TN NHSN User Call

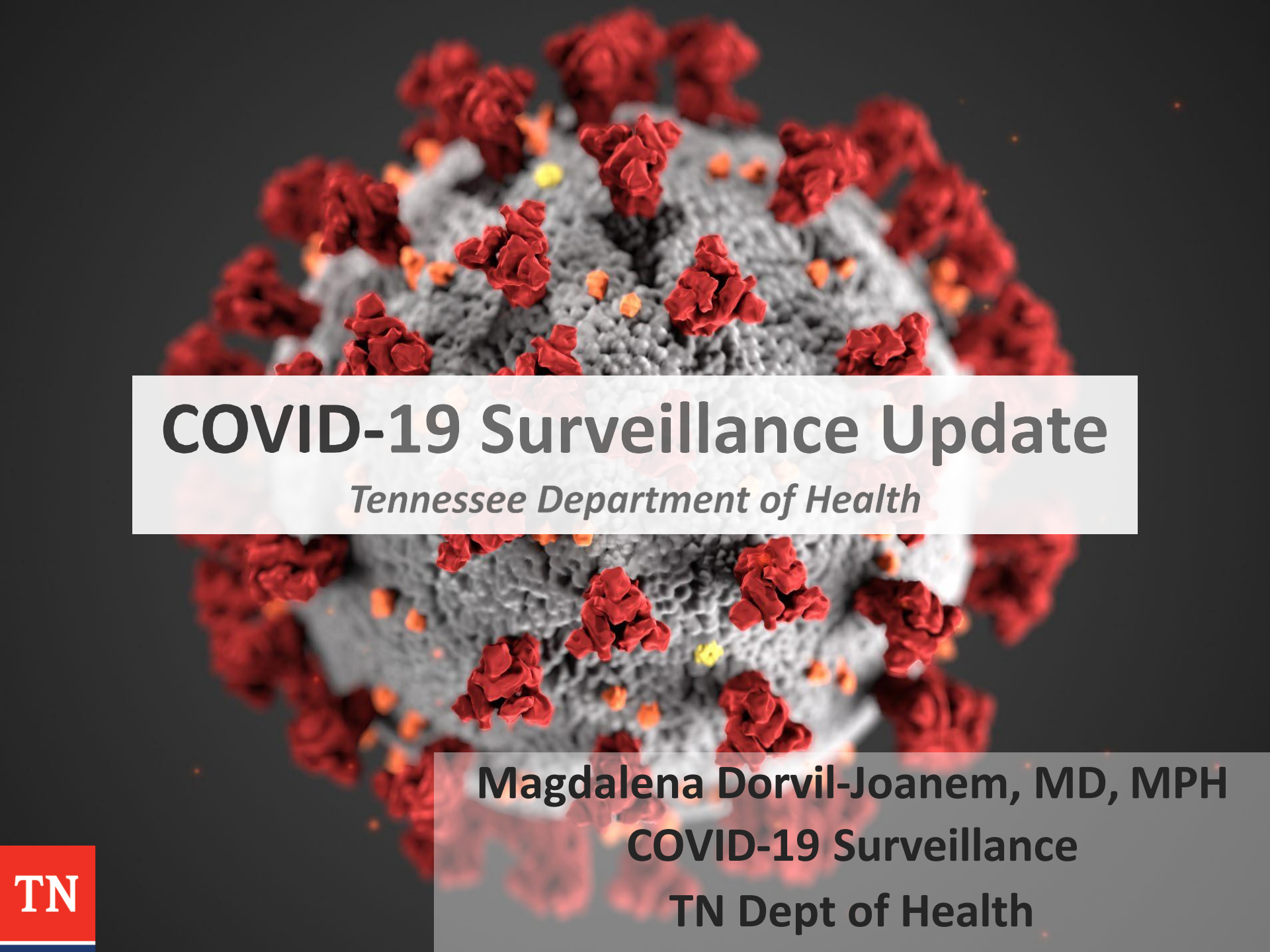
Tuesday, January 17, 10am CT

Agenda

- COVID-19 Update
  - Magdalena Dorvil-Joanem, MD, MPH
- NHSN Update and TDH Annual Training Announcement
  - Vicky Reed, AAS, RN, CIC
- Tennessee Reportable Disease Updated Guidance
  - Dr. Simone Godwin, DVM, MPH, MS
- Multi-Drug Resistant Organism (MDRO) Surveillance Team Update
  - Erika Kurtz, MPH
- C. Auris Update
  - Carolyn A. Stover, MPH, CPH

TDH NHSN Team

- Dr. Simone Godwin, DVM, MPH, MS
  - Senior NHSN Epidemiologist
  - Outbreak Lead
  - Drug Diversion Team Epidemiologist
- Vicky Reed, AAS, RN, CIC
  - Senior NHSN Public Health Nurse Consultant
    - Lead Technological Assistance
  - Infection Prevention and Control Specialist
- Tara Suhs, MPH
  - Assistant NHSN Epidemiologist
  - MRSA Initiative Lead
- Ashley Gambrell, MPH
  - Assistant NHSN Epidemiologist
- Marissa Turner, MPH
  - Assistant NHSN Epidemiologist
- Alex Kurutz, MPH
  - Dialysis Epidemiologist



COVID-19 Surveillance Update

Tennessee Department of Health

Magdalena Dorvil-Joanem, MD, MPH
COVID-19 Surveillance
TN Dept of Health

TN

COVID-19 Trends in TN & US

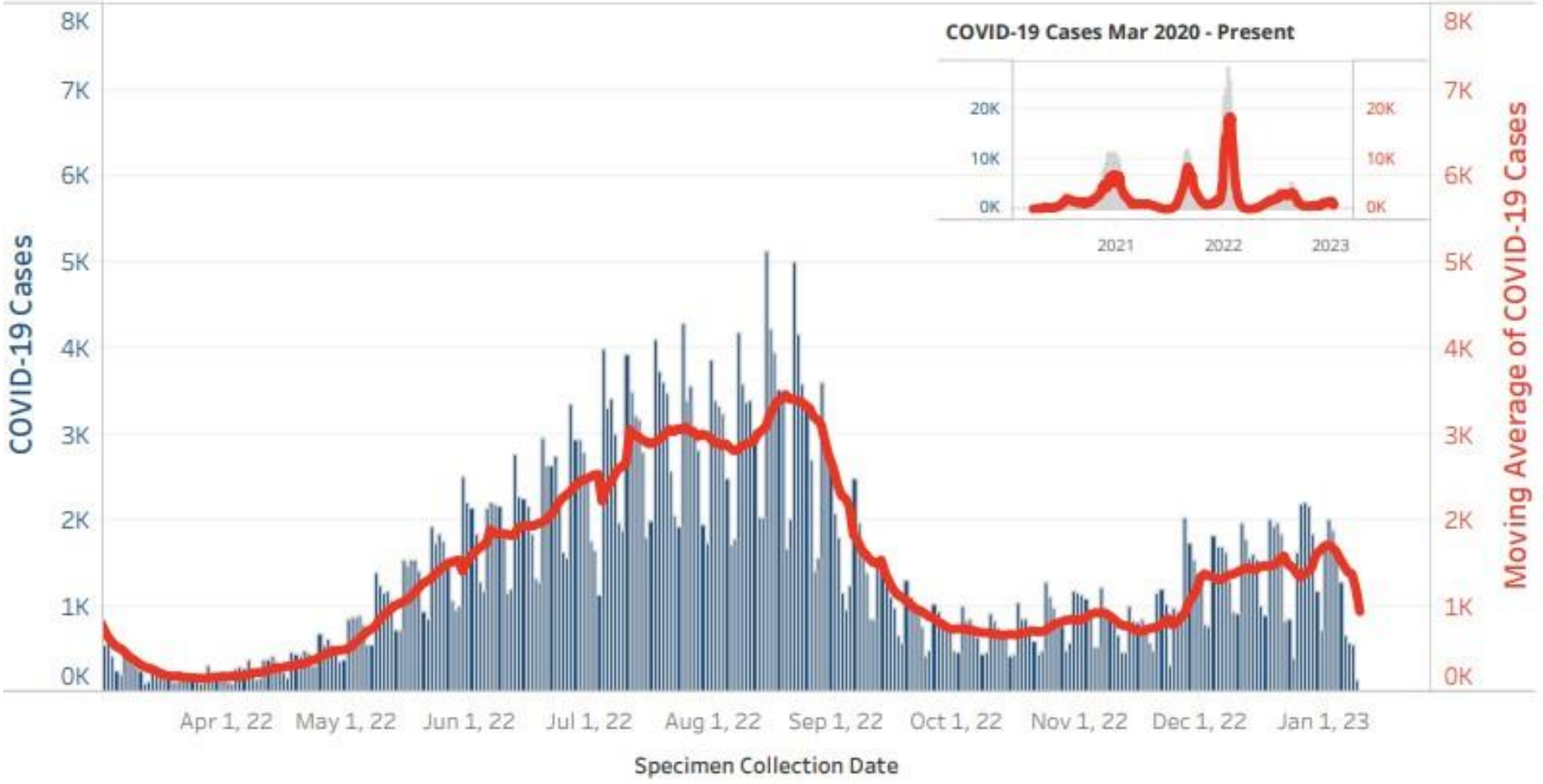
- **Tennessee**
  - **New cases stable (total ~8,570/week ending 01/07)**
  - **Hospitalizations fairly stable (848 hospitalized as of 1/10)**
  - **All TN counties have high or substantial community transmission EXCEPT Grundy County with moderate community transmission**

- **U.S.A.**
  - **Cases slight decrease**
  - **Deaths increasing**
  - **New hospitalizations fairly stable**

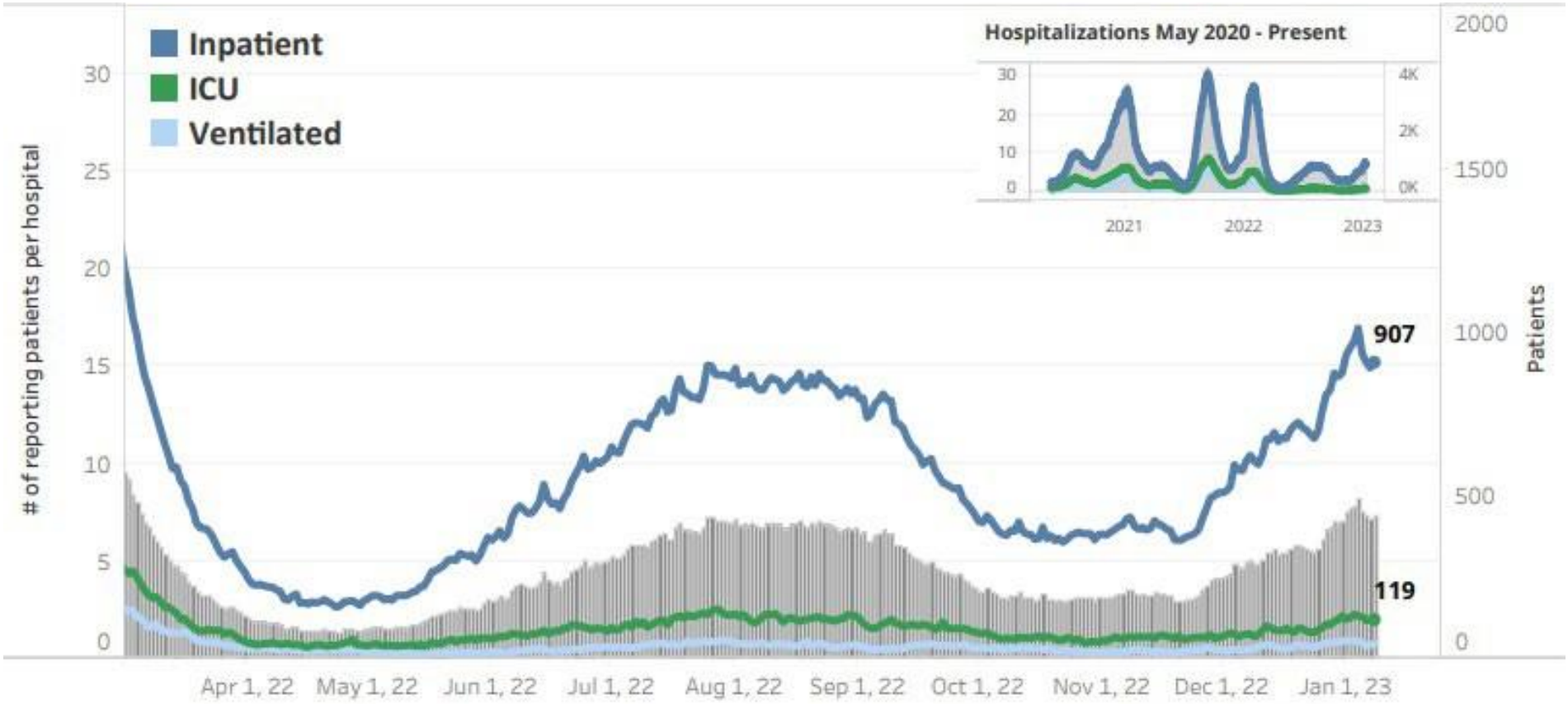
TN Case Counts

2,451,618 Total Cases

COVID-19 Cases by Specimen Collection Date[1]



Current TN COVID Hospitalizations

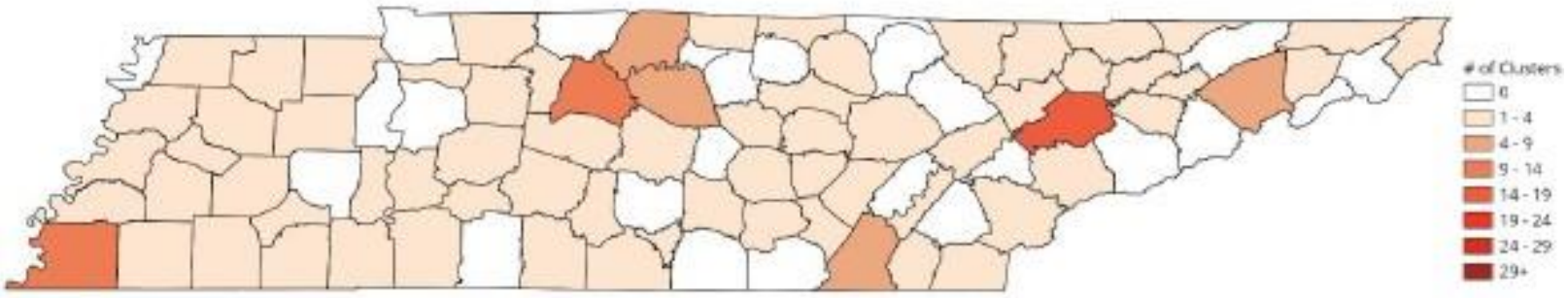


COVID Cluster in High-Risk Settings

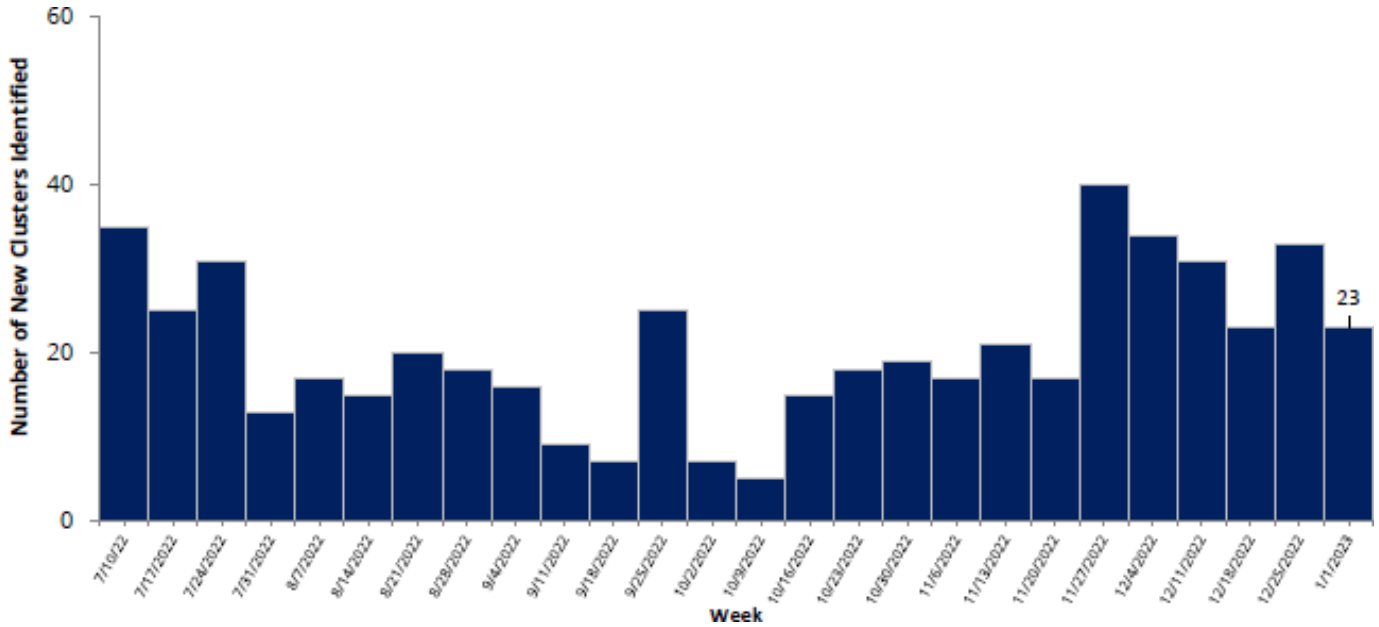
165 Total Active Clusters

High-risk settings include long-term care facilities, correctional facilities, shelters, and other congregate settings

Active Clusters by County



Confirmed Clusters by Week

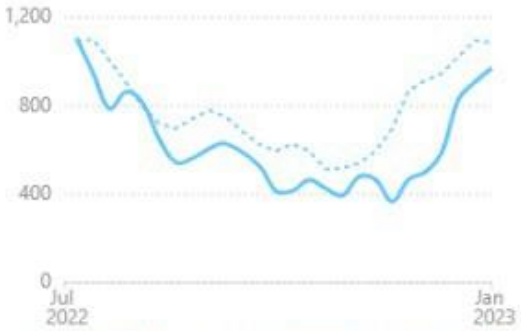


TN Wastewater Data

Chester County, TN

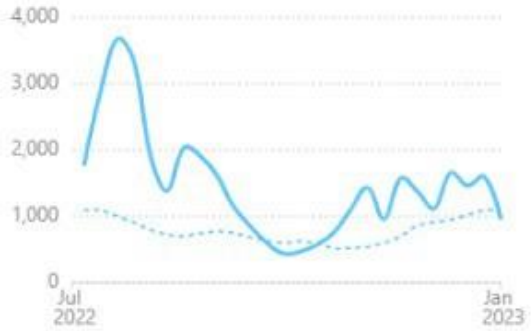
BQ.1*: **88.0%** • BA.5*: **12.0%** • BA.4*: **0%**

Davidson County, TN



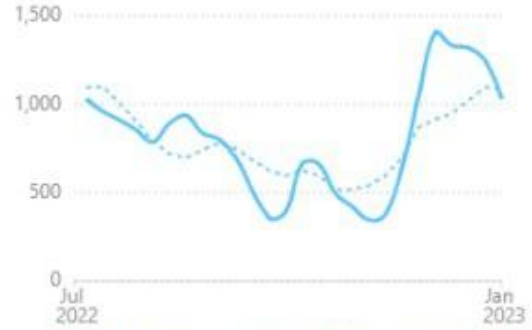
BA.5*: **50.0%** • BQ.1*: **50.0%** • BA.4*: **0%**

Hamilton County, TN



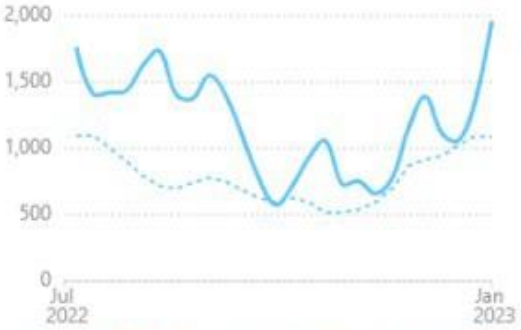
no variant data available

Shelby County, TN



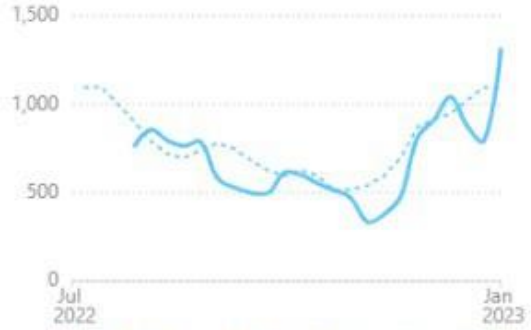
BQ.1*: **94.2%** • BA.5*: **5.8%** • BA.4*: **0%**

Sullivan County, TN



BA.5*: **100.0%** • BA.4*: **0%** • BQ.1*: **0%**

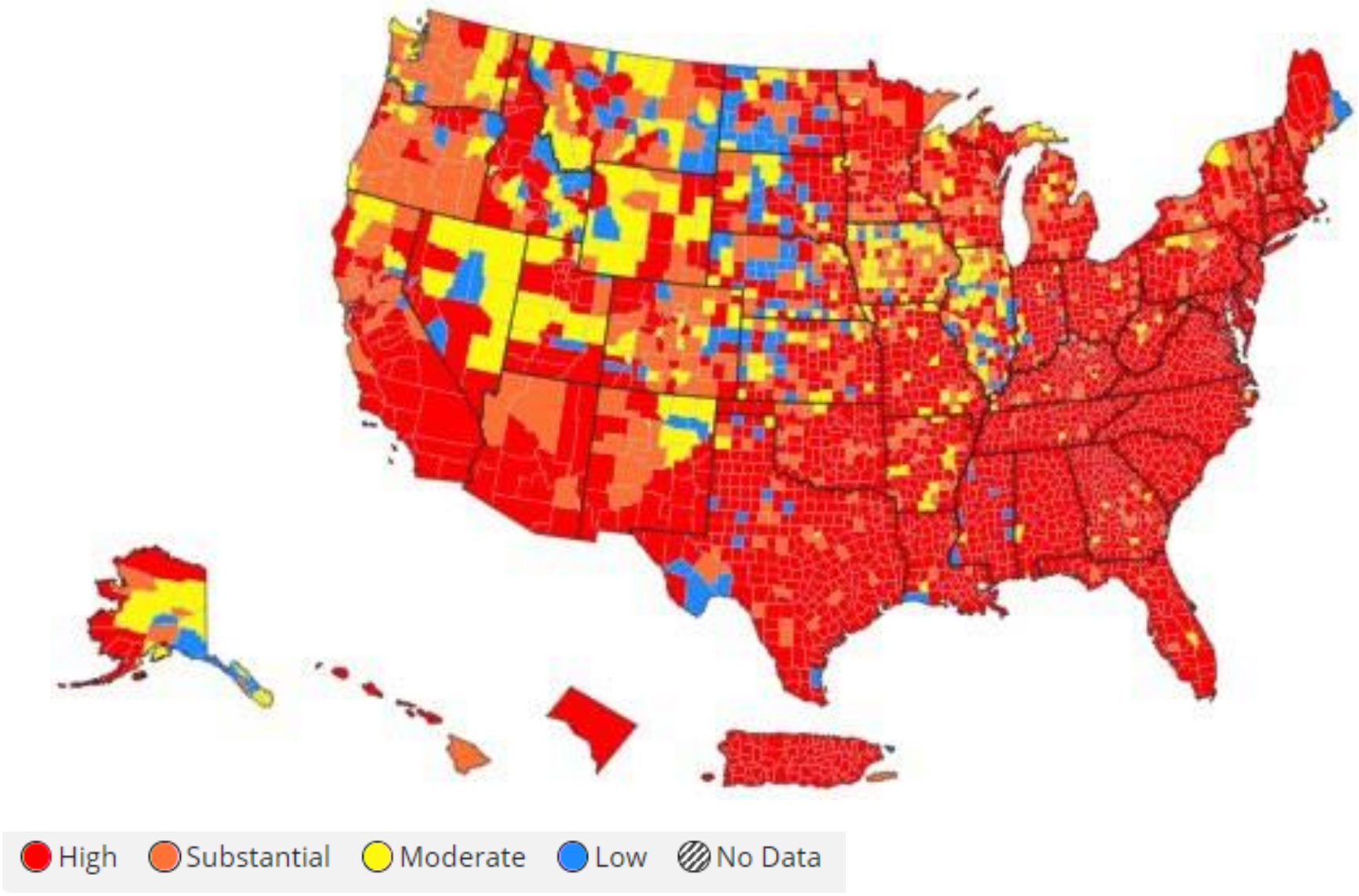
Sumner County, TN



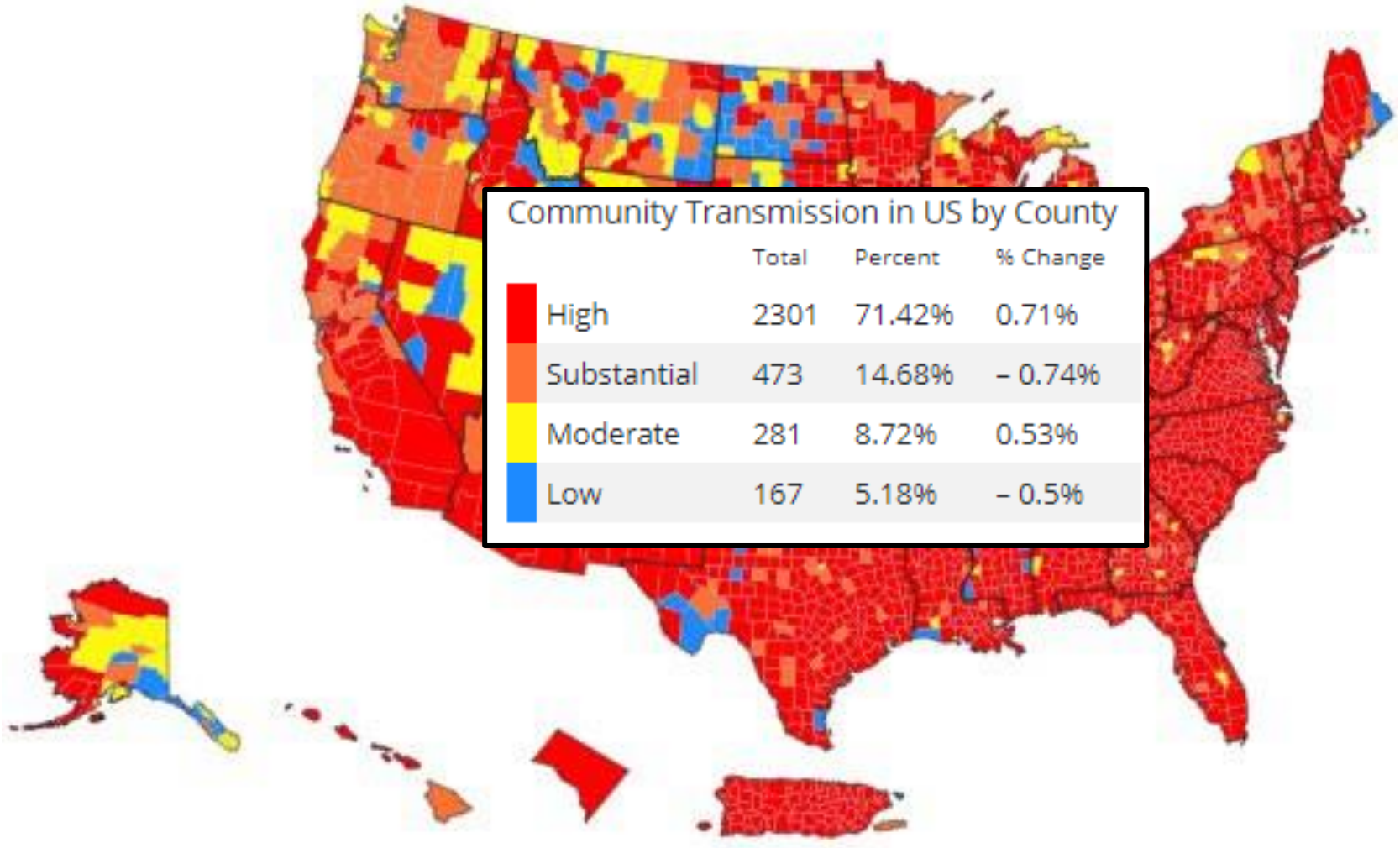
BA.5*: **92.7%** • BQ.1*: **7.3%** • BA.4*: **0%**

Source: Wastewater data from Biobot Analytics, Inc.; Clinical data from USAFacts

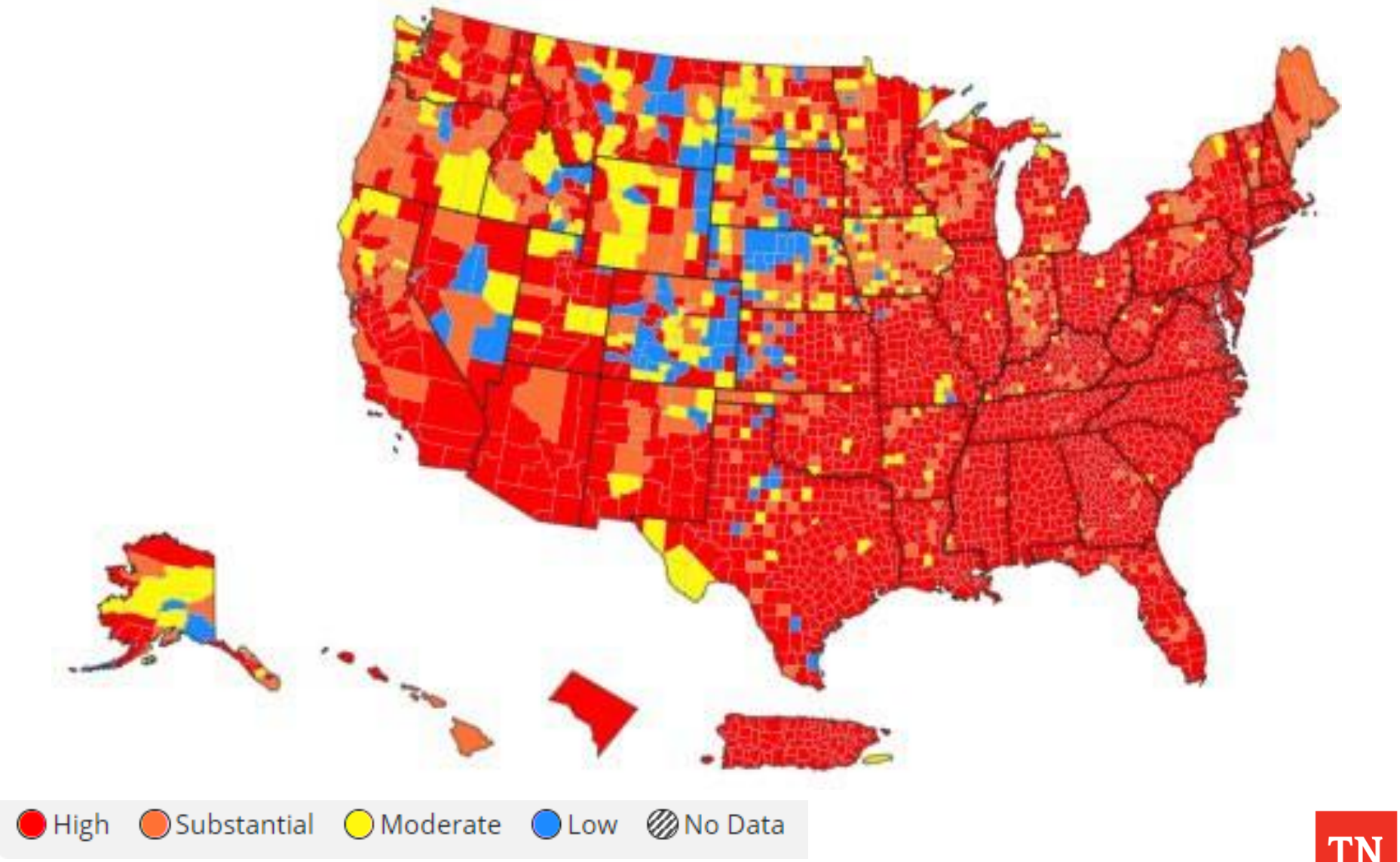
Community Transmission Nationally



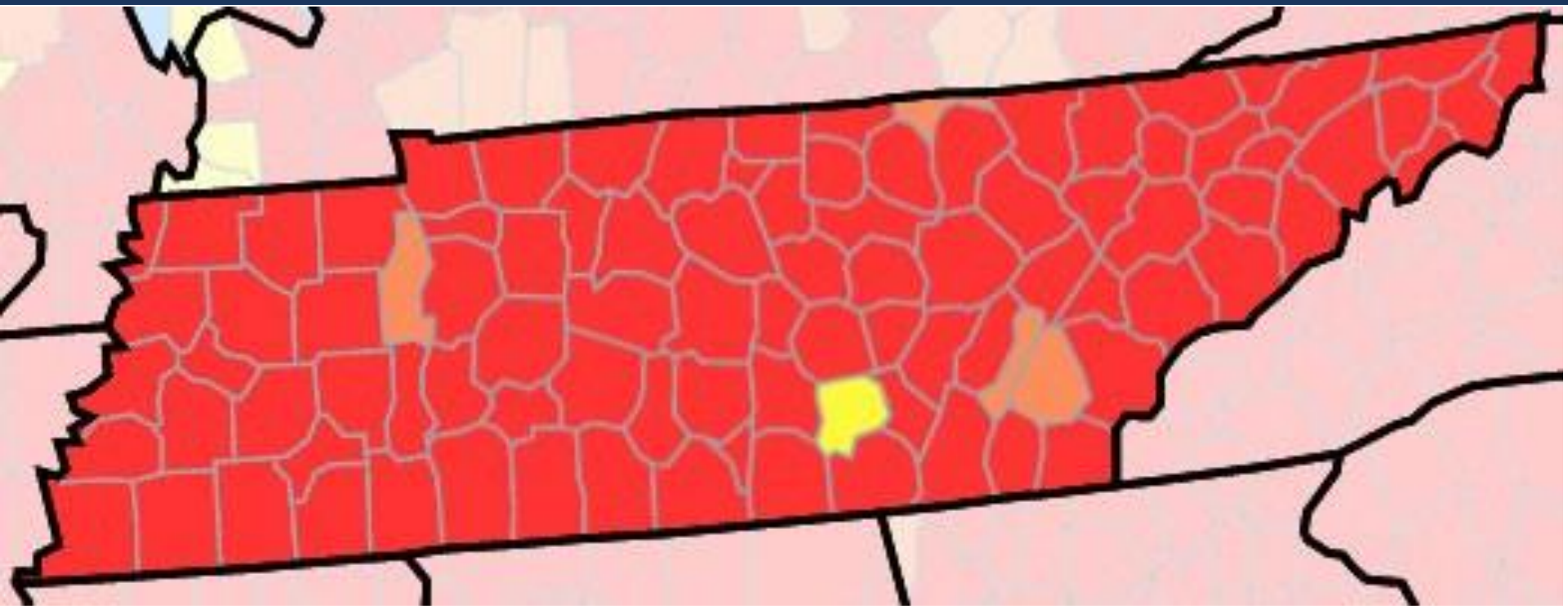
Community Transmission Nationally



Community Transmission Nationally

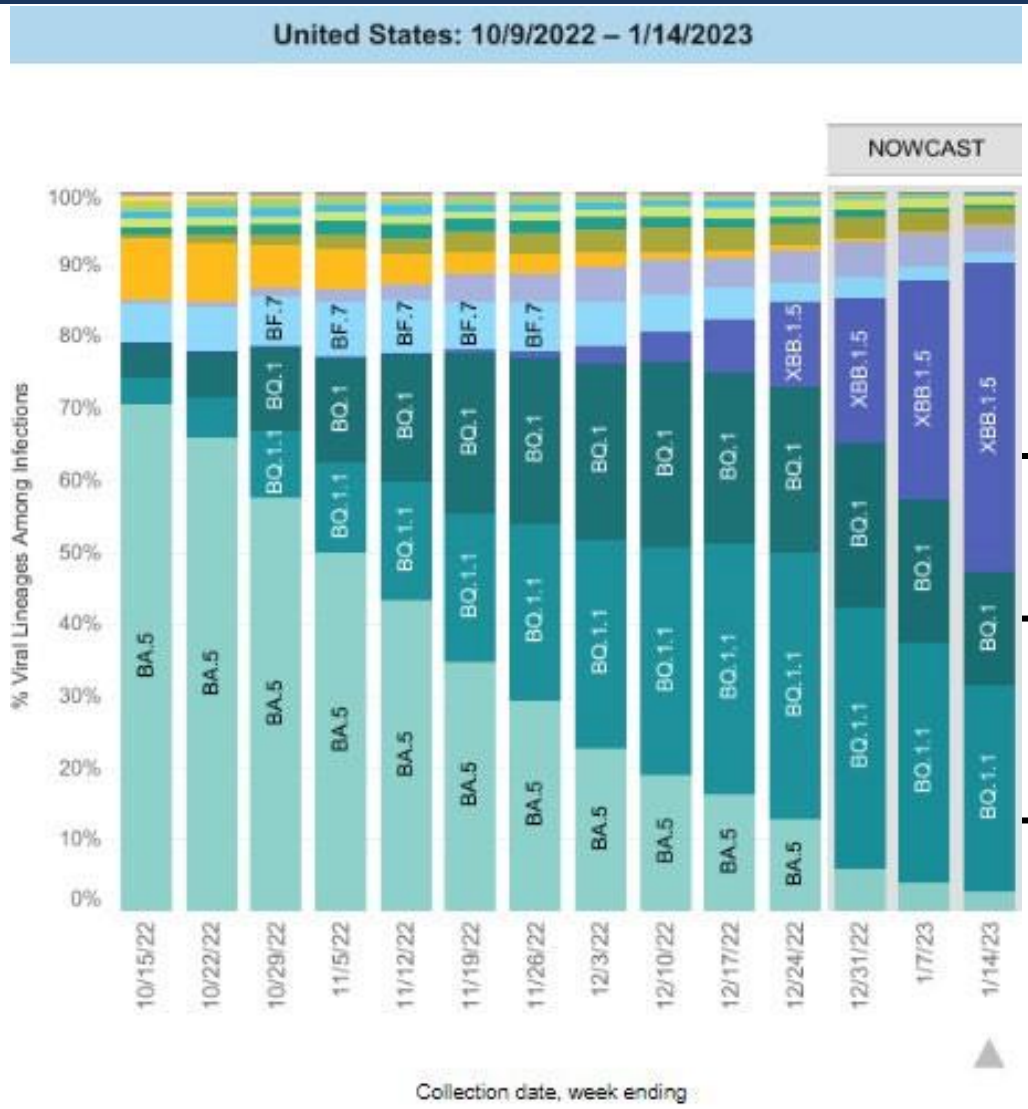


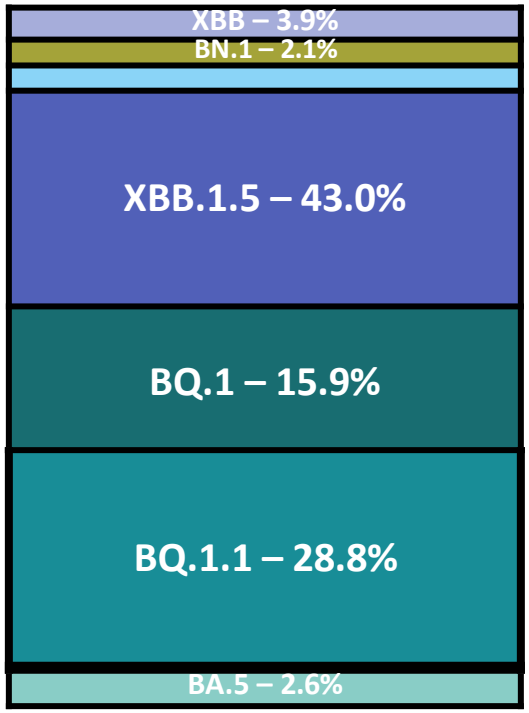
Community Transmission in Tennessee



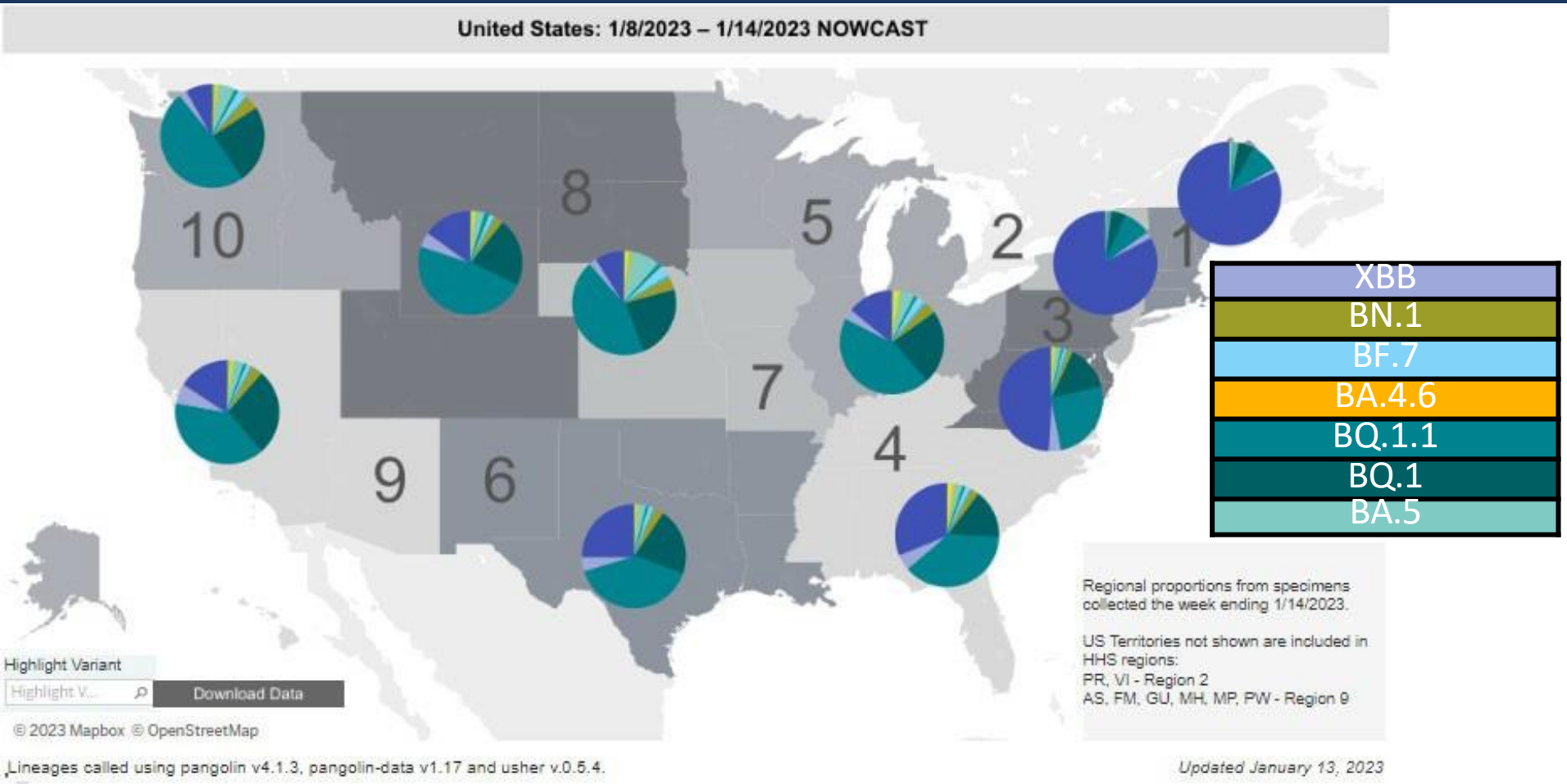
High Substantial Moderate Low No Data

US Variant Proportions





Variant Proportions by HHS Region



Vaccine Update (as of 01/09/2022)

- **10,863,731 doses administered**

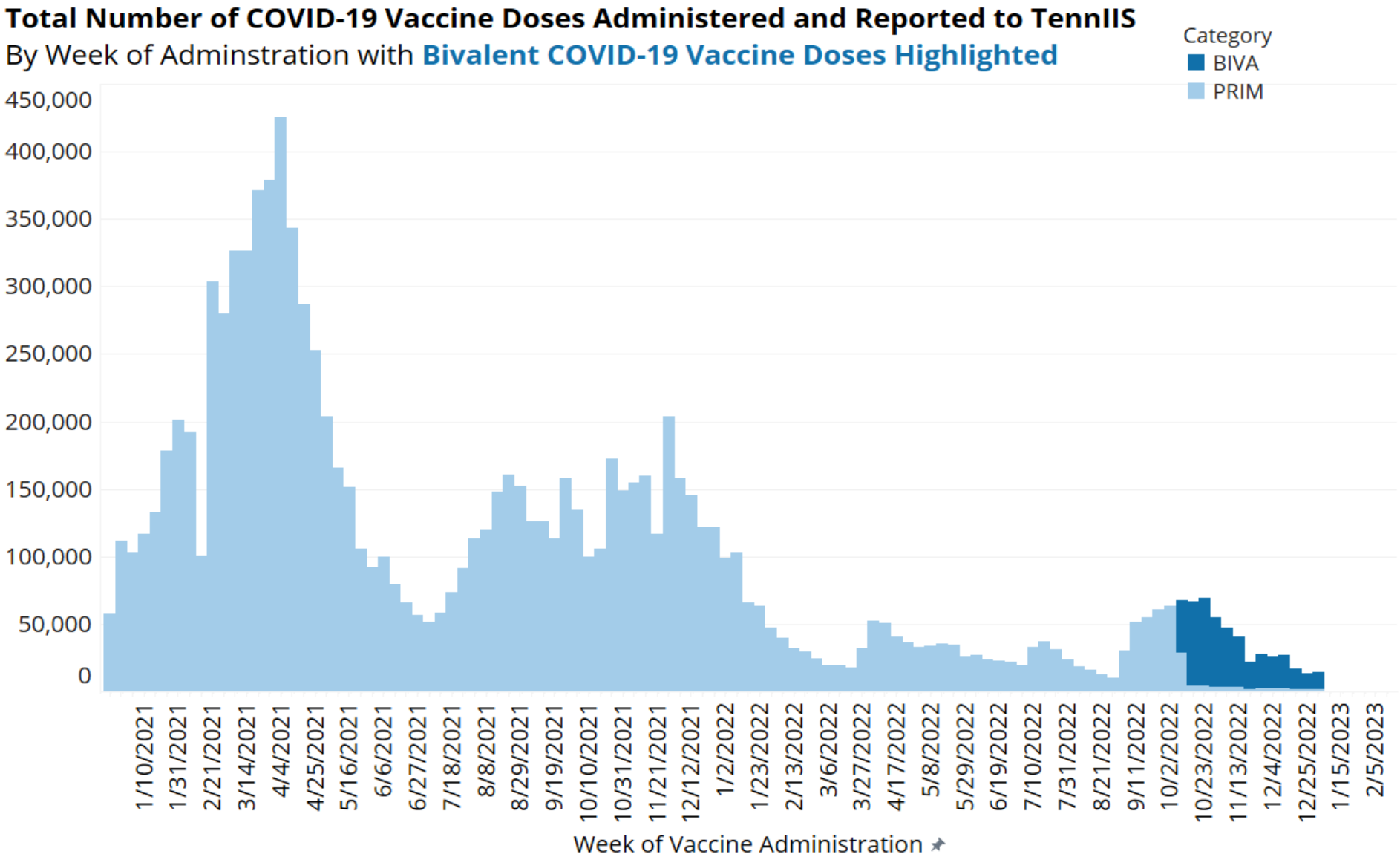
- **Tennesseans with at least one dose (% of total population)**
  - **4,012,437 or 58.3% (previously 58.2%) [1]**
  - **National rate = 80.9% (previously 80.8%) [2]**

- **Tennesseans completing primary series (% of total population)**
  - **3,237,245 or 47.0% (previously 47.2%) [1]**
  - **National rate = 69.1% (previously 69%) [2]**
  - **Ranks 46th compared to all Jurisdiction's (State/Territory) or Federal Entity**

- **Tennesseans with Bivalent Booster (% of total population)**
  - **384,575 or 5.58% (previously 5.35%)[1]**
  - **National rate = 21.9% (previously 20.9%)[2]**

[1] As reported by TennIIS: https://www.tn.gov/health/cedep/ncov/covid-19-vaccine.html
[2] As reported by CDC: https://covid.cdc.gov/covid-data-tracker/#vaccinations

Vaccine Uptake Trends



NHSN Updates

NHSN updates

- **The deadline to enter data for Quarter 3, 2022 (July 1-September 30) into NHSN is February 15, 2023, for facilities that participate in certain CMS quality reporting programs.**
- **NHSN has posted the following documents to the website for use in 2023:**
  - **Patient Safety Component Surveillance Protocols**
  - **Patient Safety Components Tables of Instructions (TOI)**
  - **Outpatient Procedure Component Surveillance Protocols**
  - **Outpatient Procedure Component Tables of Instructions (TOI)**
  - **Neonatal Component (Late-onset Sepsis/ Meningitis Module) Surveillance Protocol**
- **The 2022 protocols, will remain posted on the lower left-hand corner of the NHSN home page under "Manuals & Protocols."**
- **Summaries of significant updates to the PSC, OPC, and Neonatal Component protocols has also been posted.**

NHSN updates

- **An update to the optional Sex at Birth and Gender Identity fields.**
- **Data collection for these fields has been suspended.**
  - **The fields are available in the NHSN application for manual entry and comma separated values (CSV) file uploads**
  - **NHSN asks that you do NOT enter data into these fields.**
- **The Sex at Birth and Gender Identity fields are scheduled to be removed from the application effective January 21, 2023.**
- **NHSN will keep you informed as to when you can resume collection of these data.**
- **This update effects Patient Safety, Outpatient Procedures, Dialysis and Biovigilance Components**

TDH NHSN Training Webinars 2023

- **CLABSI/CAUTI Surveillance**
  - **Monday January 23, 2023, 10 a.m. CT**
- **SSI Surveillance**
  - **Monday January 30, 2023, 10 a.m. CT**
- **VAE Surveillance**
  - **Monday February 6, 2023, 10 a.m. CT**
- **LabID**
  - **Monday February 13, 2023, 10 a.m. CT**
- **AU/AR**
  - **Monday February 27, 2023, 10 a.m. CT**
- **Analysis**
  - **Monday March 6, 2023, 10 a.m. CT**

TDH Virtual Case Based Training Scenarios 2023

- **3 Identical Sessions, choose one that works for you**
- **Registration links to follow in January**
- **Case Study Workbook will be sent the week prior to the session**
- **Sessions:**
  - **Case Training 1 – Thursday, March 9th 1 pm – 4 pm CT**
  - **Case Training 2 – Wednesday, March 15th 8 am – 11 am CT**
  - **Case Training 3 – Friday, March 17th 8 am – 11 am CT**

2023 NHSN Virtual Annual Training Updates

- **The Centers for Disease Control and Prevention's National Healthcare Safety Network (NHSN) will hold their Virtual 2023 Annual NHSN Training:**
  - **Patient Safety, Outpatient Procedure, and Neonatal Component Healthcare Surveillance and Analytics on March 21 – 23, 2023.**

- **This training is intended for users of the Patient Safety Component, Outpatient Procedure Component, and Neonatal Component in NHSN.**
  - **The virtual training event will feature live presentations, pre-recorded training videos for self- paced viewing, an introduction of new NHSN Measures, and opportunities for Q&A.**

- **More information, including registration and an agenda, will be provided soon.**

Tennessee Reportable Disease Updated Guidance for 2023

Updated Documents

- 2023 Updates
  - Reportable Diseases List for Healthcare Providers
  - Reportable Diseases List for Labs
  - Detailed Lab Guidance

- https://www.tn.gov/health/cedep/reportable-diseases.html

List for Healthcare Providers

- https://www.tn.gov/content/dam/tn/health/documents/reportable-diseases/2023-Provider-list.pdf

Reporting Methods for Providers

- Report via fax
  - PH-1600 may be faxed or emailed directly
    - to the local/regional health office or
    - to the CEDEP Division of TDH (615) 741-3857

- Report online through NBS
  - https://hssi.tn.gov/auth/login
  - Reporters can request an account at https://redcap.health.tn.gov/redcap/surveys/?s=8L7CMWHN4M

Summary of Reporting Changes for 2023

- For **Providers**:
  - Disease name on the Provider List text changed from: Drug Overdose (Opioids, Benzodiazepines, Stimulants, Muscle Relaxants) to Drug Overdose to improve overdose surveillance by giving a more accurate snapshot of nonfatal overdoses involving illicit substances and polysubstance use.
  - Botulism (Infant or Botulinum Toxin) is now immediately notifiable.

- **Reminder:** We cannot differentiate between facility types on the reportable list
  - e.g., VAE is LTACs only
  - https://www.tn.gov/health/cedep/hai/hai-reporting-requirements.html
    - for reporting requirements by facility type

Summary of Reporting Changes for 2023

- **Laboratories Only**
  - Lead Levels - Elevated blood lead levels (≥3.5 µg/dL) should be reported within 1 week and those <3.5 µg/dL should be reported within 1 month
  - Below diseases have updated lab submission guidance:
    - Group A Streptococcal pyogenes Invasive Disease
    - Group B Streptococcal Invasive Disease
      - Streptococcus agalactiae Invasive Disease
      - Streptococcus pneumoniae Invasive Disease
    - Haemophilus influenzae Invasive Disease
    - Meningococcal Disease (Neisseria meningitidis)

Summary of Reporting Changes for 2023

- Detailed **laboratory guidance** document has been updated for the following topics
  - Monkeypox
  - **Antibiotic Resistant Pathogens**
    - **Carbapenemase-producing Pseudomonas aeruginosa (CP-CRPA)**
    - **Carbapenemase-producing Acinetobacter baumannii (CP-CRAB)**
  - **Emerging Infections Program Surveillance**
    - **Candida species isolated from blood are newly reportable in the east Tennessee EIP catchment area**
  - Routine changes based on CSTE case definition changes:
    - Coronavirus disease caused by SARS CoV-2
    - Gonorrhea
    - Lyme Disease
    - Rabies (Animal)
  - Additional details have been added to the Laboratory Tests and Results to Report to Public Health

Candida auris (including rule-out *Candida auris*) ☎	*Candida auris*, positive by any method for any specimen including detection from swabs from skin. If any *Candida auris* or "rule-out *C. auris*" are detected via PCR, perform a culture to obtain the isolate. Submit isolates immediately to the Tennessee Department of Health Laboratory. Contact hai.health@tn.gov for clarification/questions.	Required	L & P
Candida species **eip**	Submit isolate of each unique *Candida* species isolated from blood (send specimens of each if more than one species isolated in blood). Report all *Candida* species isolated from blood in the EIP catchment counties: Knox, Sevier, Jefferson, Blount, Anderson, Roane, Loudon, Union, Grainger, Hancock, Unicoi, Hawkins, Greene, Johnson, Washington, Sullivan, and Carter. Send specimens to the East TN Regional State Lab, 2102 Medical Center Way, Knoxville, TN 37920. Attn: Sandra Hardin. *Candida auris* isolates should follow the guidance listed above for that specific organism.	Required	L & P
Carbapenemase-producing *Pseudomonas aeruginosa* (CP-CRPA)	*Pseudomonas aeruginosa* detected by any method from any clinical specimen (including nonsterile sites and rectal/perirectal swabs) positive for carbapenemase production or a carbapenemase gene. Labs unable to test for carbapenemase production or genes should submit isolates resistant to at least one carbapenem antibiotic (excluding ertapenem) AND not susceptible to cefepime or ceftazidime according to breakpoints listed in the 2022 CLSI guidelines. If Pseudomonas aeruginosa is detected via PCR, perform a culture to obtain the bacterial isolate and perform subsequent testing to determine antibiotic susceptibility profile or carbapenemase production or gene. Submit isolates to the Tennessee Department of Health Laboratory within 3 days of detection/isolation. Contact hai.health@tn.gov for clarification/questions.	Required	L & P
Carbapenemase-producing *Acinetobacter baumannii* (CP-CRAB)	*Acinetobacter baumannii* detected by any method from any clinical specimen (including nonsterile sites and rectal/perirectal swabs) positive for carbapenemase production or a carbapenemase gene. Labs unable to test for carbapenemase production or genes should submit isolates resistant to at least one carbapenem antibiotic (excluding ertapenem) according to breakpoints listed in the 2022 CLSI guidelines. If Acinetobacter baumannii is detected via PCR, perform a culture to obtain the bacterial isolate and perform subsequent testing to determine antibiotic susceptibility profile or carbapenemase production or gene. Submit isolates to the Tennessee Department of Health Laboratory within 3 days of detection/isolation. Contact hai.health@tn.gov for clarification/questions.	Required	L & P

Candidemia/*Candida* species

- Submit isolates of each unique *Candida* species isolated from blood
  - The CO HAI Program does not lead this project, so please direct questions about submitting isolates or reporting cases to Sandra Hardin (Sandra.Hardin@vumc.org).
  - Cases are not entered into NBS and isolates should be submitted to the **Knoxville** lab
  - Any *Candida auris* isolates from blood should be sent to the **Nashville lab in addition to the Knoxville lab (and please notify us of a case of C. auris!)**

- The catchment area includes the following counties: Knox, Sevier, Jefferson, Blount, Anderson, Roane, Loudon, Union, Grainger, Hancock, Unicoi, Hawkins, Greene, Johnson, Washington, Sullivan, and Carter

Carbapenemase-producing *Pseudomonas aeruginosa*

- We expect most clinical labs will not have the ability to test for *P. aeruginosa* isolates for carbapenemase production
  - antibiotic susceptibility results in the detailed lab guidance which may suggest an isolate is carbapenemase-producing
- We expect most confirmed cases will be reported directly to the CO HAI team by the SPHL in Nashville
- Suspect case definitions are CO HAI designated for Tennessee

Carbapenemase-producing *Pseudomonas aeruginosa*: suspect case

- Lab reports that meet **all three criteria** would be considered a **suspect case**
  1. *P. aeruginosa* from any body site
  2. Testing was NOT performed for carbapenemase production and carbapenemase genes
     - OR testing for carbapenemase production was NOT performed and the isolate was negative for carbapenemase genes
  3. The isolate is resistant to at least one carbapenem antibiotic (excluding ertapenem) AND not susceptible to cefepime or ceftazidime

Carbapenemase-producing *Pseudomonas aeruginosa*: confirmed case

- Lab reports that meet **both criteria** would be considered a **confirmed case**
  1. *P. aeruginosa* from any body site
  2. The isolate tested positive for carbapenemase production or was positive for a carbapenemase gene

Carbapenemase-producing *Pseudomonas aeruginosa*: not a case

- Lab reports that meet **any** of the three criteria would be considered a **not a case**
  1. *Pseudomonas* species not aeruginosa
  2. The isolate tested negative for carbapenemase production and was negative for a carbapenemase gene
  3. The isolate is susceptible to all carbapenem antibiotics (excluding ertapenem) and is susceptible to cefepime and ceftazidime

Carbapenemase-producing *Pseudomonas aeruginosa*

- Lab reports that meet **all three criteria** would be considered a **suspect case**
  1. *P. aeruginosa* from any body site
  2. Testing was NOT performed for carbapenemase production and carbapenemase genes
     - OR testing for carbapenemase production was NOT performed and the isolate was negative for carbapenemase genes
  3. The isolate is resistant to at least one carbapenem antibiotic (excluding ertapenem) AND not susceptible to cefepime or ceftazidime

Carbapenemase-producing *Acinetobacter baumannii*

- This is separate from the EIP condition Acinetobacter species, carbapenem-resistant

- We expect that most clinical labs will not have the ability to test *A. baumannii* isolates for carbapenemase production
  - We have included antibiotic susceptibility results in the detailed lab guidance which may suggest an isolate is carbapenemase-producing.

- We expect that most confirmed cases will be reported directly to the CO HAI team by the State Lab in Nashville.

Carbapenemase-producing *Acinetobacter baumannii*: suspect case

- Lab reports that meet **all three criteria** would be considered a **suspect case**
  1. *A. baumannii* from any body site
  2. Testing was NOT performed for carbapenemase production and carbapenemase genes
     - OR testing for carbapenemase production was NOT performed and the isolate was negative for carbapenemase genes
  3. The isolate is resistant to at least one carbapenem antibiotic (excluding ertapenem)

Carbapenemase-producing *Acinetobacter baumannii*: confirmed case

- Lab reports that meet **both** criteria would be considered a **suspect case**
  1. *A. baumannii* from any body site
  2. The isolate tested positive for carbapenemase production or was positive for a carbapenemase gene

Carbapenemase-producing *Acinetobacter baumannii*: not a case

- Lab reports that meet **any** of these criteria would be considered **not a case**
  1. *Acinetobacter* species not *baumannii*
  2. The isolate tested negative for carbapenemase production and was negative for a carbapenemase gene
  3. The isolate is susceptible to all carbapenem antibiotics (excluding ertapenem)

Summary of Reporting Changes for 2023

- Updated or clarified language for **lab guidance** for the following conditions:
  - **Candida auris, Carbapenem-resistant Enterobacterales**, Escherichia coli: Shiga-Toxin Producing, **Extended Spectrum Beta Lactamase-Producing Escherichia coli**, Group A Streptococcal Invasive Disease, Group A Streptococcal Invasive Disease, Group B Streptococcal Invasive, Haemophilus influenzae Invasive Disease, Klebsiella, Lead Levels, Listeriosis, Meningococcal Disease (Neisseria meningitidis), and Yersiniosis
  - Additional pathogens/organisms for the following conditions: Lyme Disease, Viral Hemorrhagic Fevers
  - Change/ Update to names for the following conditions: Drug Overdose, Group A Streptococcal Invasive Disease, **HAI**, **NHSN: Antibiotic Use, HAI**, **NHSN: Clostridium difficile**, Mycobacteria Non-Tuberculosis (Extra-Pulmonary), Staphylococcus aureus: Enterotoxin B Pulmonary Poisoning, Vancomycin-Resistant Enterococcus Invasive Disease

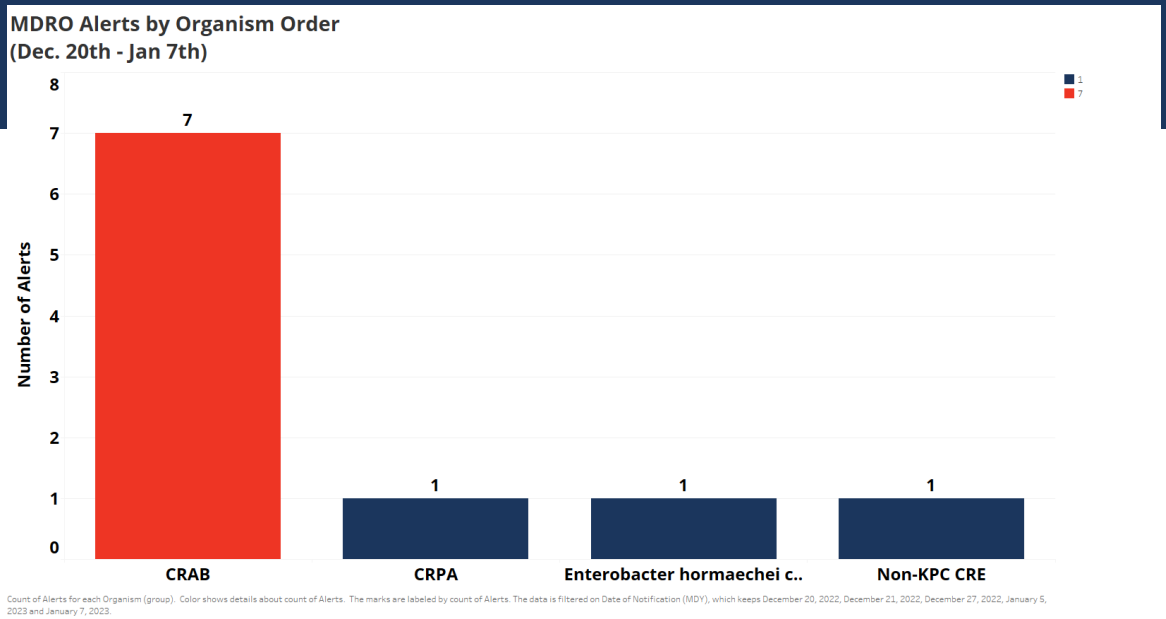
Multi-Drug Resistant Organism (MDRO) Outbreak Team Update

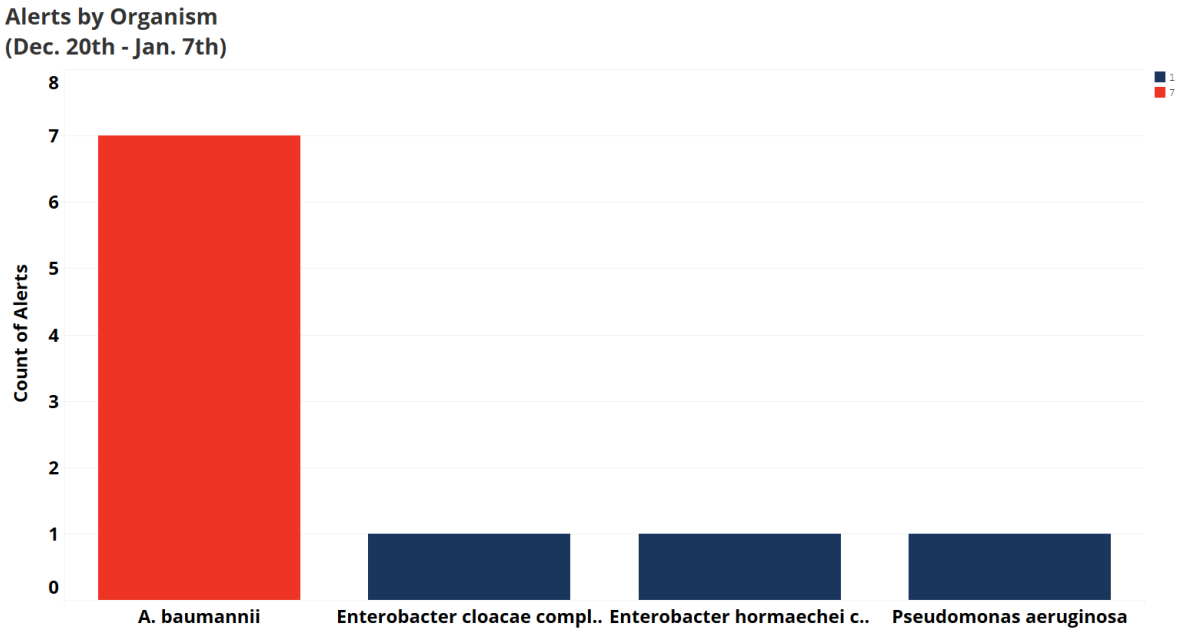
Dec 20th – Jan 7th 2023

Erika Kirtz, MPH | January 2023

MDRO Alerts

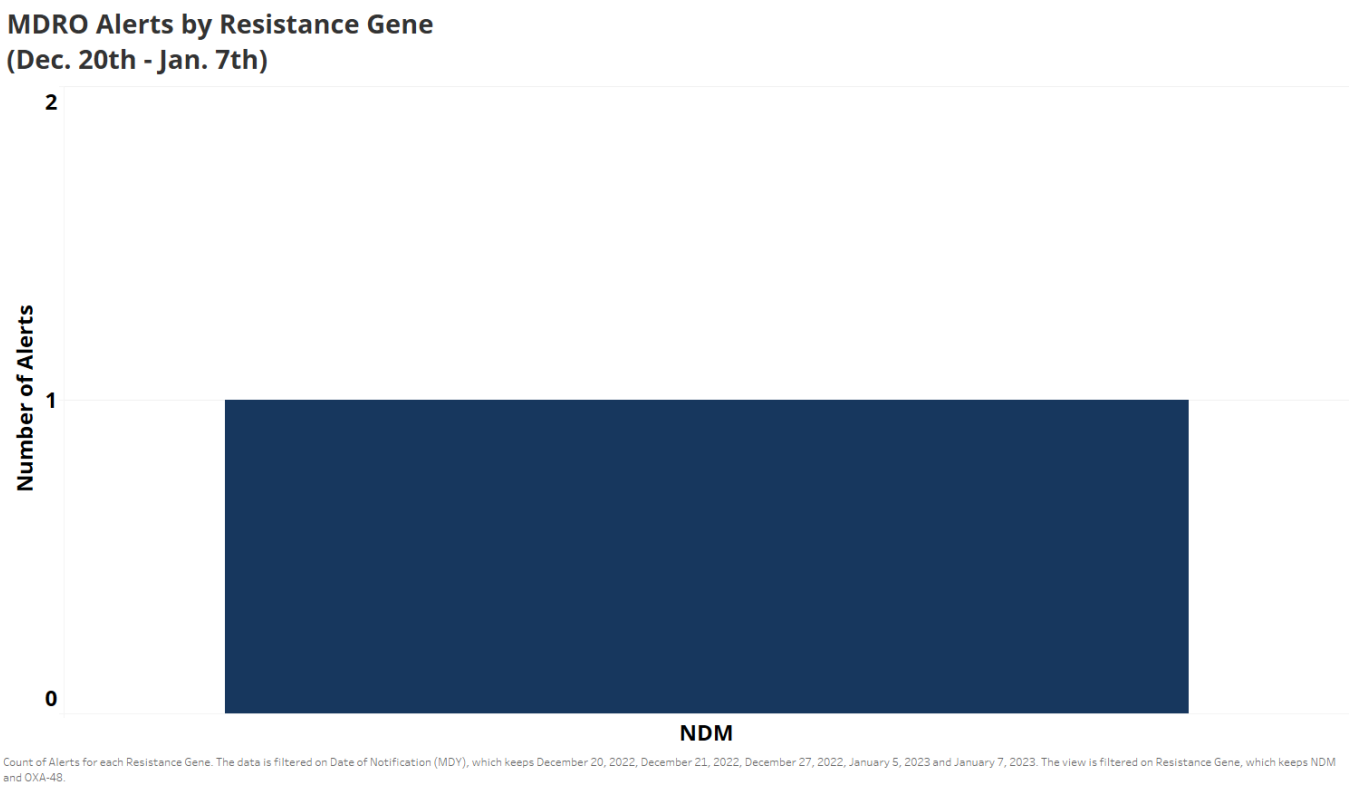
- **CRPA – Carbapenem-resistant *Pseudomonas aeruginosa***
- **CRAB – Carbapenem-resistant *Acinetobacter baumannii***
- **CRE - Carbapenem-resistant *Enterobacterales***
- **KPC – *Klebsiella pneumoniae* Carbapenemase-producing**





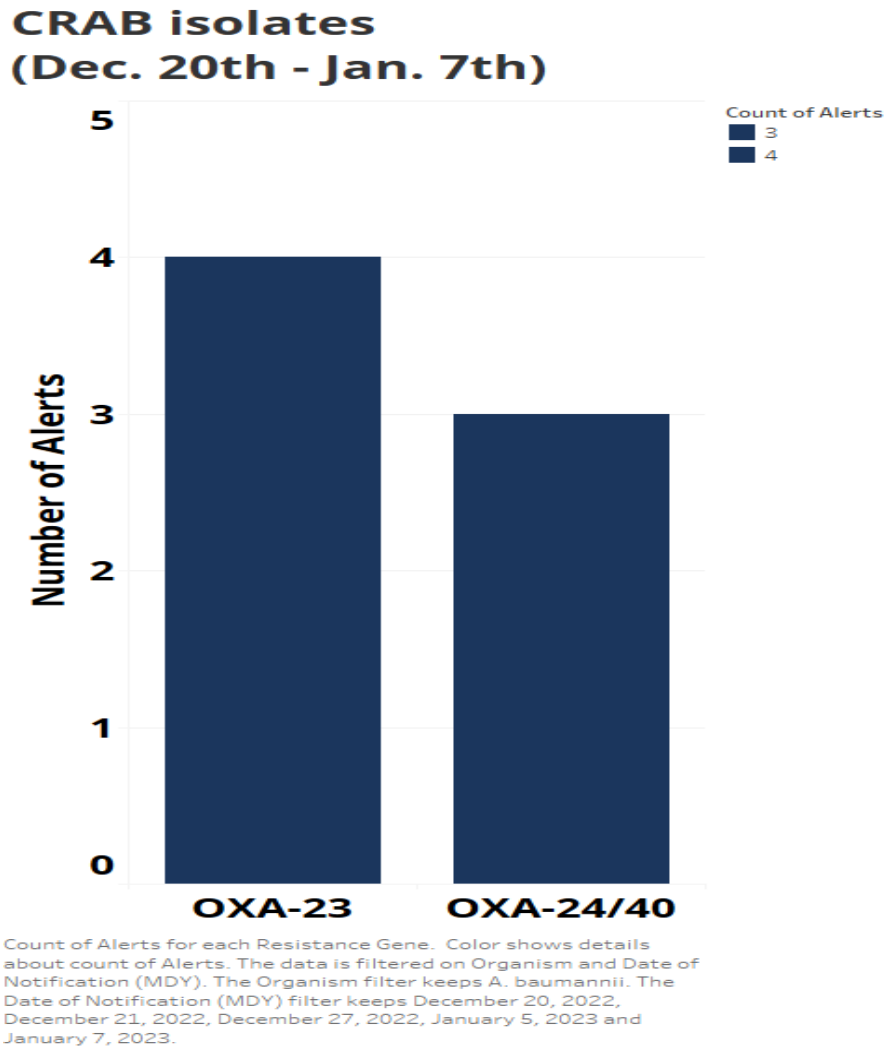
Non-KPC CRE Genes

- **Carbapenemase-producing genes:**
  - **“Big Five”**
    - **KPC**
    - **IMP**
    - **NDM**
    - **OXA-48**
    - **VIM**



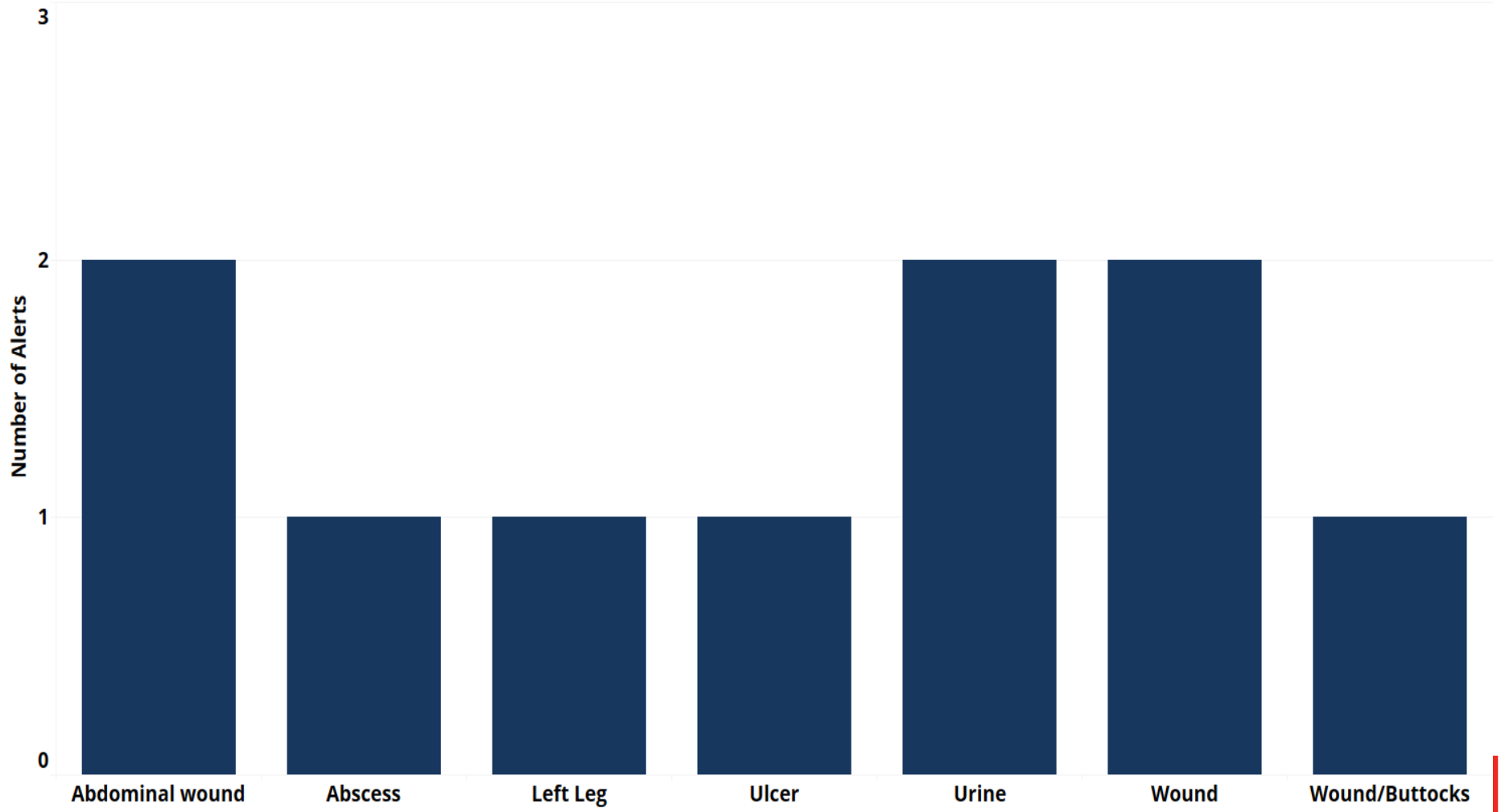
CRAB Alerts

- **Carbapenemase-producing genes:**
  - **Other Oxacillinases**
    - **OXA-24/40**
    - **OXA-23**



Specimen Sources

Alerts by Specimen Source
(Dec. 20th - Jan. 7th)



Count of Alerts for each Specimen Source. The data is filtered on Date of Notification (MDY), which keeps December 20, 2022, December 21, 2022, December 27, 2022, January 5, 2023 and January 7, 2023.

TN MDRO Alerts for 2023

- **For 2023**
  - **5 CRAB specimens**
    - **2 OXA-23**
    - **3 OXA-24/40**
  - **1 non–KPC CRE**
    - **1 NDM**

Candida Auris (C.Auris) Update

Next NHSN User Call

- **February 21, 2023**
  - **10am CT**

- **NHSN Related**
  - **Vicky.Reed@tn.gov**
  - **Simone.Godwin@tn.gov**

- **AU/AR Module**
  - **Christopher.Evans@tn.gov**

- **Infection Prevention**
  - **HAI.Health@tn.gov**