)			1st dose	2nd dose	See Notes												

- Prenatal screening
- Transmitted through infected blood or body fluids
 - Mom HBsAg+ HBeAg+: risk of perinatal infection 70-90%
 - *Mom HBsAg+ HBeAg-: risk of perinatal infection 5-20%*
 - At risk mother consider vaccination!!
- HepB#1 at birth (regardless of maternal history)
- HBIG if at risk



Hepatitis B: infants

- Up to 90% infected perinatally or 1st year of life will develop chronic infection
 - <u>25-50%</u> chronic infection if age 1-5 years old
 - vs 5-10% of infected older children and adults

 In the absence of treatment, <u>up to 25%</u> of infants and children with chronic HBV will die prematurely from HBV-related hepatocellular carcinoma



Hepatitis B Vaccine

Composition

- recombinant HBsAg (**subunit)
 Efficacy
 - 95% (Range, 80%-100%)

Duration of Immunity

20 years or more

Schedule

3 Doses*

Booster doses not routinely recommended





Hepatitis B Vaccine

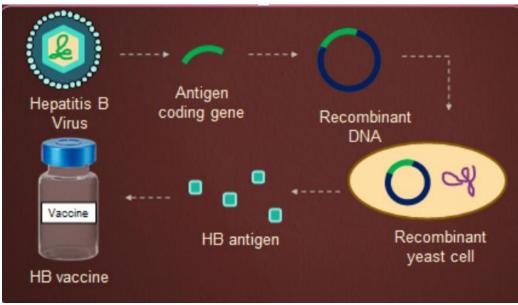
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 Duration of Immunity
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Schedule

3 Doses*

Booster doses not routinely recommended

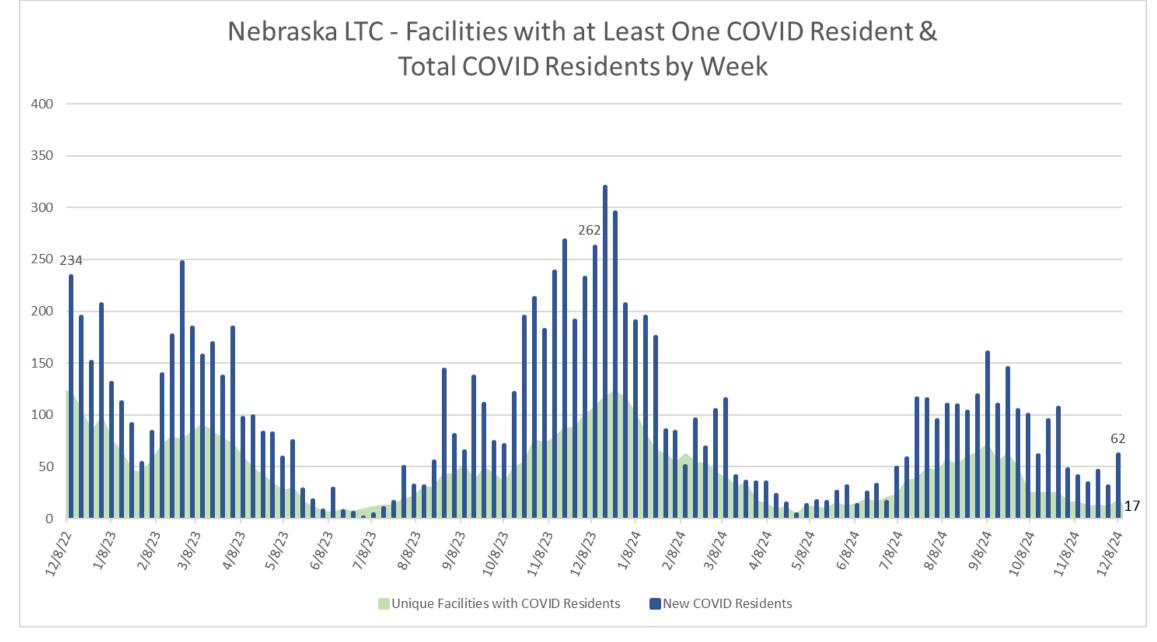


Byjus.com





ICAP LTC & ALF - JUAN TERAN

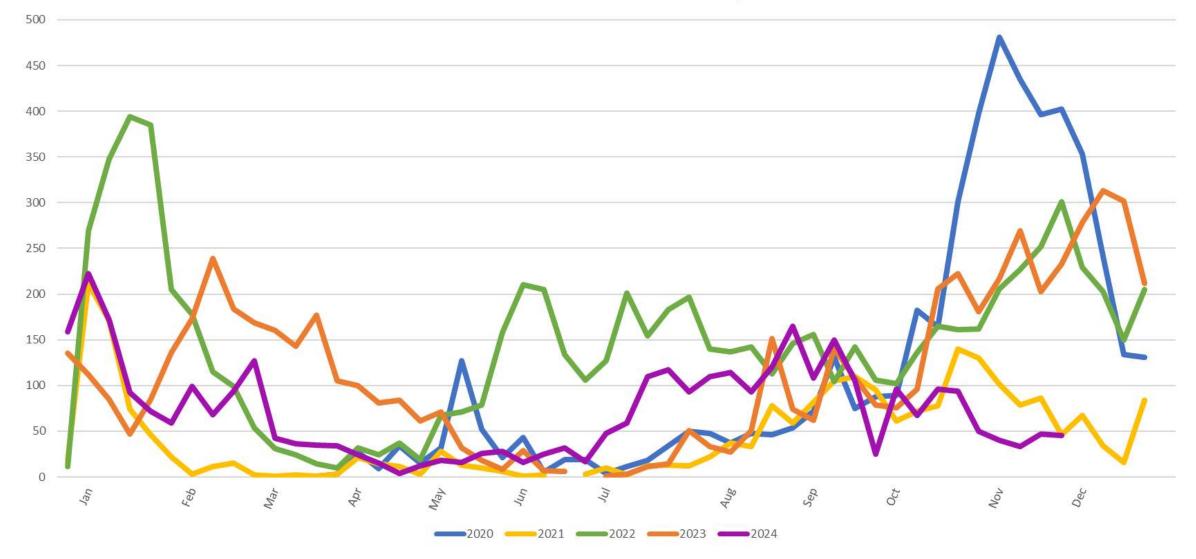


Source: Unofficial Counts Compiled by Nebraska ICAP based on data reported by facilities and DHHS; Actual Numbers may vary slightly



Slide Credit: Dan German

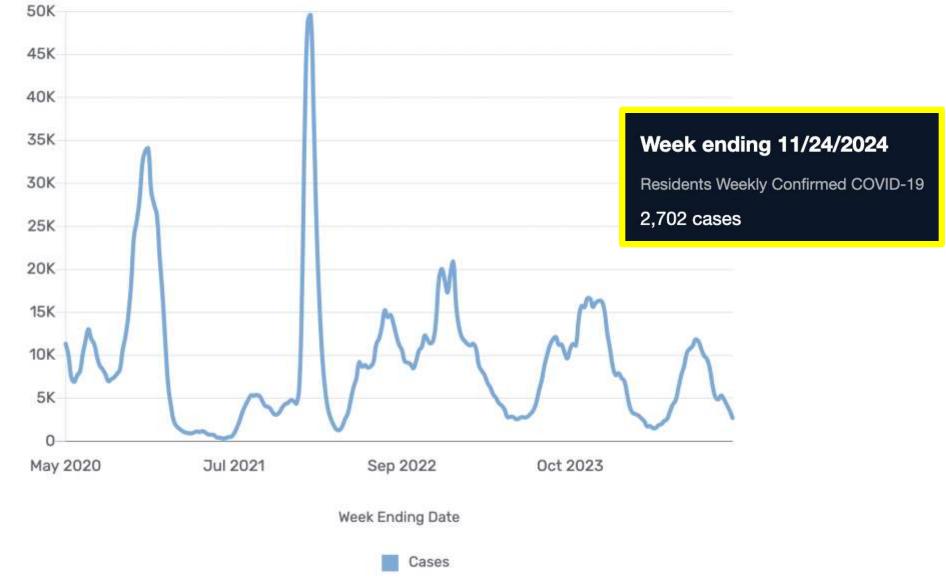
Nebraska LTC COVID Residents by Week





Weekly Resident COVID-19 Confirmed Cases

Note: The most recent week's data is considered preliminary and will be updated the following week.



Nationwide CMS 11/24/24

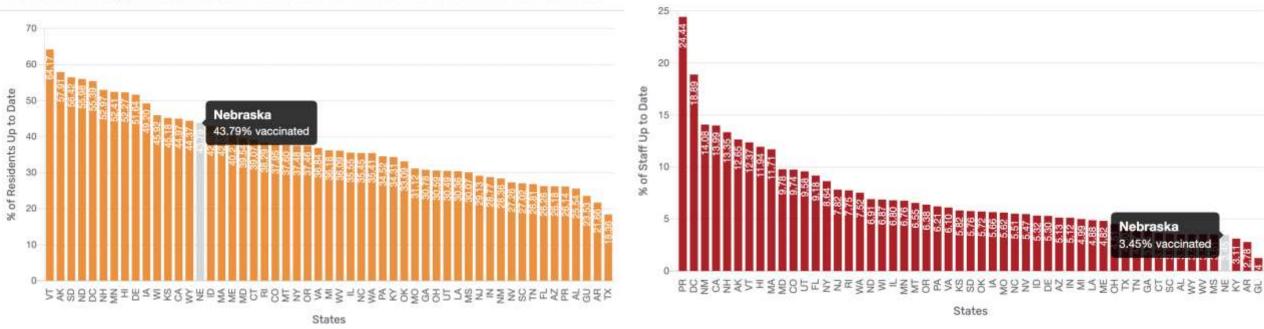
CMS Nursing Home Data

Percentage of Current Residents Up to Date with COVID-19 Vaccines per Facility

This shows the average percentage among facilities who have reported vaccination data in the current or prior week.

Percentage of Current Staff Up to Date with COVID-19 Vaccines per Facility

This shows the average percentage among facilities who have reported vaccination data in the current or prior week.



CMS Nursing Home Data 11/24/24

CMS Requirement in CY2025 AUR Module Data

- Antibiotic Use and Antibiotic Resistance module reporting has been separated
 - Facilities must attest to two separate measures in CY2025.
- Timeline: CY2025 facilities can spend 2025 in the pre-production (building) phase since it is a "new" measure. So, production data is due starting CY2026.
- Exclusions remain similar, but now apply separately to the AU and AR modules

 Applies to eligible hospitals and critical access hospitals that participate in the CMS PI Program

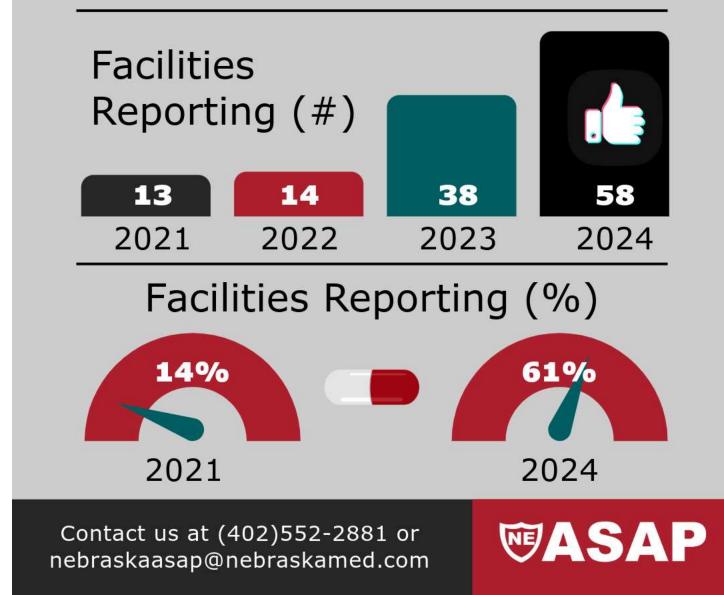


- Most facilities participate in the CMS PI Program
- Reach out to the person(s) in change of quality reporting
- Facilities not paid under the CMS Hospital Inpatient Prospective Payment System (IPPS) are **NOT** included in the CMS PI Program
 - Includes but is not limited to
 - Inpatient rehab hospitals
 - Inpatient psych hospitals
 - Long term acute care hospitals

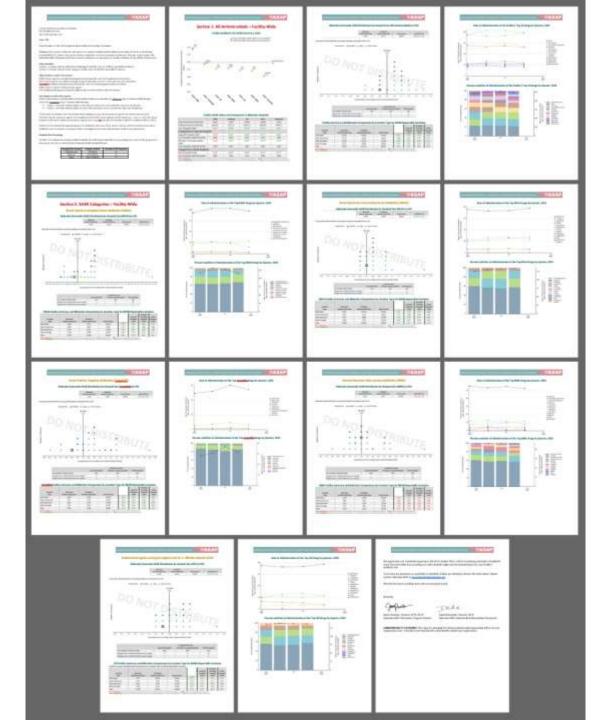
NHSN AUR Implementation in Nebraska – Funding Assistance

- Nebraska DHHS HAI/AR program currently has funding available to dedicate towards assisting hospitals with implementing NHSN Antibiotic Use and Resistance module
- Funding distributed by reimbursing at least part of their expenses for program implementation incurred between February 2022 – July 2025
- Facilities meeting all requirements for funding may request reimbursement for related eligible expenses up to the maximum amount allowed for their facility based on licensed bed size as follows:
 - Facilities with <100 licensed beds can request a maximum of \$10,000 in reimbursement
 - Facilities with 101-200 licensed beds can request a maximum of \$15,000 in reimbursement
 - Facilities with ≥201 licensed beds can request a maximum of \$20,000 in reimbursement

Nebraska NHSN AUR Rapid Reporting Increase



Nebraska ASAP Annual NHSN AU Reports



Note: Fictitious data for illustrative purposes only

HOT TOPICS / OTHER UPDATES



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Contact Information



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