New Mexico
Emerging Infections Program

Healthcare-Associated Infections
Community Interface

CDC Public Health Image Library (PHIL) ID 18169: Carbapenem-resistant *Klebsiella pneumoniae*
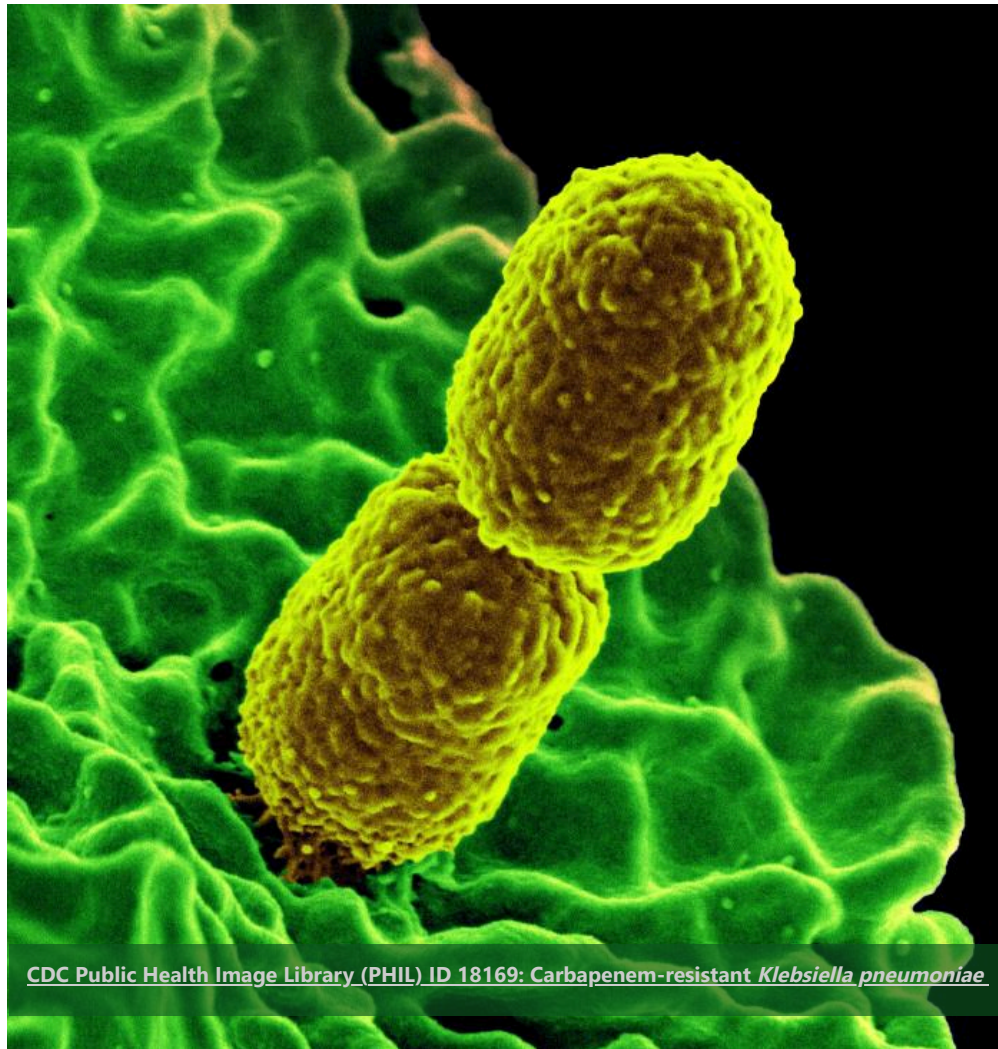
Carbapenem-Resistant Enterobacterales (CRE)

Surveillance Report, 2020-2024

Bernalillo County, New Mexico

Carbapenem-resistant Enterobacterales (CRE) Surveillance Report, Bernalillo County, 2020 to 2024

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Carbapenem-resistant Enterobacterales (CRE) Surveillance Report, Bernalillo County, 2020 to 2024

Overview:

The World Health Organization identified antimicrobial resistance (AMR) as a top global public health threat, placing modern medicine at risk of no longer being able to treat infections in humans and animals (1). Nationally and worldwide, AMR infections cause significant morbidity and mortality and are predicted to increase at an alarming rate (1-3). Enterobacterales, which include gram-negative bacteria such as *Escherichia coli* (*E. coli*) and *Klebsiella pneumoniae (K. pneumoniae),* are common causes of healthcare and community infections. These bacteria have a propensity for sharing AMR genes, even among different species, that can confer resistance to certain antibiotics such as carbapenems (i.e., meropenem, doripenem, ertapenem, imipenem). Carbapenems are drugs typically reserved as a "last resort" therapy for treating serious multi-drug resistant infections (4).

Healthcare providers treating severe or complicated carbapenem-resistant enterobacterales (CRE) infections face extremely limited treatment options, with some CRE resistant to almost all known antibiotics. For these reasons, the Centers for Disease Control and Prevention (CDC) classified CRE infections as an urgent threat, responsible for an estimated 13,100 cases, 1,100 deaths, and $130M in attributable healthcare costs in the U.S. in 2017 (2). Though commonly thought of as hospital-related infection, CRE infections are diagnosed in non-hospitalized community-dwelling adults, and some individuals may even be colonized by the bacteria. CRE can spread from person-to-person through dirty hands, devices or contaminated surfaces. CRE can spread rapidly and has been associated with outbreaks in the U.S. Strong infection prevention and control practices and antimicrobial stewardship throughout healthcare settings are critical to preventing and containing this threat (5).

Beginning 2013, the New Mexico Emerging Infections Program (NM EIP) Healthcare-Associated Infections - Community Interface (HAIC) initiated CRE surveillance to gather demographic, clinical, and outcome data to estimate overall burden of disease and identify populations at risk of infections or severe outcomes. This report provides a 5-year summary of CRE infections, both healthcare- and community-associated, in Bernalillo County. Surveillance of these infections would not have been possible without the efforts of many public health partners, including the University of New Mexico (UNM), New Mexico Department of Health (NMDOH), Bernalillo County healthcare facilities (e.g. outpatient clinics, acute and long-term acute care hospitals, long-term care facilities), public health and clinical reference laboratories, as well as CDC and ten other EIP sites nationally.

Population:

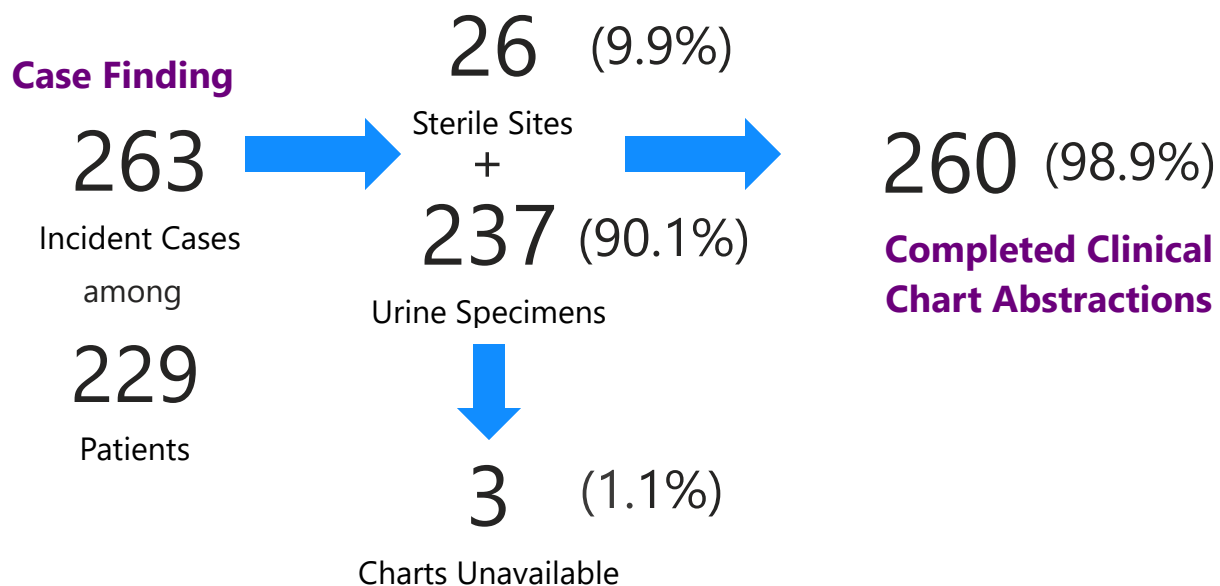The surveillance area, Bernalillo County, represents 676,452 persons.
- Source: Population estimates were obtained from the U.S. Census Bureau, Population Division, Annual County Resident Population Estimates by Age, Sex, Race and Hispanic Origin, April 1, 2020 - July 1, 2023 (6).

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Case Definition:

A Carbapenem-resistant Enterobacterales (CRE) case is defined as isolation of *E. coli*, *Klebsiella* species, or *Enterobacter cloacae* complex species with the following criteria:

- Carbapenem-resistant (doripenem, imipenem, meropenem, or ertapenem) using the current Clinical and Laboratory Standards Institute clinical breakpoints (7)

- Isolated from a normally sterile body specimen (e.g., blood, cerebrospinal/pleural/ pericardial/peritoneal/synovial fluid, bone, muscle, other internal body site) or urine; and

- Identified in a resident of Bernalillo County, New Mexico, the predetermined surveillance area

Case Finding

263

Incident Cases

among

229

Patients

26 (9.9%)

Sterile Sites

+

237 (90.1%)

Urine Specimens

3 (1.1%)

Charts Unavailable

260 (98.9%)

Completed Clinical Chart Abstractions

Methods:

NM EIP conducts active, population-based surveillance of lab-confirmed CRE cases. Clinical laboratories serving residents of Bernalillo County identify positive CRE isolates by querying automated testing instruments (ATIs) for minimum inhibitory concentration (MIC) values, which define levels of antimicrobial resistance or susceptibility. The majority of isolates also had molecular carbapenemase gene testing and/or phenotypic characterization performed via Kirby-Bauer disk diffusion, though this was at the discretion of the laboratory. To ensure complete case ascertainment, EIP staff audit laboratories at least annually.

Upon receipt of a positive lab report, NM EIP staff review medical records from healthcare facilities (outpatient clinics/ERs, long-term care facilities (LTCF), long-term acute care

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Method(s):

hospitals (LTACH) and acute care hospitals) and complete a standardized case report form. Data collected include patient demographics, underlying medical conditions, clinical characteristics and infection types associated with the culture, healthcare and select risk factors, and patient outcomes. Descriptive statistics for population demographics and isolates are based on all incident cases (n=263); whereas calculations for clinical risk factors and outcomes are limited to cases whose medical records were abstracted (n=260). Cases were classified as healthcare-facility onset (vs. community-onset) if the case had: (1) a specimen collected >3 calendar days after admission to an acute care facility; (2) surgery, dialysis, a prior hospital admission or resided in a healthcare facility LTCF, LTACH in the past year; or a central line, urinary or other catheter in the 2 days prior to specimen collection.

This public health surveillance project was reviewed by UNM Human Research Protections Office (UNM HRPO #13-333) and Presbyterian Healthcare Services Institutional Review Board (PHS IRB #1457164) and given a Not Human Subjects Research determination.

Acknowledgment of Support and Disclaimer:

For questions about the report, please contact:
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Carbapenem-resistant Enterobacterales (CRE) Surveillance in Bernalillo County, 2020 to 2024

Summary of Findings

Cases and Incidence:

CRE cases in Bernalillo County, with the exception of 2016 and 2017, have remained relatively stable over the past 11 years, ranging from 31 cases in 2015 to 112 cases in 2017 (Figure 1a). The sharp increase in annual cases counts observed in 2016 and 2017 was due to an overcalling of ertapenem susceptibilities, which resulted in confirmatory testing via Kirby-Bauer disk diffusion testing being implemented in 2017. Since 2020, Bernalillo County has averaged 53 cases of CRE per year with a crude incidence rate of 8 per 100,000 population from 2020 to 2024 (range: 6 to 8 per 100,000). Monthly case counts from 2020 to 2024 peaked with 17 cases in June 2020 during the pandemic and in July 2023 when 10 cases were reported (Figure 1c).

Females were more likely than males to have a CRE (62% vs 38%) though males represented the majority of cases in 2022 (Figure 2c). Incidence rates increased with age with the age group 65 years and older representing more than half (60%) of cases (Table 3, Figure 3a). Persons 85 years and older experienced the highest burden with at least twice the rate of CRE infection (96 cases per 100,000 in 2024) compared to persons 75 to 84 years of age (40 per 100,000). Non-Hispanic whites represented the largest proportion of cases (44%), followed by Hispanics (regardless of race) (42%) and non-Hispanic American Indian Alaskan Native (AIAN) (6%) or Other (Black, Asian, multi-race) (6%).

Organism:

The majority of specimens collected were urine (90%), followed by blood and other sterile sites (10%) (Table 5). *E. cloacae* complex was the bacteria identified in 43% of CRE specimens followed by *K. pneumoniae* (23%), *E. coli* (20%) *K. aerogenes* (7%) and *K. oxytoca* (7%) (Figure 5a). Since 2020, *K. pneumoniae* increased from 11 cases to 16 cases; whereas other bacteria decreased. *E. coli* decreased from 19 case in 2020 to 9 cases in 2024 (Figure 5c). Among CRE cases, 13% tested positive by polymer chain reaction (PCR) for a carbapenemase gene, though not all cases were tested. bla_{KPC} was the predominant carbapenemase gene detected in prior to 2023 and bla_{NDM} has been seen more recently.

Patient Residence and Testing Location:

The majority of patients (81%) resided at a private residence prior to testing positive, while 19% of cases were healthcare facility such as a LTCF, LTACH or acute-care hospital (Figure 6a). The majority of cases were tested through outpatient settings or emergency departments (74%) though this has fluctuated across years (Table 6, Figure 6b).

Carbapenem-resistant Enterobacterales (CRE) Surveillance in Bernalillo County, 2020 to 2024

Summary of Findings

Infection Types:

The majority of patients presented with urinary tract infections (UTIs) (77%) followed by bacteremia (10%), sepsis (9%), and septic shock and pyelonephritis (3%) (Table 7), though collection of sepsis as an infection types began in 2024. The proportion of infection types have remained relatively stable over the years; however, UTIs increased in 2020 and 2021, while bacteremia among cases slightly decreased from 12% to 9% (Figure 7b). Colonization with CRE was indicated in 4% of cases. However, most CRE cases (88%) were associated with a diagnosed infection type.

Underlying Medical Conditions:

Most CRE cases (94%) had at least one underlying medical condition (Figure 8a). Chronic metabolic disorders represented the most prevalent underlying medical condition (26%), followed by neurologic conditions, chronic lung disease and cardiovascular disease (20%) (Table 8). The high proportion of chronic medical conditions among cases likely reflects 60% of cases being aged 65 years or older. However, 18% of cases had urinary tract problems/abnormalities, and in 2024, it was the most common underlying condition (25%) among cases, highlighting a population likely at higher risk of infection (Figure 8b). A list of condition/condition groups is provided in the Appendix.

Healthcare Exposures and Risk Factors:

The majority (70%) of CRE cases were healthcare-associated with acute care hospitalization as the most commonly reported risk factor (56%) (Table 9, Figure 9a). Other healthcare exposures included residing in a long-term care facility (LTCF) or long-term acute care hospital (LTACH) in the past year (18%). Half of cases had recurrent UTIs in the past year and 12% of cases were classified as hospital-onset with the specimen collected at least three days after their admission (Table 9, Figure 10a). Invasive procedures and catheters are a known risk factor for healthcare-associated infections. Approximately 25% of cases had surgery in the year prior to specimen collection and 20% had an indwelling urinary catheter in the two days prior to specimen collection (Table 10, Figure 10). Of cases with CRE, 9% had a central venous catheter and/or other catheter and 3% percent were on dialysis (Table 10, Figure 10).

Outcomes and Discharge Location:

In 2024, 43% of cases were hospitalized the day of or in the 29 days following their positive CRE lab result (Figures 11a). Among 118 hospitalized patients with CRE infections, 20% were admitted to the intensive care unit (ICU) and 9% died during hospitalization; however, severe outcomes were less common when non-hospitalized cases are included

Carbapenem-resistant Enterobacterales (CRE)
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Summary of Findings

Outcomes and Discharge Location (continued):

(7% ICU and 4% overall mortality) (Figure 11b, 11c, 12a, 12b). The majority (74%) of patients discharged from the hospital returned to their private residence; however, a quarter of patients went to a LTCF or LTACH (24%) (Table 12).

Antibiotics:

Prior antibiotic use is a risk factor for CRE infection. Antibiotics were prescribed for 66% of cases in the 30 days prior to the CRE infection with over a third of patients receiving cephems (36%), followed by beta-lactam combination agents (16%) and glycopeptides (11%) in 2024 (Figure 13a, Table 13). The proportion of cases who received prior carbapenems was 9% in 2024 (Table 13)).

Discussion:

Rates of CRE have remained relatively stable in Bernalillo County since 2020, though there was an increase in July 2023. Demographic risk factors for infection include older age and being female. Nearly all cases had underlying medical conditions and recent healthcare exposures. These risk factors highlight opportunities for working with populations at risk, monitoring antibiotic prescribing through stewardship, and implementing strong infection control practices (e.g. hand hygiene, isolation practices, low-level disinfection, catheter care). The majority of CRE cases were tested at outpatient clinics or ERs, emphasizing the importance of prevention and antibiotic stewardship in ambulatory settings.

Cases of CRE Infections by Year and Month

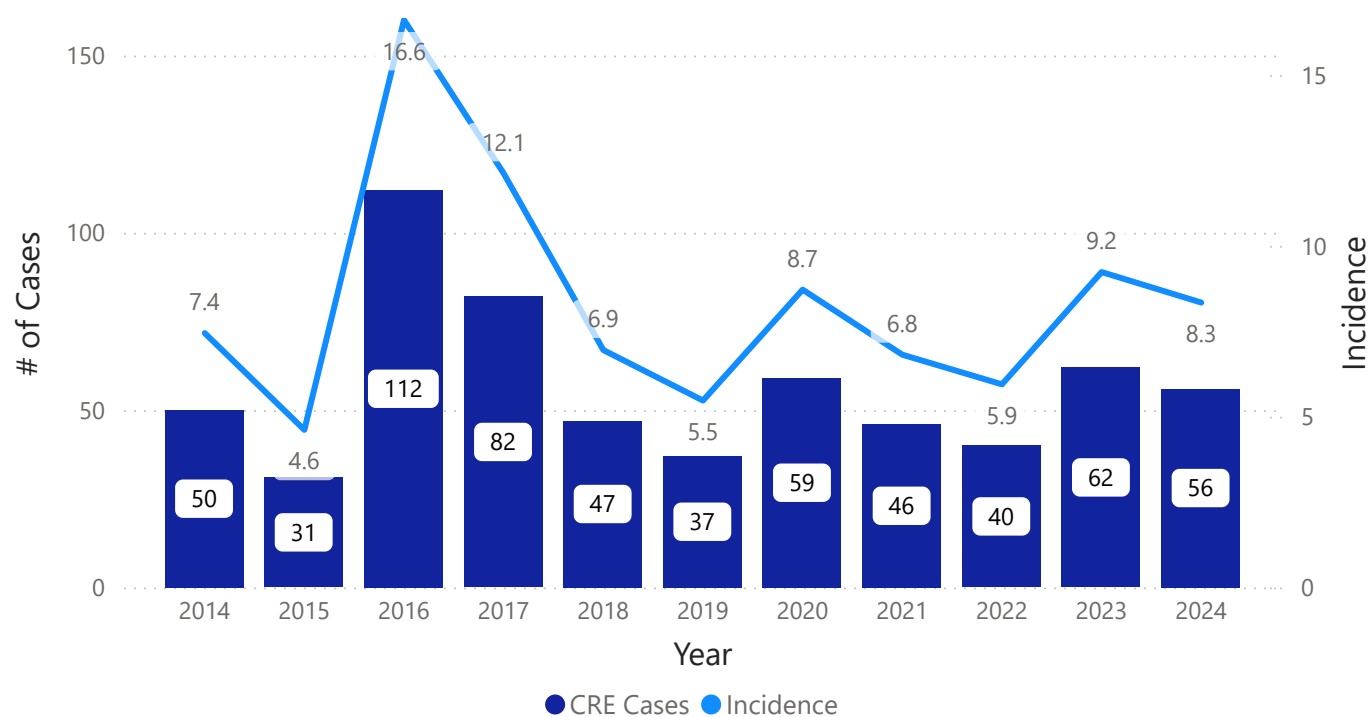**1a. CRE Cases and Incidence Rates by Year, 2014 to 2024, in Bernalillo County**
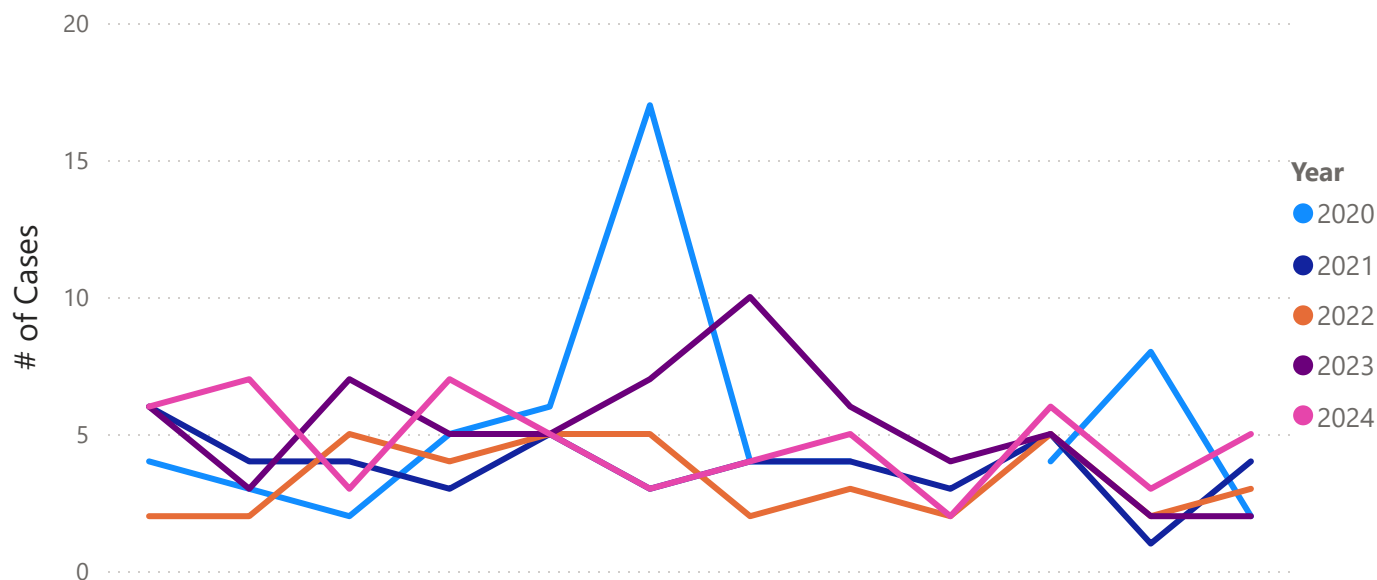

Figure 1b. Case Counts by Month

Table 1. Case Counts by Month

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	**Total**
2020	4	3	2	5	6	17	4	4		4	8	2	**59**
2021	6	4	4	3	5	3	4	4	3	5	1	4	**46**
2022	2	2	5	4	5	5	2	3	2	5	2	3	**40**
2023	6	3	7	5	5	7	10	6	4	5	2	2	**62**
2024	6	7	3	7	5	3	4	5	2	6	3	5	**56**

Case Counts & Incidence Rates
Overall and by Sex in Bernalillo County

Table 2. Case Counts by Sex and Year

Year	Female	Male
2020	41	18
2021	35	11
2022	18	22
2023	36	26
2024	34	22

Figure 2a. Proportion of Cases by Sex

99 (37.64%)
164 (62.36%)

Sex
● Female
● Male
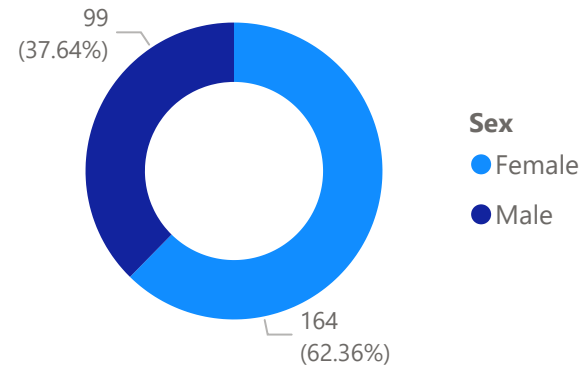
Figure 2b. Crude Incidence Rate by Sex and Year in Bernalillo County

Incidence Rate (per 100,000)

11.9, 10.2, 6.7, 10.5, 10.0
5.4, 3.3, 5.3, 7.9, 6.7

Year
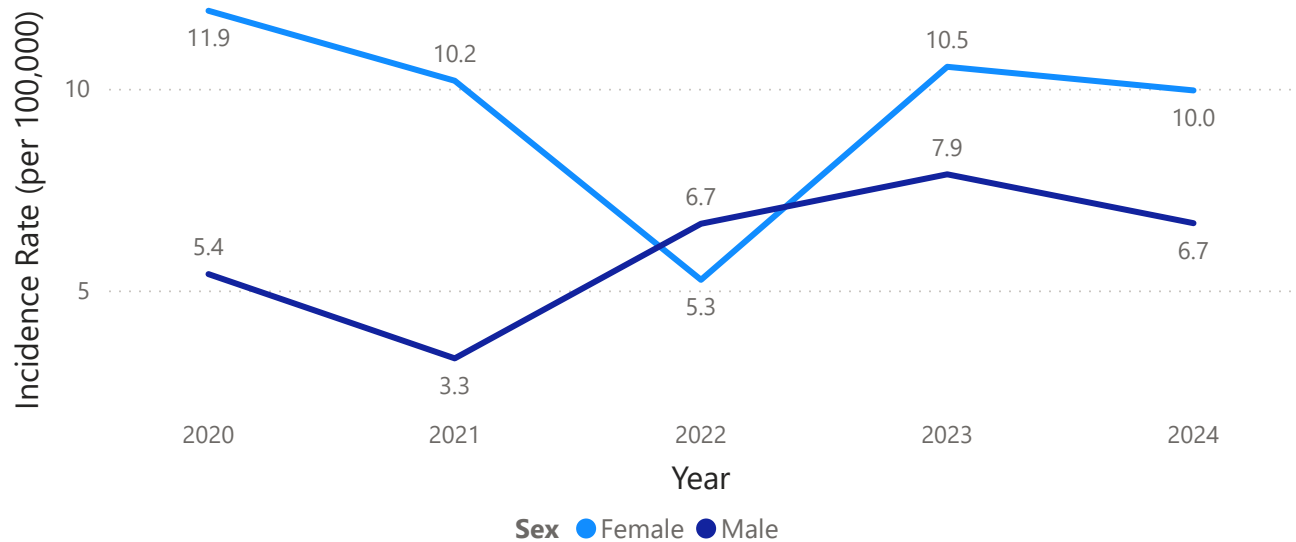
Sex ● Female ● Male

Figure 2c. Proportion of Incident Cases by Sex and Year

Proportion of Cases

	2020	2021	2022	2023	2024
Male	31%	24%	55%	42%	39%
Female	69%	76%	45%	58%	61%

Year

Sex
● Female
● Male
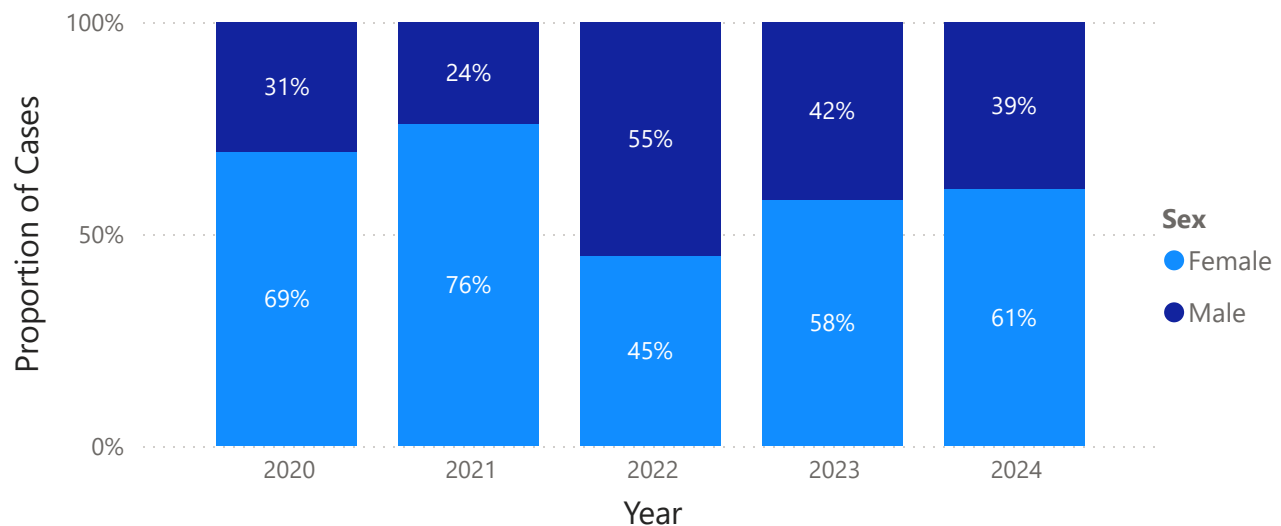
Case Counts & Incidence Rates
by Age Group in Bernalillo County

Table 3. Cases by Age Group

Sex	Female		Male		**Total**	
Age Group (years)	No. of Cases	Percent	No. of Cases	Percent	**No. of Cases**	**Percent**
0 to 14	3	1.1%	1	0.4%	**4**	**1.5%**
15 to 34	10	3.8%	3	1.1%	**13**	**4.9%**
35 to 54	27	10.3%	25	9.5%	**52**	**19.8%**
55 to 64	20	7.6%	15	5.7%	**35**	**13.3%**
65 to 74	36	13.7%	27	10.3%	**63**	**24.0%**
75 to 84	38	14.4%	16	6.1%	**54**	**20.5%**
85+	30	11.4%	12	4.6%	**42**	**16.0%**
Total	**164**	**62.4%**	**99**	**37.6%**	**263**	**100.0%**

Figure 3a. Crude Incidence Rate by Age Group and Year in Bernalillo County
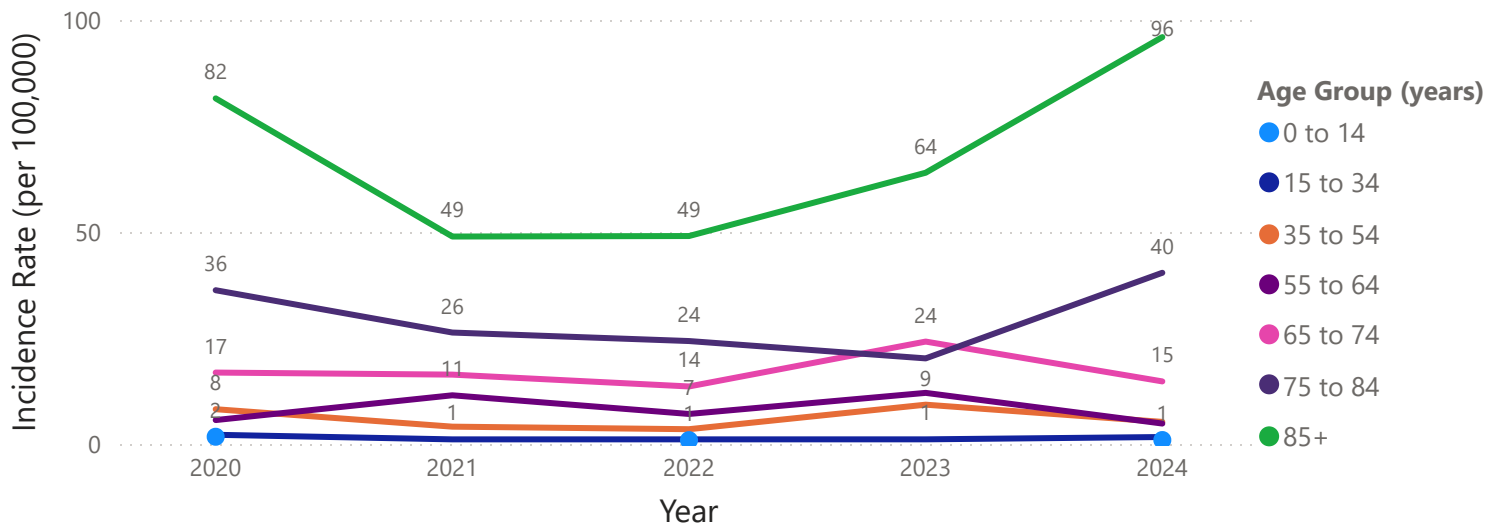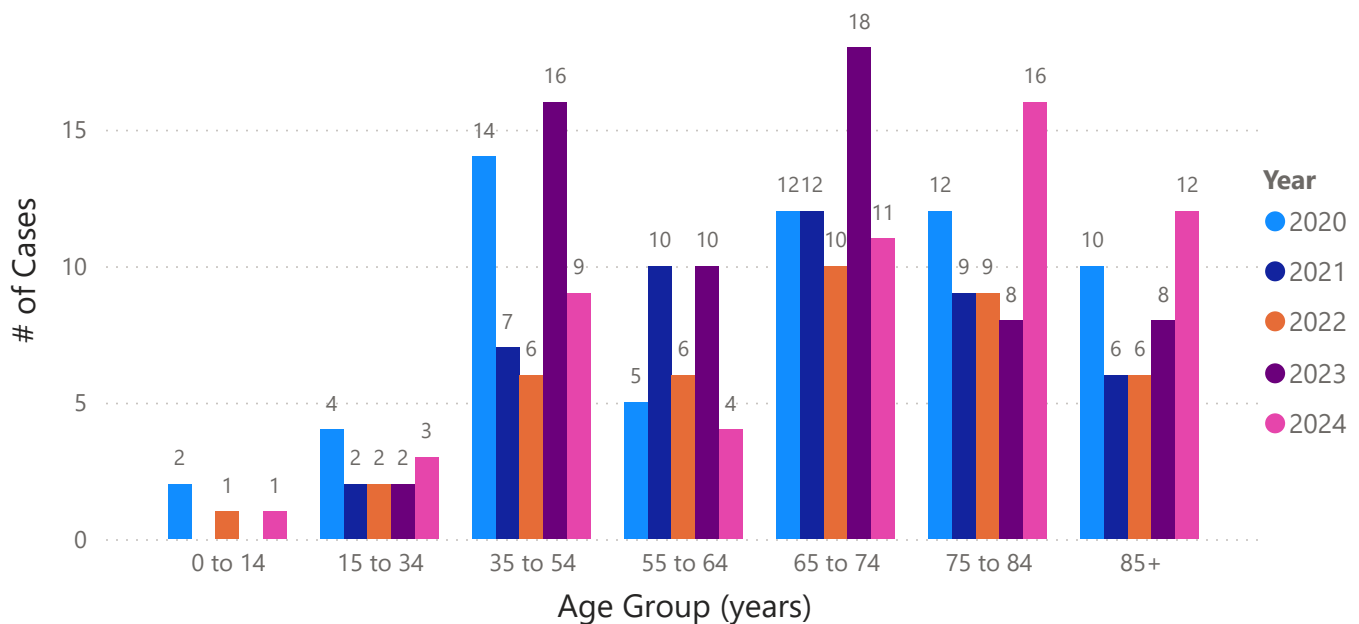

Figure 3b. Case Counts by Age Group and Year in Bernalillo County, 2020-2024

Case Counts & Incidence Rates by Race/Ethnicity in Bernalillo County

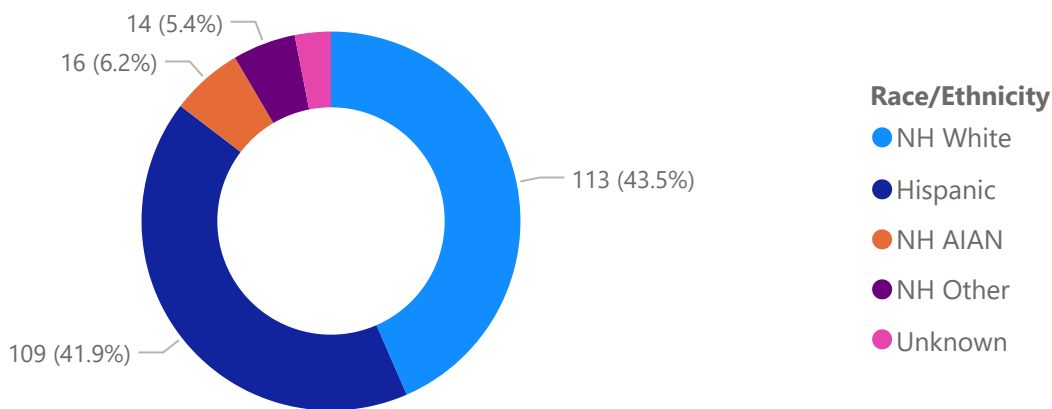**Table 4. Proportion of Cases by Race/Ethnicity**

Table 4. Proportion of Cases by Race/Ethnicity

Race and Ethnicity	No. of Cases	Percent
Not known to be Hispanic - White	113	43.5%
Hispanic, any race	109	41.9%
Not known to be Hispanic - American Indian or Alaskan Native (AIAN)	16	6.2%
Not known to be Hispanic - Other or multiple race	14	5.4%
Not known to be Hispanic - Unknown race	8	3.1%
Total	**260**	**100.0%**

*3 charts were unavailable

Figure 4b. Cases by Race/Ethnicity and Year
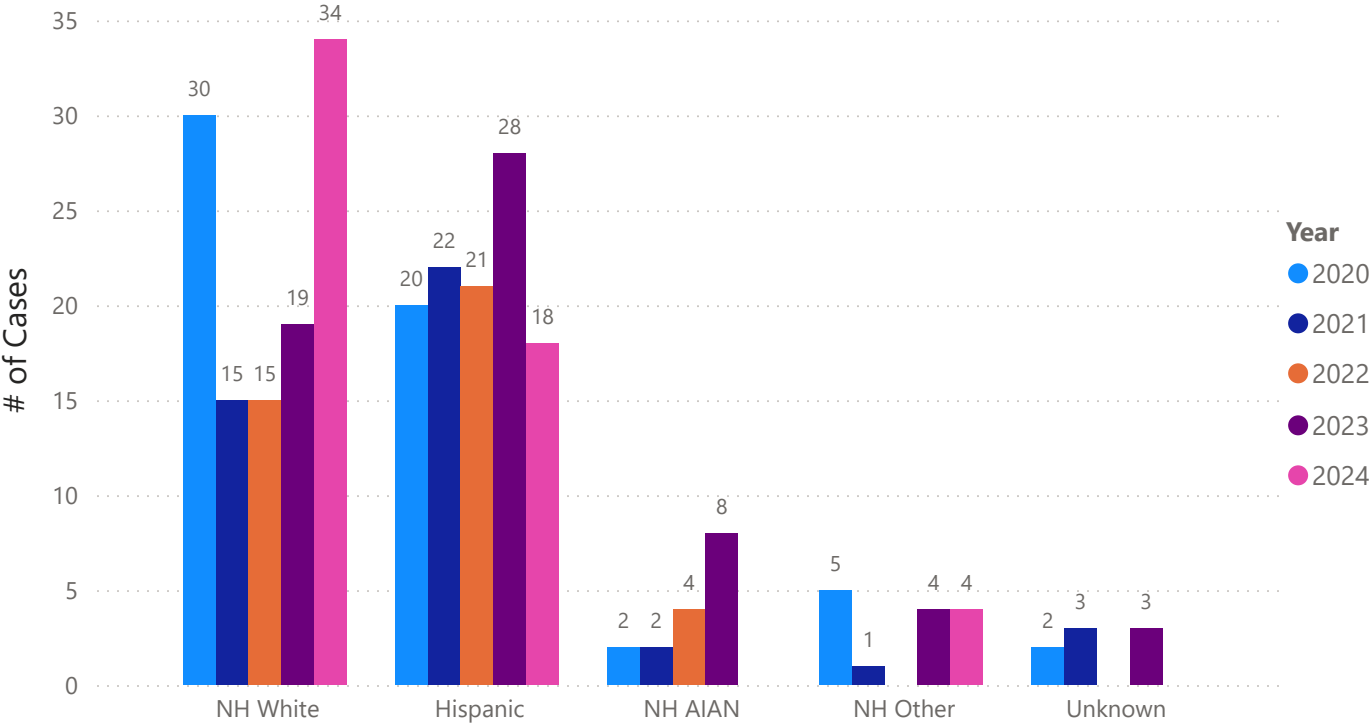
Specimen Source and Organisms Isolated

Table 5. Specimen Source by Organism

Specimen Source	Blood		Other Sterile Site		Urine	
Organism	No. of Cases	Percent	No. of Cases	Percent	No. of Cases	Percent
Enterobacter cloacae complex	8	7.0%			106	93.0%
Escherichia coli	6	11.5%	1	1.9%	45	86.5%
Klebsiella aerogenes	4	21.1%			15	78.9%
Klebsiella oxytoca					18	100.0%
Klebsiella pneumoniae	7	11.7%			53	88.3%
Total	**25**	**9.5%**	**1**	**0.4%**	**237**	**90.1%**

Figure 5a. Proportion (%) of CRE Bacteria Isolated

E. cloacae complex
114 (43.3%)

E. coli
52 (19.8%)

K. aerogenes
19 (7.2%)

K. oxytoca 18 (6.8%)

K. pneumoniae
60 (22.8%)
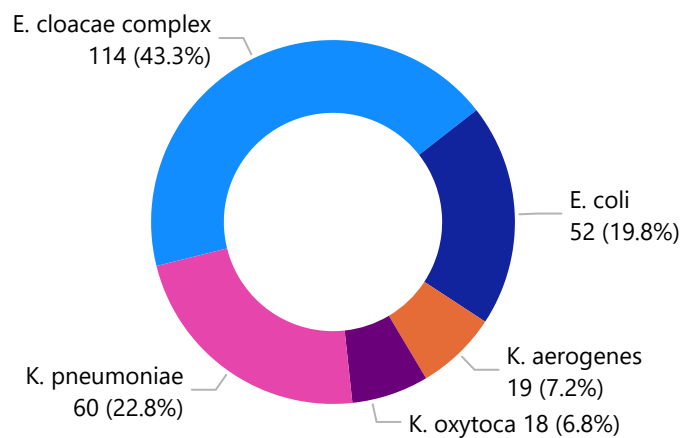
Figure 5b. Case Counts of CRE Isolates that Tested Positive for Carbapenemase Gene(s)

KPC   NDM   NDM/OXA   OXA-48
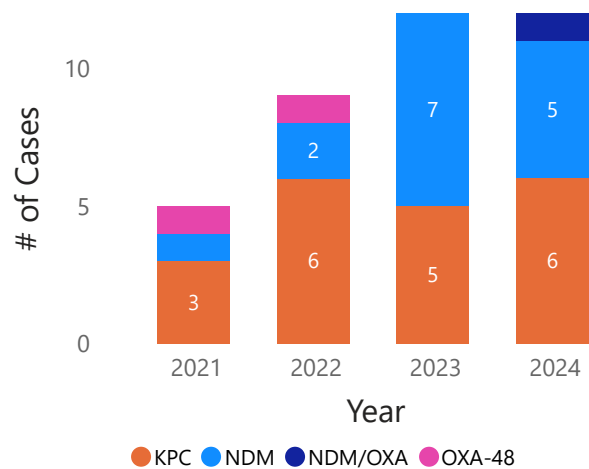
Figure 5c. Organisms Isolated by Year

Year
2020
2021
2022
2023
2024
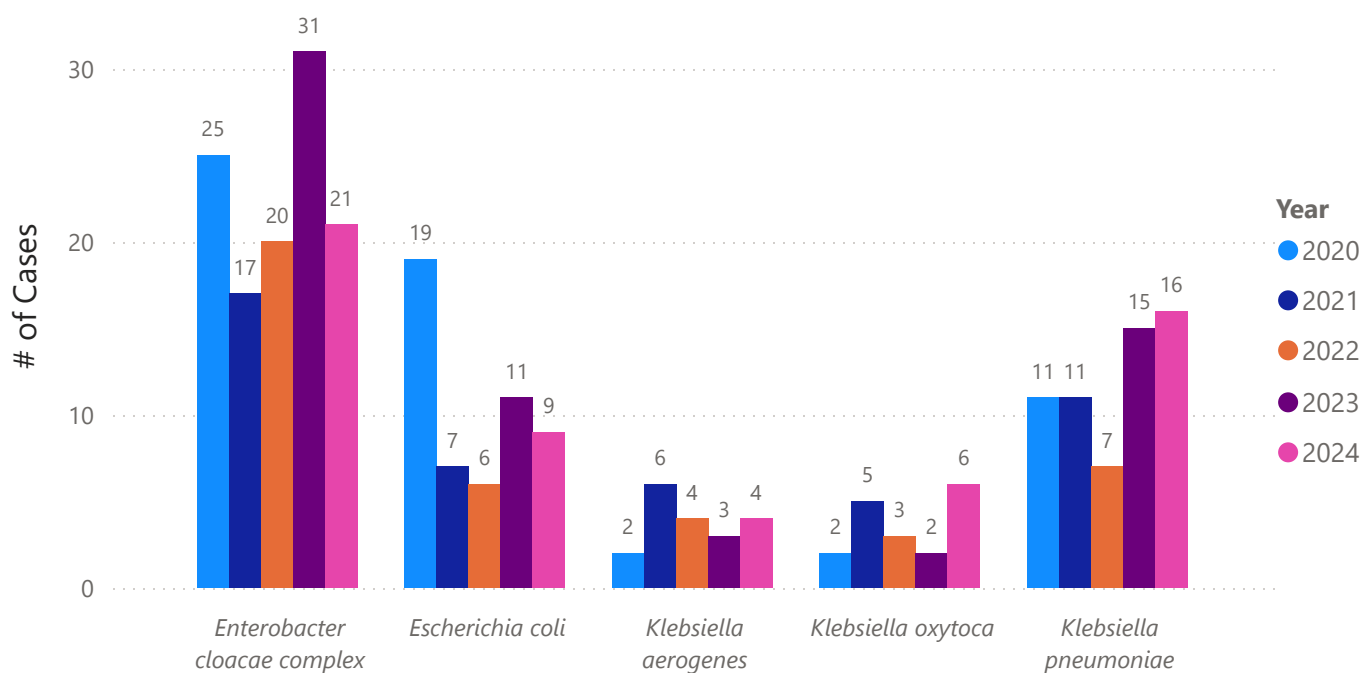
Location of Patient and Specimen Collection

Figure 6a. Location of Patient on the 3rd Calendar Day Before Specimen Collection

33 (12.7%)
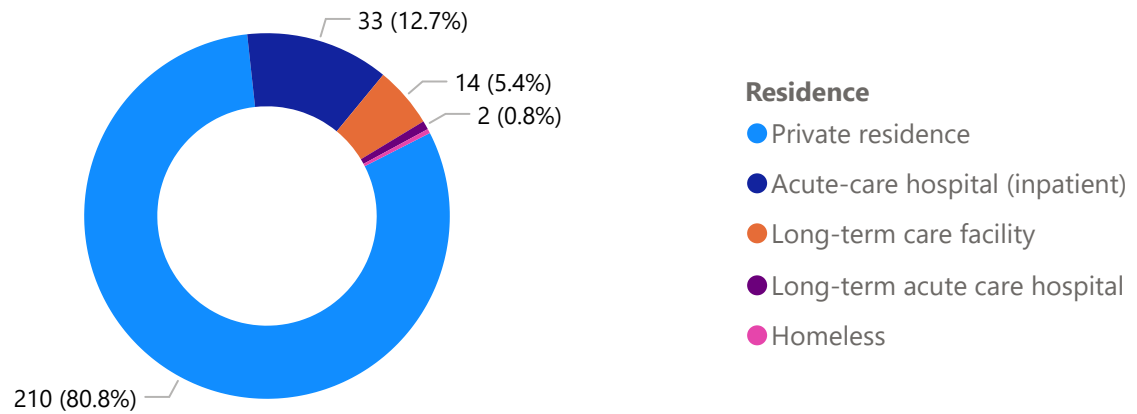14 (5.4%)
2 (0.8%)
210 (80.8%)

Residence
- Private residence
- Acute-care hospital (inpatient)
- Long-term care facility
- Long-term acute care hospital
- Homeless

Table 6. Location of Specimen Collection

Collecton Location	No. of Cases	Percent
Outpatient setting or emergency department	192	73.8%
Acute-care hospital	60	23.1%
Long-term acute care hospital	3	1.2%
Long-term care facility	3	1.2%
Unknown/other	2	0.8%
Total	**260**	**100.0%**

Figure 6b. Location of Specimen Collection by Year

# of Cases

Acute-care hospital: 9, 14, 16, 14, 7
Long-term acute care hospital: 1, 2
Long-term care facility: 2, 1
Outpatient setting or emergency department: 47, 29, 23, 47, 46
Unknown/other: 1, 1

Year
- 2020
- 2021
- 2022
- 2023
- 2024
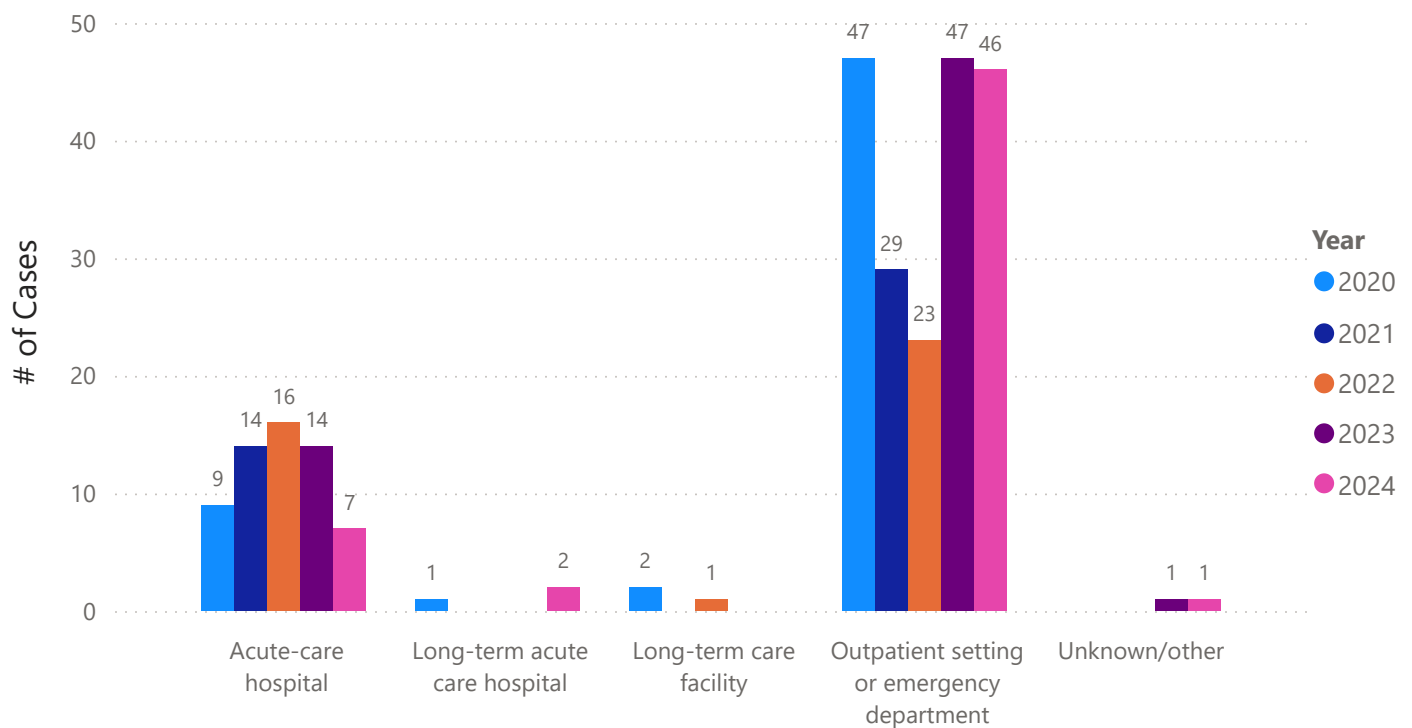
Infection Type Associated with CRE

Table 7. Infection Types* (2020-2024)

Criteria	No. of Cases ▼	Percent (%)
Urinary tract infection	201	77.3
Bacteremia	27	10.4
Septic shock	8	3.1
Pyelonephritis	7	2.7
Pneumonia	4	1.5
Abscess	3	1.2
Catheter site infection	2	0.8
Cellulitis	2	0.8

Infection Type ▲	No. of Cases	Percent (%)
Sepsis**	5	8.9
Urosepsis**	1	1.8

*Cases could have more than one infection type..
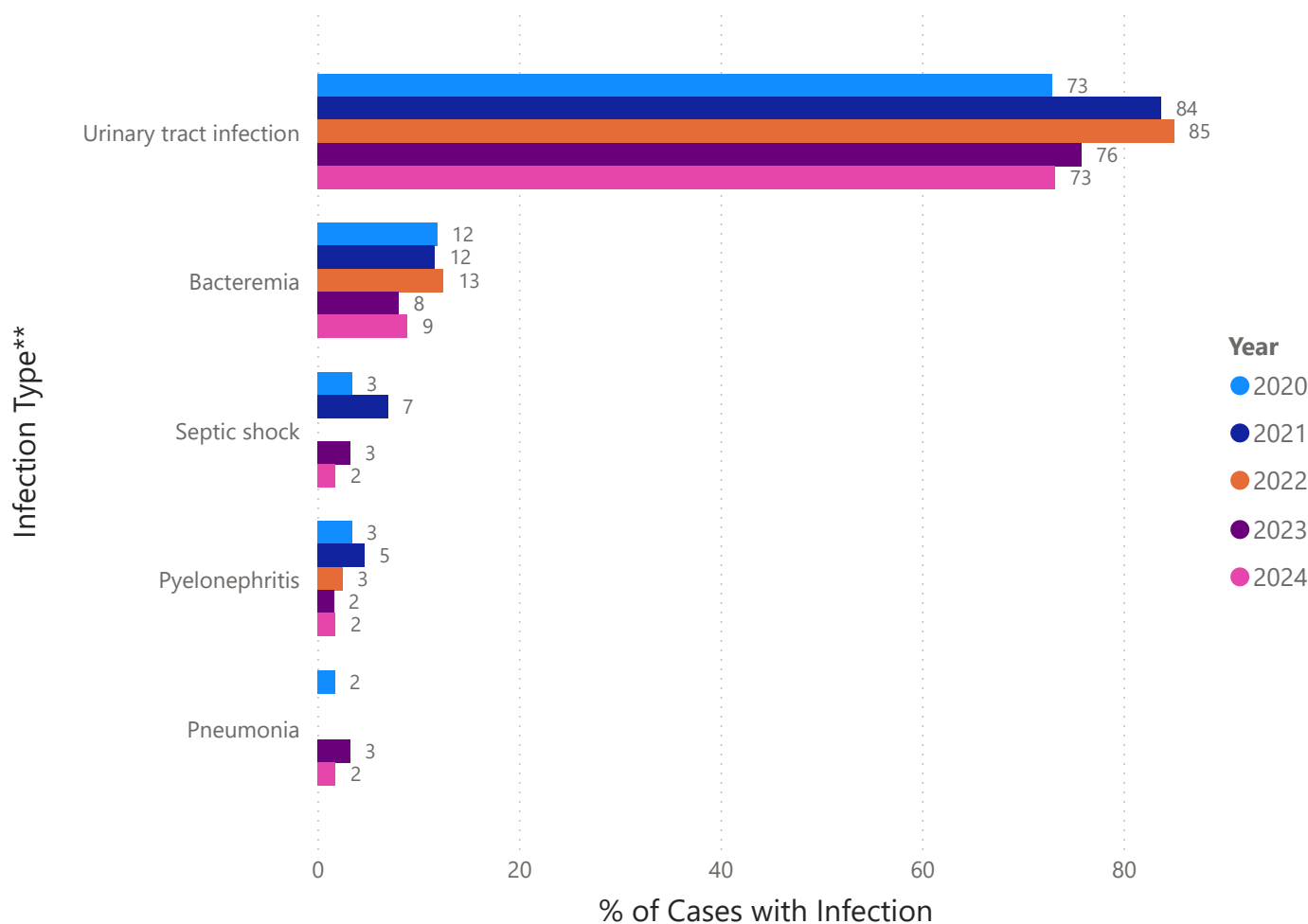
**Data collection began in 2024

***3 Cases were chart unavailable

Figure 7a. Proportion (%) of Cases with Infection(s)

No/unknown infection type 21 (8.1%)

Colonized 11 (4.2%)

Yes, infection 228 (87.7%)
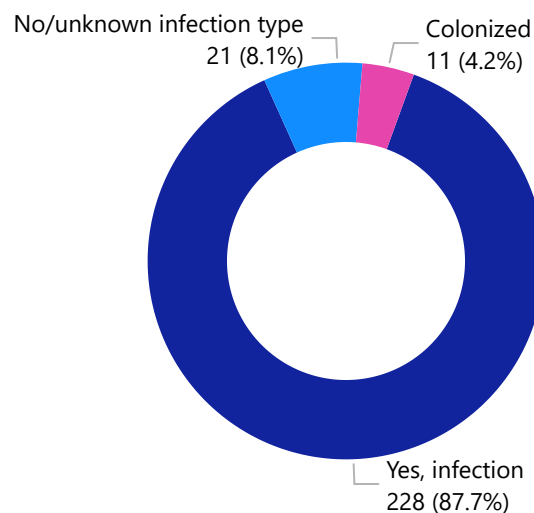
Figure 7b. Proportion (%) of Cases with Select Infection Types, 2020-2024

Year
- 2020
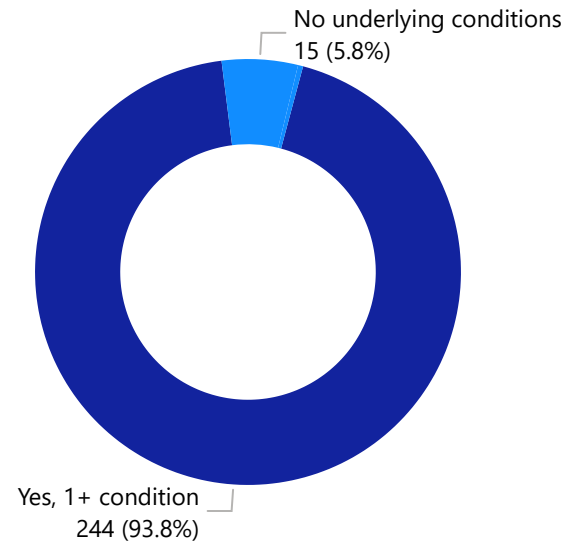- 2021
- 2022
- 2023
- 2024

% of Cases with Infection

Underlying Medical Conditions

Table 8. Proportion of Cases with Select Conditions

HAIC Program	Carbapenem-resistant Enterobacterales (CRE)	
Condition	Cases	Percent (%)
Cardiovascular disease	52	20.0
Chronic lung disease	51	19.6
Chronic metabolic disorder	68	26.2
Gastrointestinal disease	19	7.3
Liver disease	26	10.0
Malignancy	28	10.8
Neurologic condition	57	21.9
Other	52	20.0
Plegias/paralysis	12	4.6
Renal disease	43	16.5
Skin condition	25	9.6
Urinary tract abnormality	46	17.7

*See Appendix for a list of conditions within underlying medical condition groups

Figure 8a. Proportion (%) of Cases with Underlying Conditions

No underlying conditions 15 (5.8%)

Yes, 1+ condition 244 (93.8%)

Figure 8b. Proportion (%) of Cases with Underlying Conditions

Year
- 2022
- 2023
- 2024

14
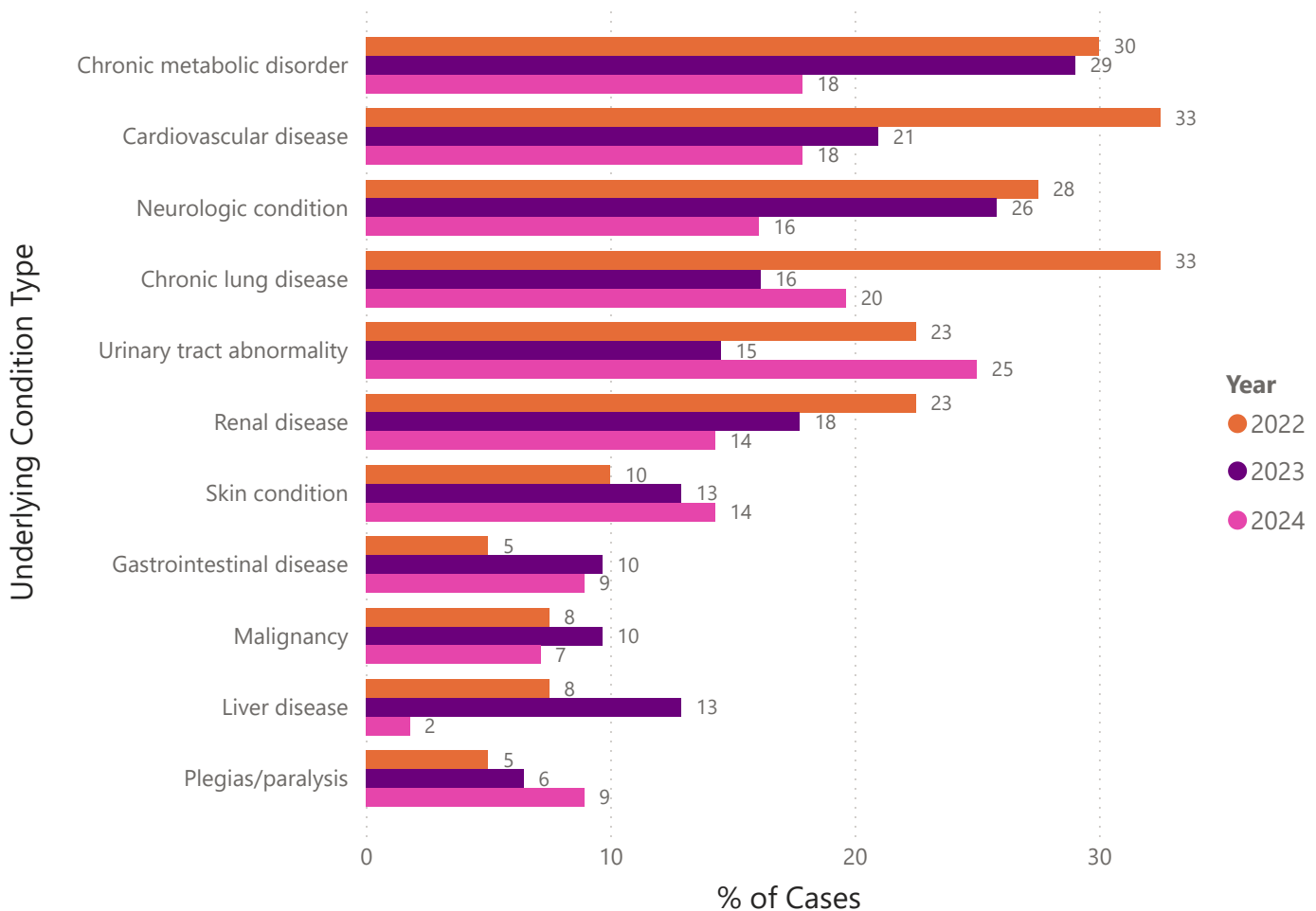
Prior Healthcare Exposures and Risk Factors

Figure 9a. Proportion of Cases with Healthcare Exposure

Community-associated
77 (29.6%)

Healthcare-associated
183 (70.4%)
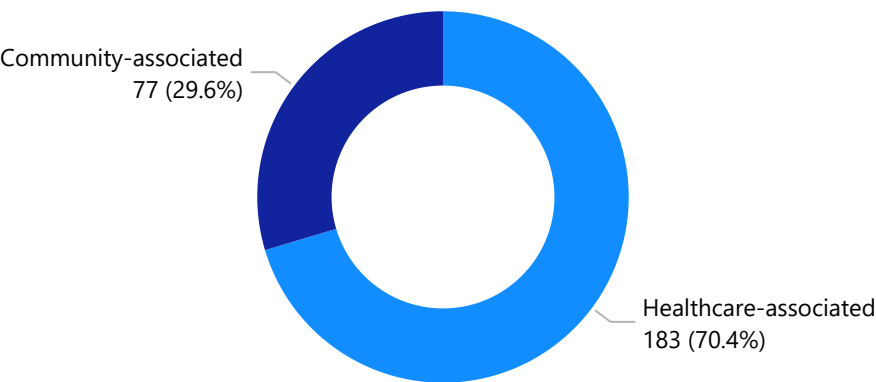
Table 9. Selected Healthcare Exposures or Risk Factors

Exposure Type	No. of Cases	Percent (%)
Acute care hospitalization	146	56.2
No known risk factors	56	21.5
Long-term care facility (LTCF)	41	15.8
Specimen collected ≥3 days after hospital admission	30	11.5
Long-term acute care hospitalization (LTACH)	5	1.9
International travel in the past year	3	1.2

Figure 9b. Proportion (%) of Cases with Selected Health Care Exposures or RIsk Factors by Year
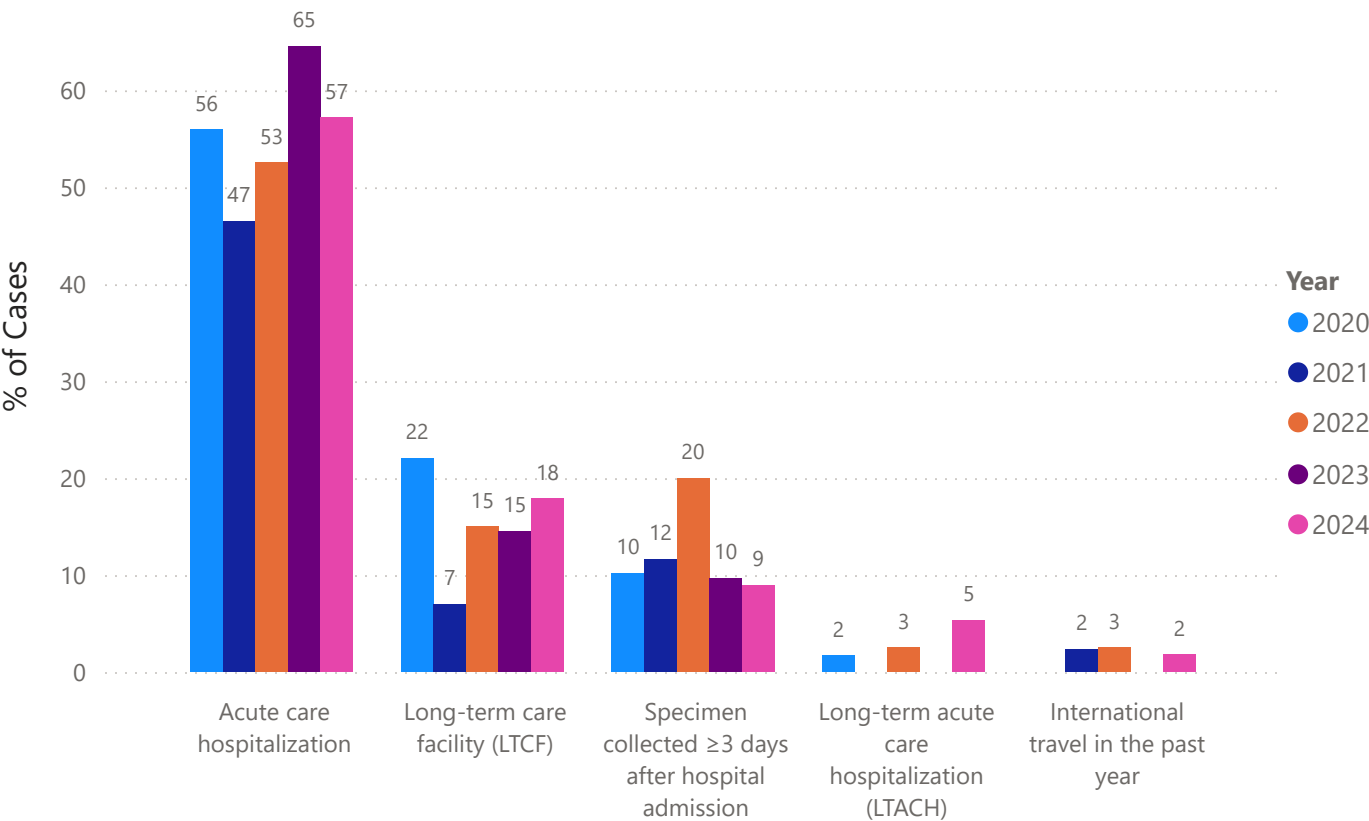
• Acute care hospitalizations, LTACH and LTCF stays were classified as an exposure if they occurred in the year prior to specimen collection

15

Prior Healthcare Risk Factors - Devices and Procedures

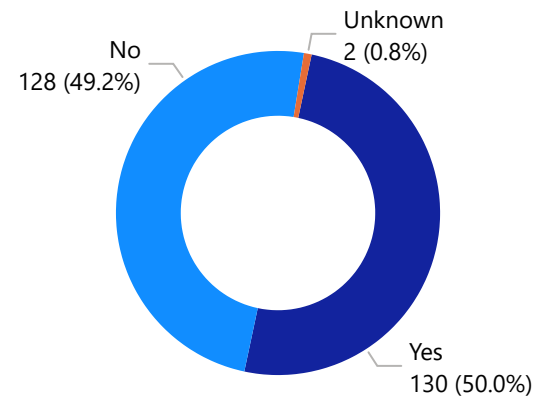**Table 10. Select Healthcare Device or Procedural Risk Factors**

Exposure Type	No. of Cases ▼	Percent (%)
Surgery	66	25.4
Catheter (indwelling urinary)	53	20.4
Catheter (urinary)*	47	18.1
Catheter (central venous)***	23	8.8
Catheter (other)**	22	8.5
Chronic dialysis	8	3.1

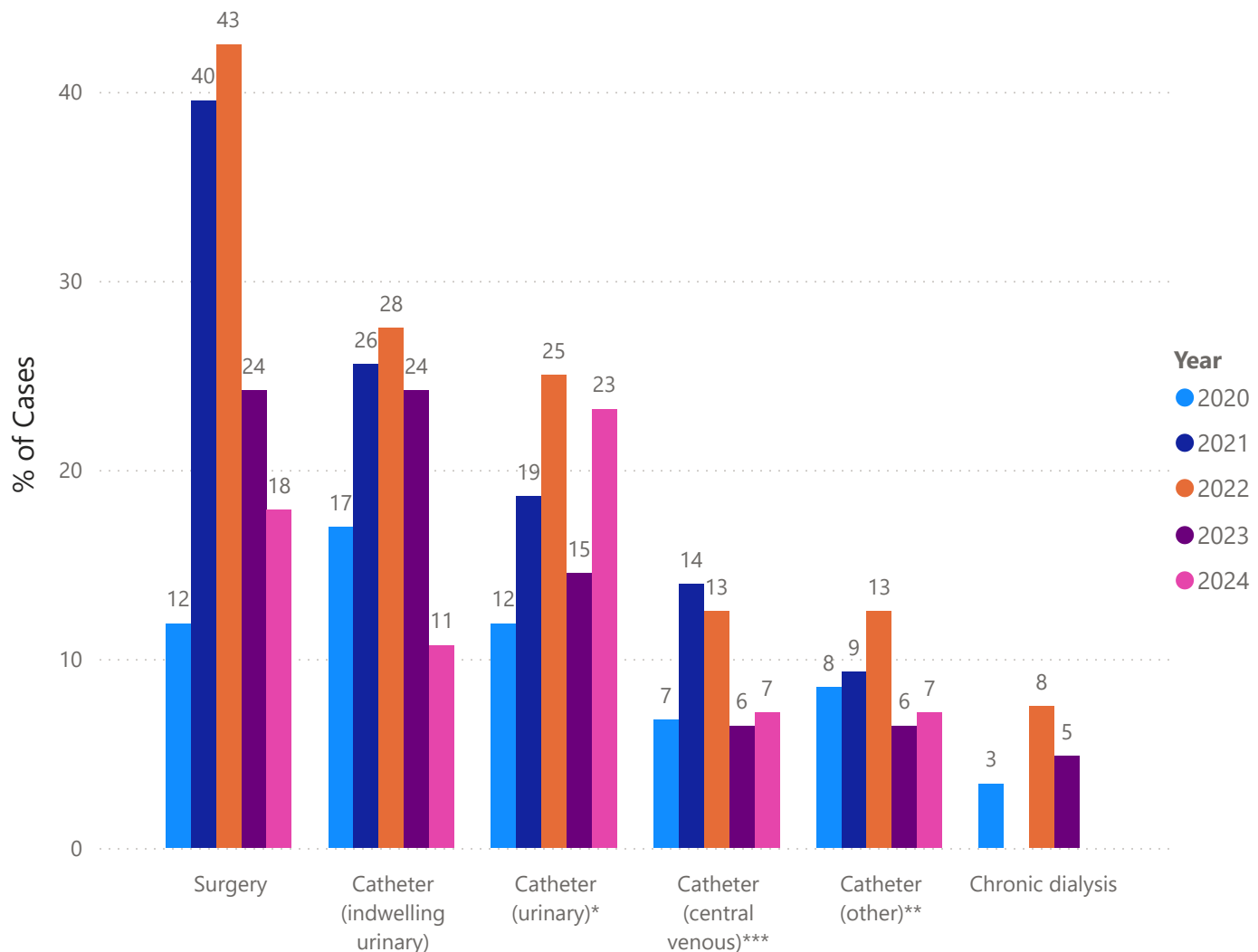*Catheter (Urinary) include indwelling urethral, suprapubic, and condom catheters, etc.

**Catheter (Other) include: endotracheal, nasogastric, gastrostomy, tracheostomy, nephrostomy tubes, etc.

***Catheter (central venous) include non-tunneled and tunneled CVCs, implantable ports, and peripherally inserted central catheters (PICCs)

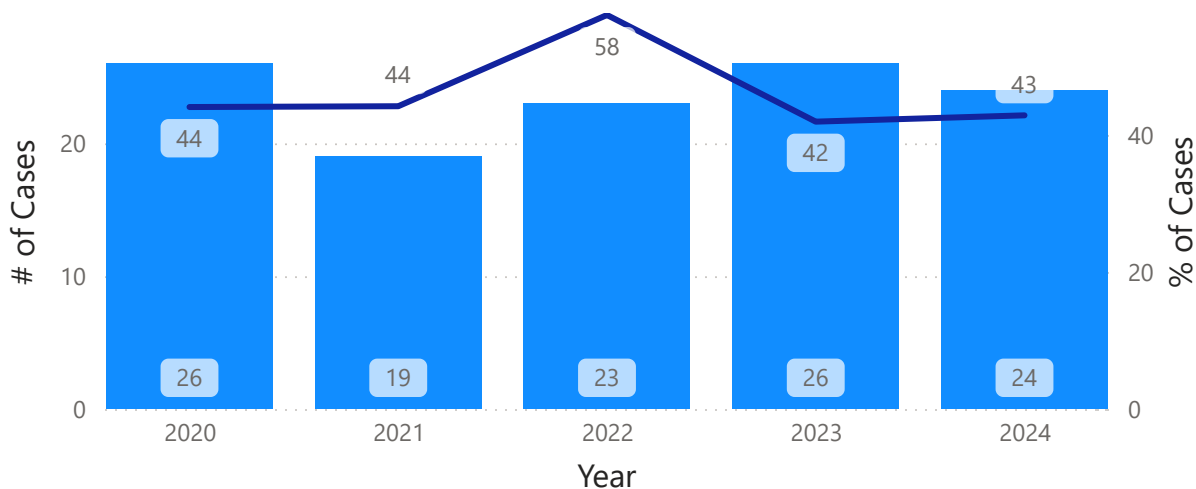**Figure 10a. Proportion of Cases with Recurrent Urinary Tract Infections**

No 128 (49.2%)

Unknown 2 (0.8%)

Yes 130 (50.0%)

Figure 10b. Proportion (%) of Cases with Select Healthcare Device or Procedural Risk Factors by Year

Patient Outcomes

118

\# of Patients
Hospitalized

Figure 11a. Cases and Proportion (%) Hospitalized on the Day or in the 29 Days After the Date of Specimen Collection by Year
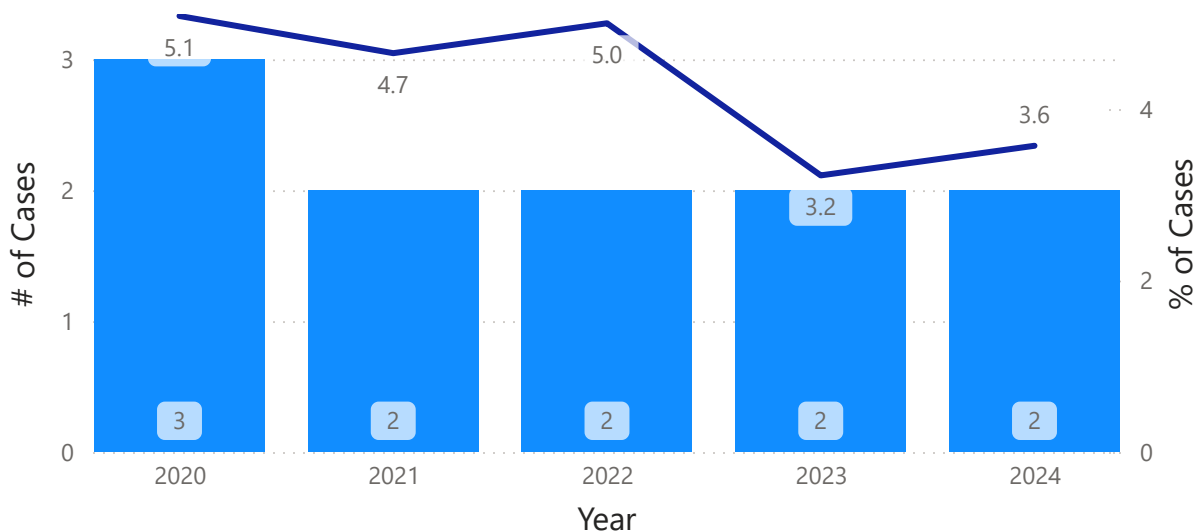

23

\# of Patients
Admitted to ICU

Figure 11b. Cases and Proportion (%) Admitted to ICU in the 6 Days After the Date of Specimen Collection by Year

11

\# of Patients Who
Died During
Hospitalization

Figure 11c. Cases and Proportion (%) Who Died During Hospitalization by Year

Hospitalized Patients - Outcomes and Discharge Locations

Figure 12a. Proportion of Hospitalized Patients Admitted to an Intensive Care Unit (ICU) in the 6 Days After Specimen Collection
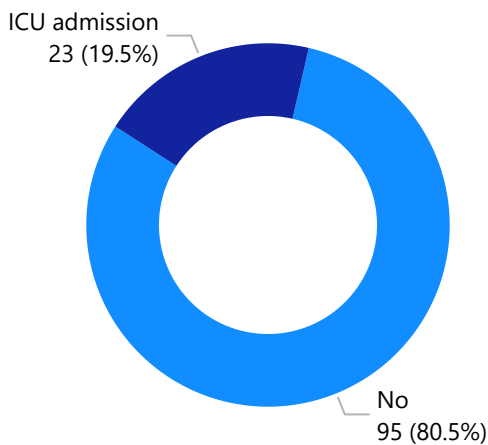

ICU admission
23 (19.5%)

No
95 (80.5%)

Figure 12b. Proportion of Hospitalized Patients Who Died During Hospitalization

Died during hospitalization
10 (8.5%)
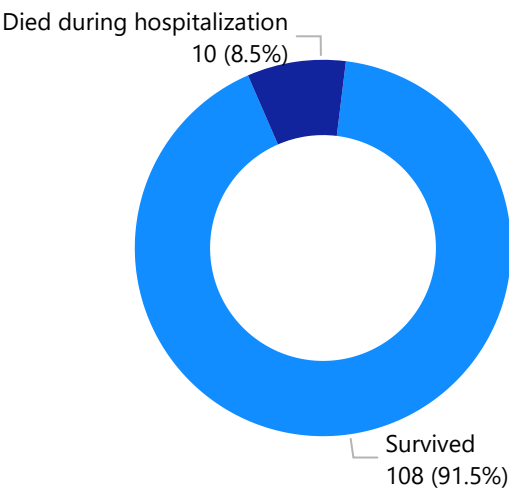
Survived
108 (91.5%)

Table 12. Discharge Location Among Surviving Hospitalized Patients

Discharge Location	No. of Cases	Percent
Private residence	80	74.1%
Long-term care facility	26	24.1%
Long-term acute care hospital	1	0.9%
Unknown	1	0.9%
Total	**108**	**100.0%**

Figure 12c. Hospitalized Patient Flow from Residence to Disposition (N=118)

12.7%
Acute-care hospital (inpatient)

5.4%
Long-term care facility

80.8%
Private residence

22.0%
Long-term care facility

67.8%
Private residence

8.5%
Died during hospitalization

<1%
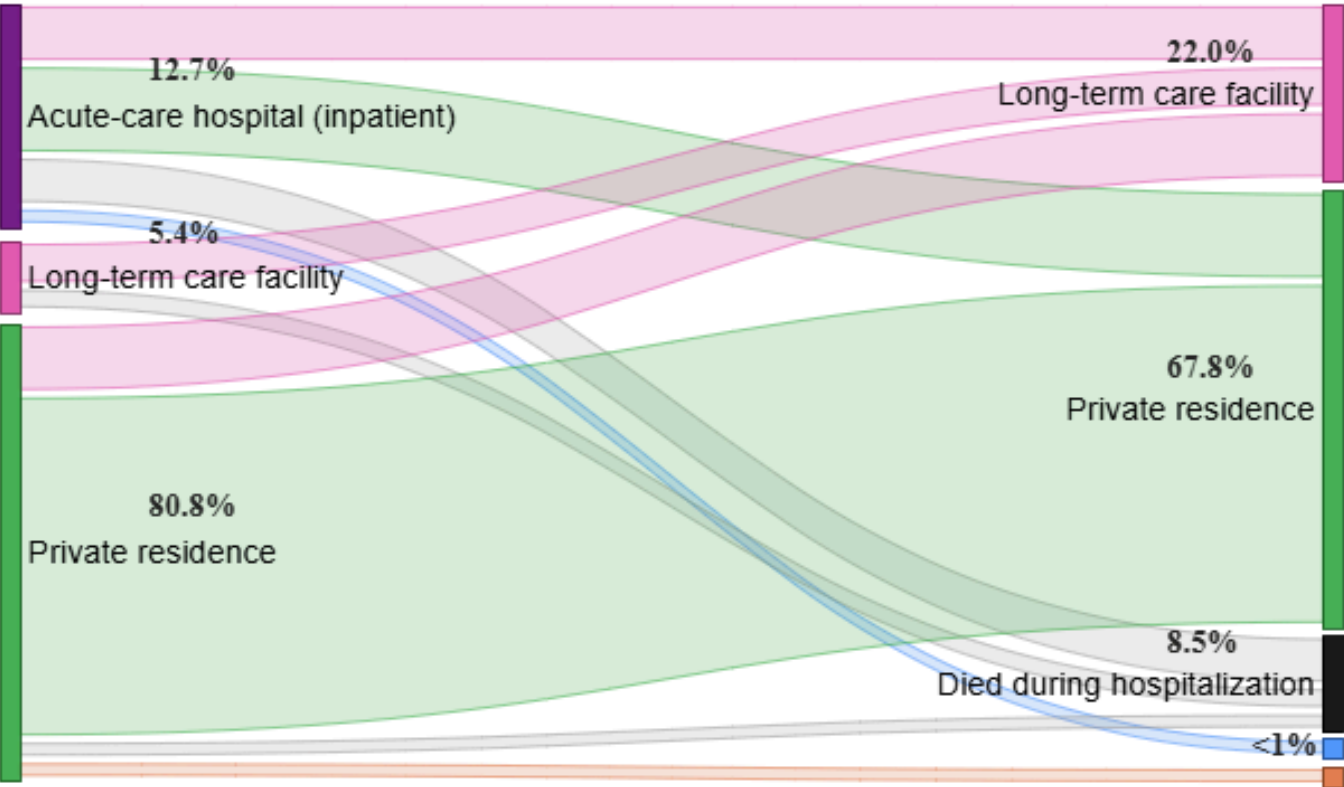
*0.9% of hospitalized patients had an unknown discharge location or were discharged to a long-term acute care hospital (0.9%) [not shown]

18

Prior Antimicrobial Use, 2024

Figure 13a. Proportion of Patient With Antimicrobial Use in 30 Days Prior, 2024

No 18 (32.1%)

Unknown 1 (1.8%)
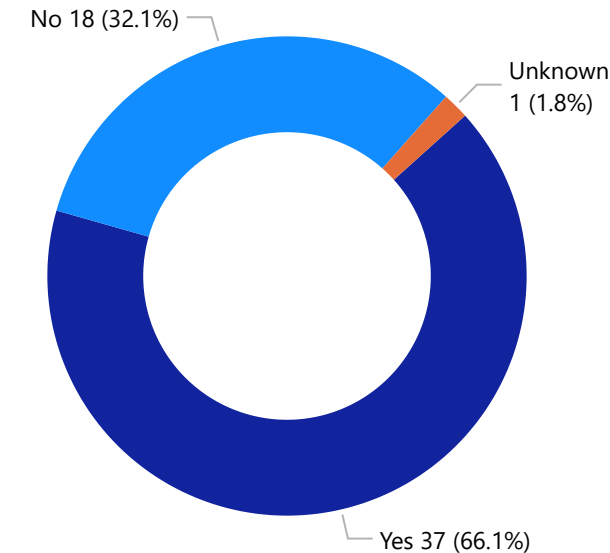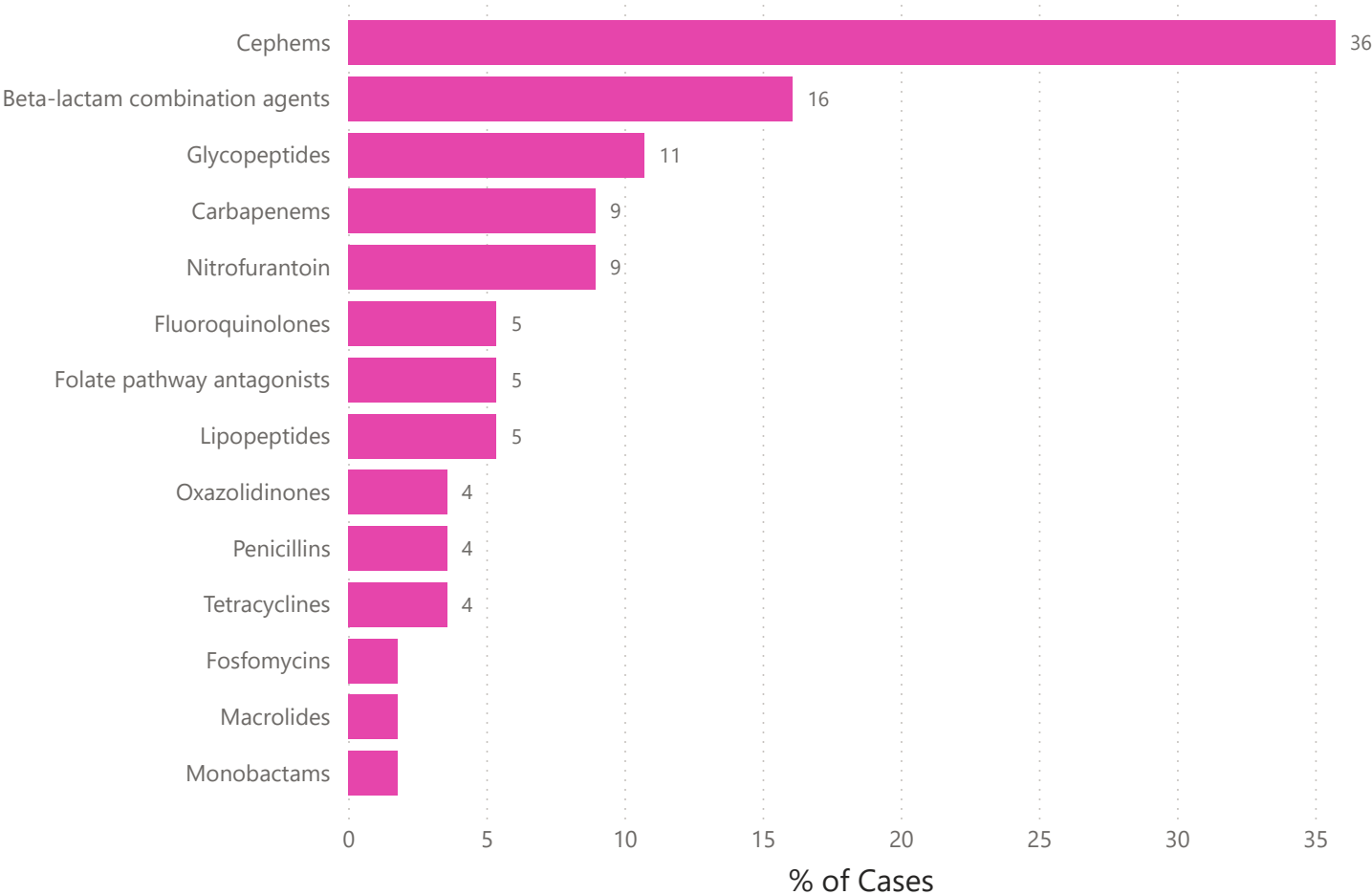
Yes 37 (66.1%)

Note:: the indication for antibiotic prescription is not collected.

Table 13. Proportion (%) of Cases With Prior Antimicrobial Class Use, 2024

Criteria	2024
Cephems	35.7
Beta-lactam combination agents	16.1
Glycopeptides	10.7
Carbapenems	8.9
Nitrofurantoin	8.9
Fluoroquinolones	5.4
Folate pathway antagonists	5.4
Lipopeptides	5.4
Oxazolidinones	3.6
Penicillins	3.6
Tetracyclines	3.6
Fosfomycins	1.8
Macrolides	1.8
Monobactams	1.8

Figure 13b. Proportion (%) of Patients with Select Antimicrobial Use in 30 Days Prior to Specimen Collection, 2024

Class	% of Cases
Cephems	36
Beta-lactam combination agents	16
Glycopeptides	11
Carbapenems	9
Nitrofurantoin	9
Fluoroquinolones	5
Folate pathway antagonists	5
Lipopeptides	5
Oxazolidinones	4
Penicillins	4
Tetracyclines	4
Fosfomycins	
Macrolides	
Monobactams	

% of Cases

New Mexico Emerging Infections Program (EIP)

Extended-spectrum β-lactamase-producing Enterobacterales (ESBL-E) Surveillance Report, Bernalillo County, 2020 to 2024

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Appendix. Underlying Medical Condition Groups

Condition (groups)	Condition
⊟ **Cardiovascular disease**	Congenital heart disease
	Congestive heart failure
	CVA/Stroke/TIA
	Myocardial infarction
	Peripheral vascular disease (PVD)
⊟ **Chronic lung disease**	Chronic pulmonary disease
	Cystic fibrosis
⊟ **Chronic metabolic disease**	Diabetes
⊟ **Gastrointestinal disease**	Diverticular disease
	Inflammatory bowel disease
	Peptic ulcer disease
	Short gut syndrome
⊟ **Immunocompromised condition**	HIV infection
	Primary Immunodeficiency
	Transplant, hematopoietic stem cell
	Transplant, solid organ
⊟ **Liver disease**	Chronic liver disease
	Hepatitis C
⊟ **Malignancy**	Malignancy, hematologic
	Malignancy, solid organ (metastatic)
	Malignancy, solid tumor (non-metastatic)
⊟ **Neurologic condition**	Cerebral palsy
	Chronic cognitive deficit
	Dementia
	Epilepsy/seizure/seizaure disorder
	Multiple sclerosis
	Neurologic, other
	Neuropathy
	Parkinson's Disease
⊟ **Other**	Connective tissue disorder
	Obesity
	Pregnant
⊟ **Plegias/paralysis**	Hemiplegia
	Paraplegia
	Quadriplegia
⊟ **Renal disease**	Chronic kidney disease
⊟ **Skin condition**	Burn
	Decubitus/pressure ulcer
	Other skin condition
	Other wound
	Surgical wound
⊟ **Urinary tract problems/abnormalities**	Urinary tract problems/abnormalities