2023

Top 10

INPATIENT HOSPITALIZATIONS

in Nebraska

NHA | NEBRASKA HOSPITALS

Contents

About This Data

Top 10 reasons for inpatient hospitalizations by ICD-10 diagnosis codes by discharge.

ICD-10 Diagnoses	Total Discharges in 2023
Septicemia	12,888
Heart Failure	5,044
Depressive Disorders	4,781
Cardiac Dysrhythmias	3,637
Pneumonia	3,301
Hypertensive Complications During Pregnancy	3,227
Diabetes Complications	3,095
Acute Myocardial Infarction	2,713
Respiratory Failure	2,766
Renal Failure	2,613

Note: Hospitalizations due to giving birth were excluded from this analysis.

Methods of Data Extraction

+ **NHA Dimensions** - Aggregated data was extracted at county-level from NHA Dimensions (Go to NHA Dimensions Extraction Appendix I). The county-level aggregated data was determined by the patient's home zip code.
+ **Census Data** - County population estimates for 2023 were extracted from US Census data.
+ **GIS Maps** – Geographic Information System maps were designed using ArcGIS Pro (maps displayed below in decreasing order of hospitalizations).
+ The analysis is done using county aggregated diagnosis data by county per 10,000 population.

NHA Support

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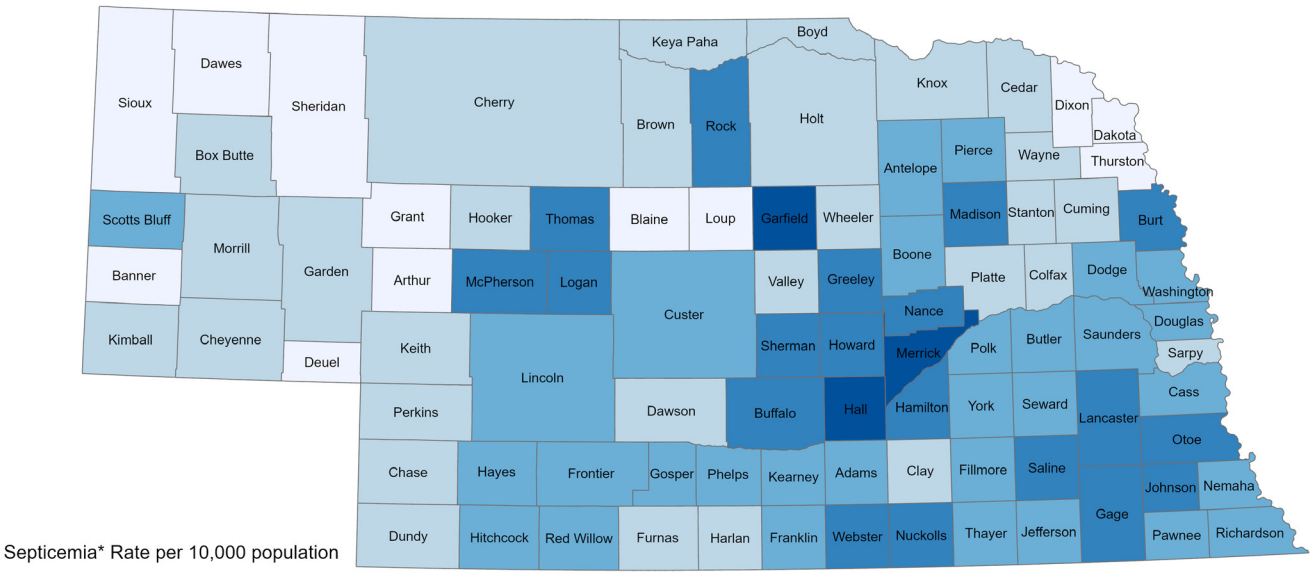
Septicemia

Inpatient Hospitalizations - CY 2023



**Septicemia discharge county-aggregated data was obtained from the Nebraska Hospital Association's Data Program based on the Patient's home zip code*

County population data was obtained from the 2023 Census data

Septicemia codes utilized: A021, A327, A400, A401, A403, A408, A409, A4101, A4102, A411, A412, A413, A414, A4150, A4151, A4152, A4153, A4154, A4159, A4181, A4189, A419, A427, B007, B377

How to Use This Data

1. Pull individual hospital and market data
2. Review trends of septicemia
3. Consider geographic information such as patient residences and public health statistics
4. Analyze potential risk factors such as socioeconomic status
5. Review policies and procedures for sepsis treatment
6. Review readmission and mortality rates associated with sepsis
7. Identify gaps to improve patient care
8. Collaborate with clinic and community to improve sepsis identification
9. Seek assistance from the NHA quality team for data and/or process improvement support

Counties with Highest Rates

Garfield Halt Merrick

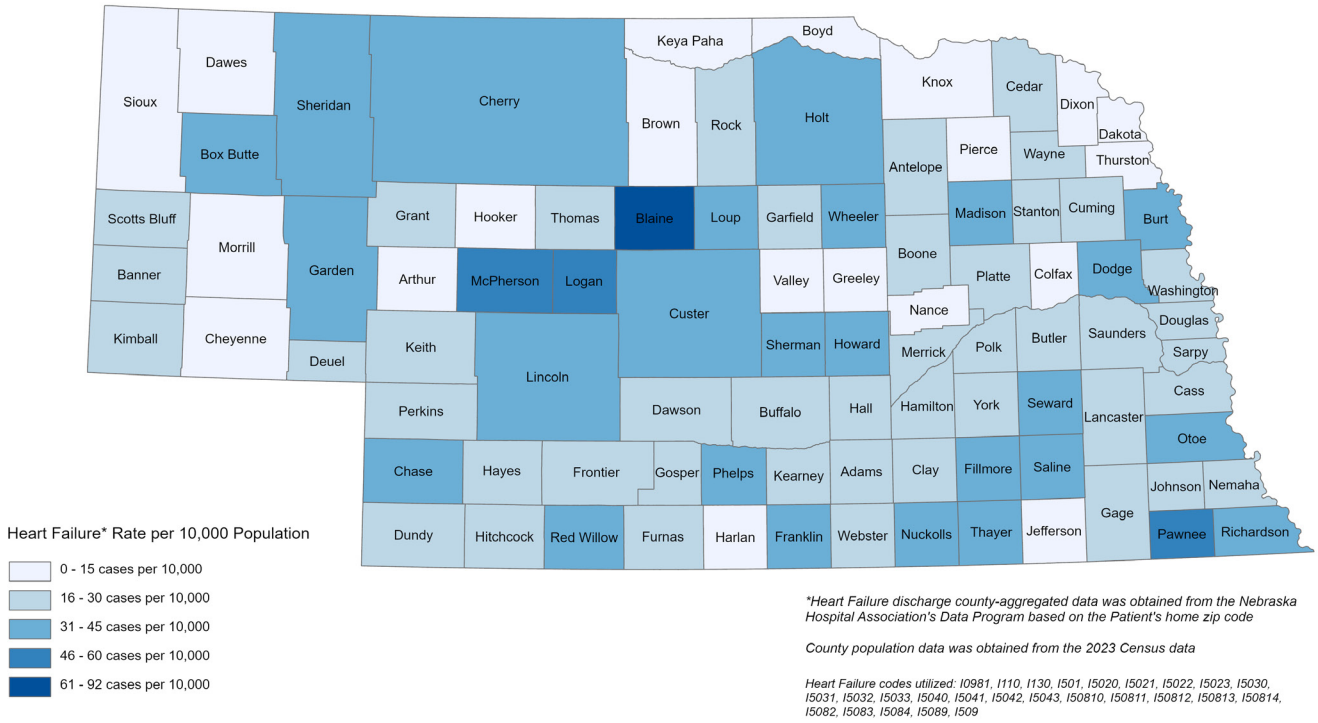
101-128 cases per 10,000

Sepsis Resources

- NHA Sepsis Toolkit
- Surviving Sepsis Campaign
- Sepsis Alliance
- CDC

Heart Failure

Inpatient Hospitalizations - CY 2023



*Heart Failure discharge county-aggregated data was obtained from the Nebraska Hospital Association's Data Program based on the Patient's home zip code

County population data was obtained from the 2023 Census data

Heart Failure codes utilized: I0981, I110, I130, I501, I5020, I5021, I5022, I5023, I5030, I5031, I5032, I5033, I5040, I5041, I5042, I5043, I50810, I50811, I50812, I50813, I50814, I5082, I5083, I5084, I5089, I509

How to Use This Data

1. Pull individual hospital and market data
2. Pull individual hospital and market data
3. Review trends of heart failure
4. Analyze patient specific data to review comorbidities associated with heart failure
5. Consider geographic information such as patient residences and public health statistics
6. Analyze potential risk factors such as socioeconomic status
7. Review readmission and mortality rates associated with heart failure
8. Review policies and procedures for heart failure treatment
9. Identify gaps to improve patient care
10. Consider implementation of a heart failure management program
11. Collaborate with clinic and community to improve warning signs of heart failure
12. Seek assistance from the NHA quality team for data and/or process improvement support

Counties with Highest Rates

Blaine

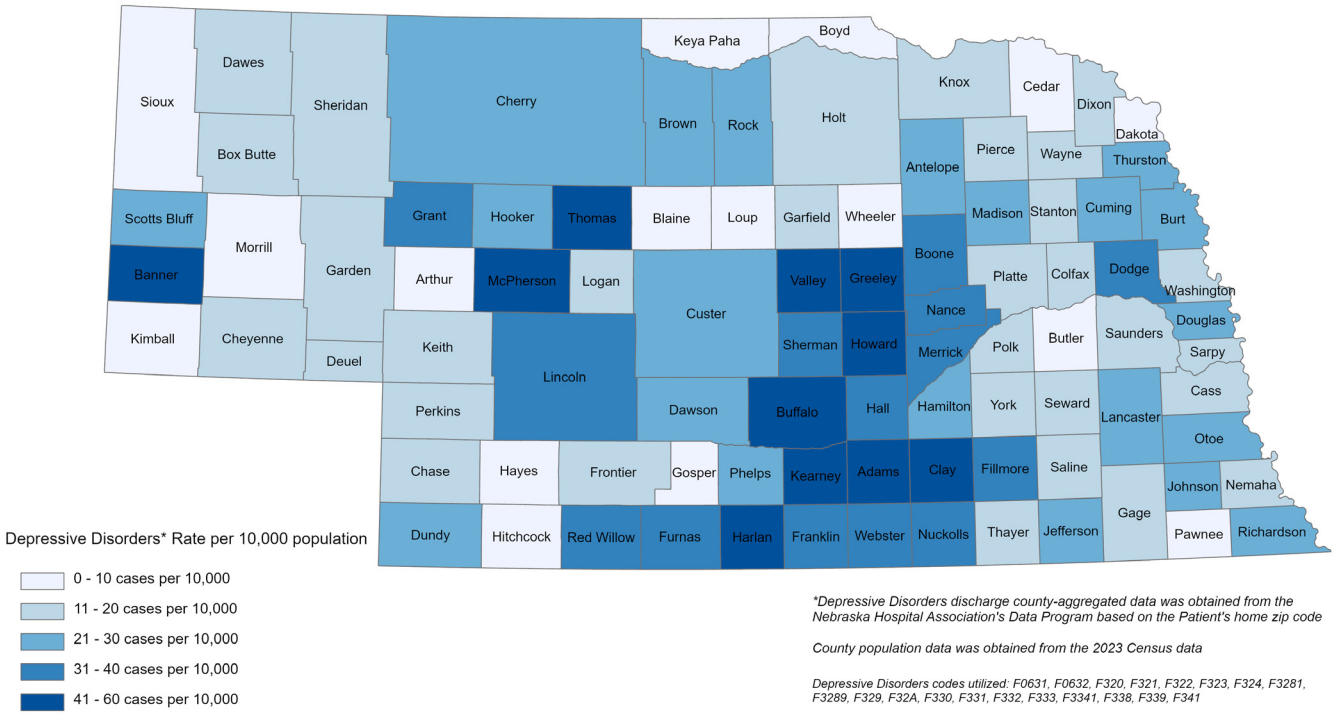
61-92 cases per 10,000

Heart Failure Resources

- ACC/AHA Clinical Guidelines
- HFSA Guidelines
- HFSA Patient Resources

Depressive Disorders

Inpatient Hospitalizations - CY 2023



**Depressive Disorders discharge county-aggregated data was obtained from the Nebraska Hospital Association's Data Program based on the Patient's home zip code*

County population data was obtained from the 2023 Census data

Depressive Disorders codes utilized: F0631, F0632, F320, F321, F322, F323, F324, F3281, F3289, F329, F32A, F330, F331, F332, F333, F3341, F338, F339, F341

How to Use This Data

1. Pull individual hospital and market data
2. Review trends of depressive disorders
3. Consider geographic information such as patient residences and public health statistics
4. Analyze potential risk factors such as socioeconomic status
5. Review readmission and mortality rates associated with depressive disorders
6. Review depression screening protocols
7. Review policies and procedures for depressive disorder treatment
8. Identify gaps to improve patient care
9. Identify behavioral health services in your region
10. Collaborate with clinic and community to improve access to care and early treatment of depressive disorders
11. Seek assistance from the NHA quality team for data and/or process improvement support

Counties with Highest Rates

Banner	Thomas	McPherson
Valley	Greenley	Howard
Buffalo	Kearney	Adams
Clay		Harlan

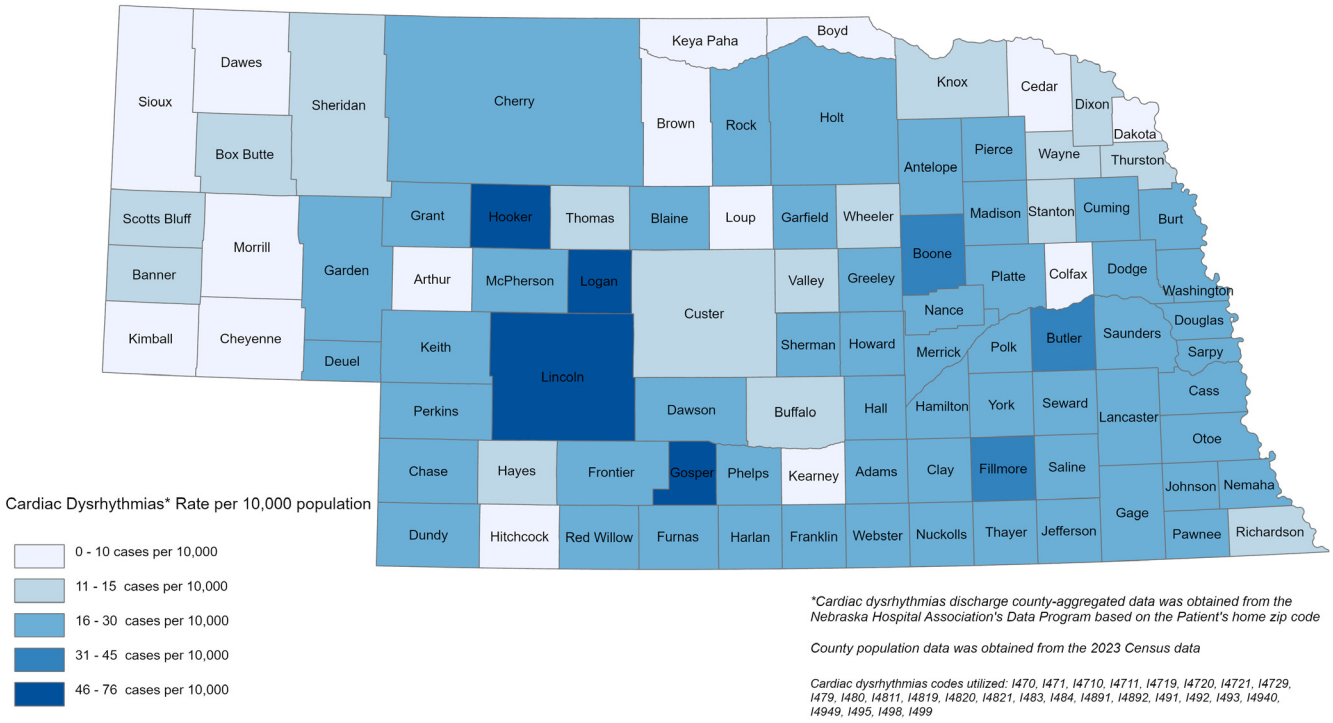
41-60 cases per 10,000

Depression Resources

- APA Guidelines
- National Alliance on Mental Illness
- PHQ-9
- Mental Health America

Cardiac Dysrhythmias

Inpatient Hospitalizations - CY 2023



*Cardiac dysrhythmias discharge county-aggregated data was obtained from the Nebraska Hospital Association's Data Program based on the Patient's home zip code

County population data was obtained from the 2023 Census data

Cardiac dysrhythmias codes utilized: I470, I471, I4710, I4711, I4719, I4720, I4721, I4729, I479, I480, I4811, I4819, I4820, I4821, I483, I484, I4891, I4892, I491, I492, I493, I4940, I4949, I495, I498, I499

How to Use This Data

1. Pull individual hospital and market data
2. Review trends of cardiac dysrhythmias
3. Consider geographic information such as patient residences and public health statistics
4. Analyze potential risk factors such as socioeconomic status
5. Review readmission and mortality rates associated with cardiac dysrhythmias
6. Review policies and procedures for cardiac dysrhythmias
7. Identify gaps to improve patient care
8. Collaborate with local EMS services to improve response times
9. Collaborate with clinic and community to improve early treatment recommendations for cardiac dysfunction and lifestyle factors that may be associated with heart health
10. Seek assistance from the NHA quality team for data and/or process improvement support

Counties with Highest Rates

Hooker Logan Lincoln

Gosper

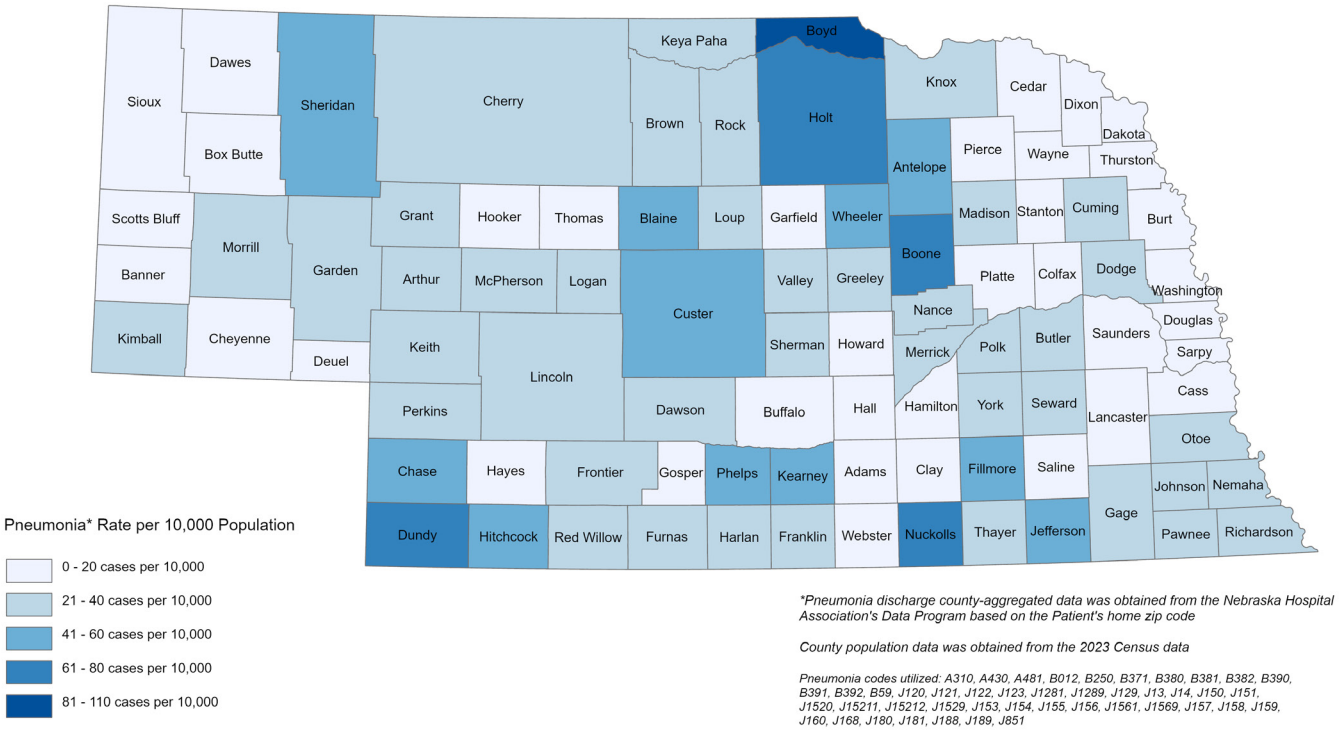
46-76 cases per 10,000

Cardiac Resources

- ACC/AHA Clinical Guidelines
- Heart Rhythm Society Guidelines

Pneumonia

Inpatient Hospitalizations - CY 2023



**Pneumonia discharge county-aggregated data was obtained from the Nebraska Hospital Association's Data Program based on the Patient's home zip code*

County population data was obtained from the 2023 Census data

Pneumonia codes utilized: A310, A430, A481, B012, B250, B371, B380, B381, B382, B390, B391, B392, B59, J120, J121, J122, J123, J1281, J1289, J129, J13, J14, J150, J151, J1520, J15211, J15212, J1529, J153, J154, J155, J156, J1561, J1569, J157, J158, J159, J160, J168, J180, J181, J188, J189, J851

How to Use This Data

1. Pull individual hospital and market data
2. Review trends of pneumonia
3. Consider geographic information such as patient residences and public health statistics
4. Analyze potential risk factors such as socioeconomic status
5. Review readmission and mortality rates associated with pneumonia
6. Review policies and procedures for pneumonia
7. Identify gaps to improve patient care
8. Collaborate with local post-acute setting facilities to identify and treat timely infections
9. Examine cardiac rehabilitation program
10. Collaborate with clinic and community to improve early treatment recommendations for pneumonia
11. Review pneumococcal vaccine rates
12. Seek assistance from the NHA quality team for data and/or process improvement support

Counties with Highest Rates

Boyd

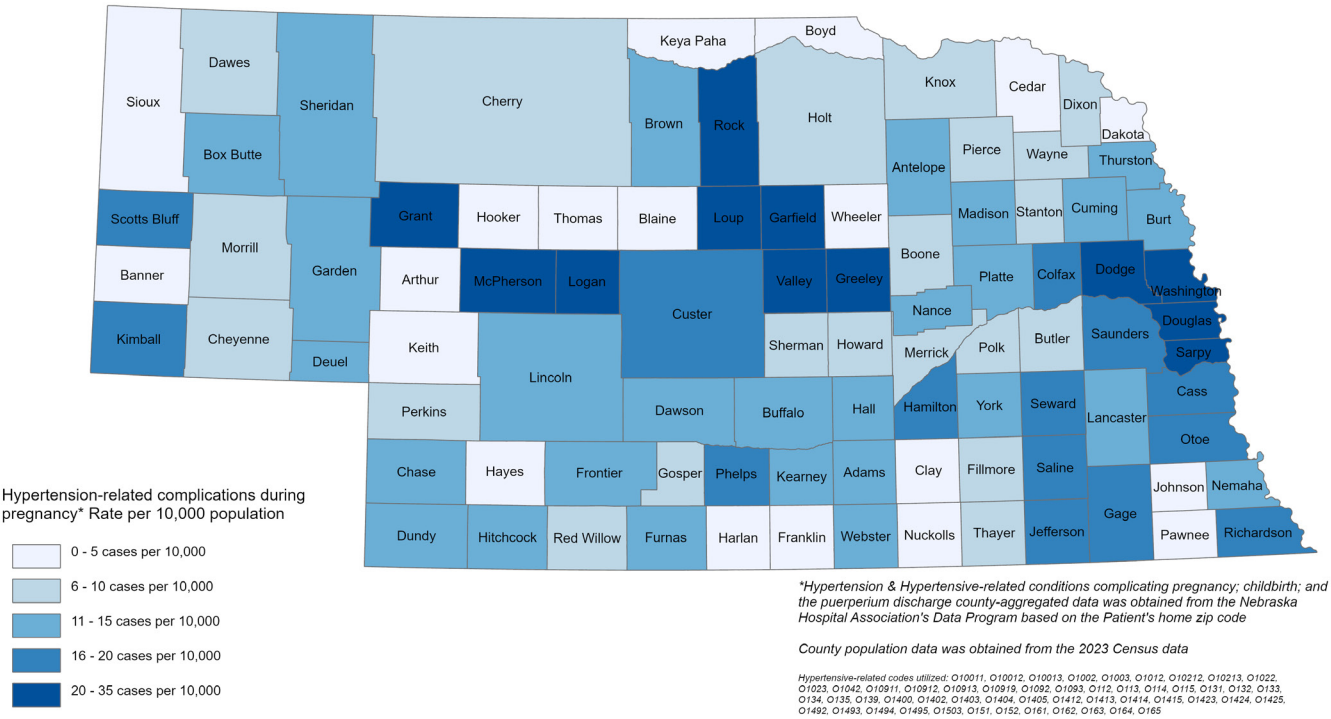
81-110 cases per 10,000

Pneumonia Resources

- CDC
- American Lung Association

Hypertensive Complications During Pregnancy

Inpatient Hospitalizations - CY 2023



*Hypertension & Hypertensive-related conditions complicating pregnancy; childbirth; and the puerperium discharge county-aggregated data was obtained from the Nebraska Hospital Association's Data Program based on the Patient's home zip code

County population data was obtained from the 2023 Census data

Hypertensive-related codes utilized: O10011, O10012, O10013, O1002, O1003, O1012, O10212, O10213, O1022, O1023, O1042, O10911, O10912, O10913, O10919, O1092, O1093, O112, O113, O114, O115, O131, O132, O133, O134, O135, O139, O1400, O1402, O1403, O1404, O1405, O1412, O1413, O1414, O1415, O1423, O1424, O1425, O1492, O1493, O1494, O1495, O1503, O151, O152, O161, O162, O163, O164, O165

How to Use This Data

1. Pull individual hospital and market data
2. Review trends of hypertension in pregnancy
3. Consider geographic information such as patient residences and public health statistics
4. Analyze potential risk factors such as socioeconomic status
5. Review policies and procedures for hypertension in pregnancy
6. Identify gaps to improve patient care
7. Examine cardiac rehabilitation program
8. Collaborate with clinic and community to improve early treatment recommendations for hypertension
9. Seek assistance from the NHA quality team for data and/or process improvement support

Counties with Highest Rates

Grant	Logan	McPherson
Rock	Loup	Garfield
Valley	Greeley	Dodge
Washington	Douglas	Sarpy

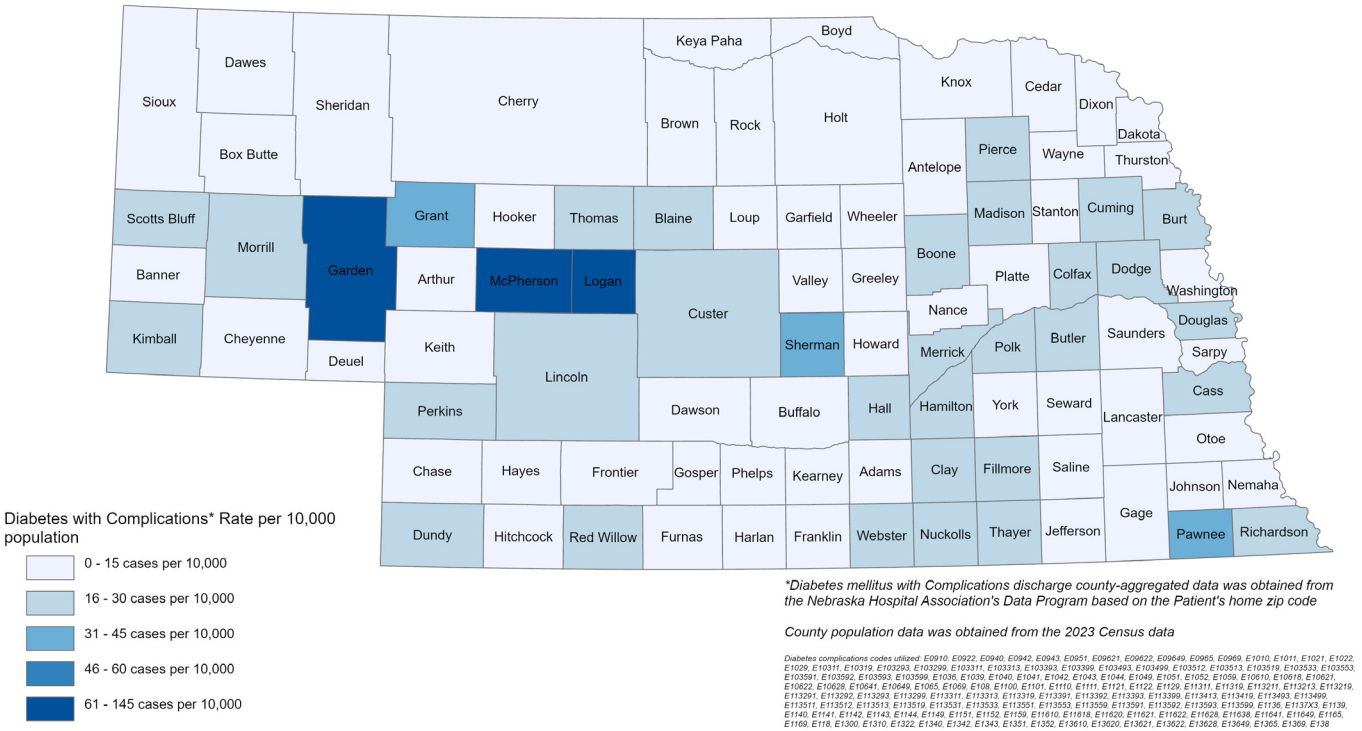
20-35 cases per 10,000

Pregnancy Resources

- NPQIC
- ACOG Hypertension Guidelines
- Society for Maternal-Fetal Medicine
- March of Dimes

Diabetes Complications

Inpatient Hospitalizations - CY 2023



**Diabetes mellitus with Complications discharge county-aggregated data was obtained from the Nebraska Hospital Association's Data Program based on the Patient's home zip code*

County population data was obtained from the 2023 Census data

Diabetes complications codes utilized: E0910, E0922, E0940, E0942, E0943, E0951, E09621, E09622, E09649, E0965, E0969, E1010, E1011, E1021, E1022, E1029, E10311, E10319, E103293, E103299, E103311, E103313, E103393, E103399, E103493, E103499, E103512, E103513, E103519, E103533, E103553, E103591, E103592, E103593, E103599, E1036, E1039, E1040, E1041, E1042, E1043, E1044, E1049, E1051, E1052, E1059, E10610, E10618, E10621, E10622, E10628, E10641, E10649, E1065, E1069, E108, E1100, E1101, E1110, E1111, E1121, E1122, E1129, E11311, E11319, E113211, E113213, E113219, E113291, E113292, E113293, E113299, E113311, E113313, E113319, E113391, E113392, E113393, E113399, E113413, E113419, E113493, E113499, E113511, E113512, E113513, E113519, E113531, E113533, E113551, E113553, E113559, E113591, E113592, E113593, E113599, E136, E137X3, E1139, E1140, E1141, E1142, E1143, E1144, E1149, E1151, E1152, E1159, E11610, E11618, E11620, E11621, E11622, E11628, E11638, E11641, E11649, E1165, E1169, E118, E1300, E1310, E1322, E1340, E1342, E1343, E1351, E1352, E13610, E13620, E13621, E13622, E13628, E13649, E1365, E1369, E138

How to Use This Data

1. Pull individual hospital and market data
2. Review trends of diabetes
3. Consider geographic information such as patient residences and public health statistics
4. Analyze potential risk factors such as socioeconomic status
5. Review readmission and mortality rates associated with diabetes
6. Review policies and procedures for diabetes
7. Identify gaps to improve patient care
8. Collaborate with clinic and community to improve early treatment recommendations for diabetes
9. Consider implementation of a diabetes management program
10. Seek assistance from the NHA quality team for data and/or process improvement support

Counties with Highest Rates

Garden McPherson Logan

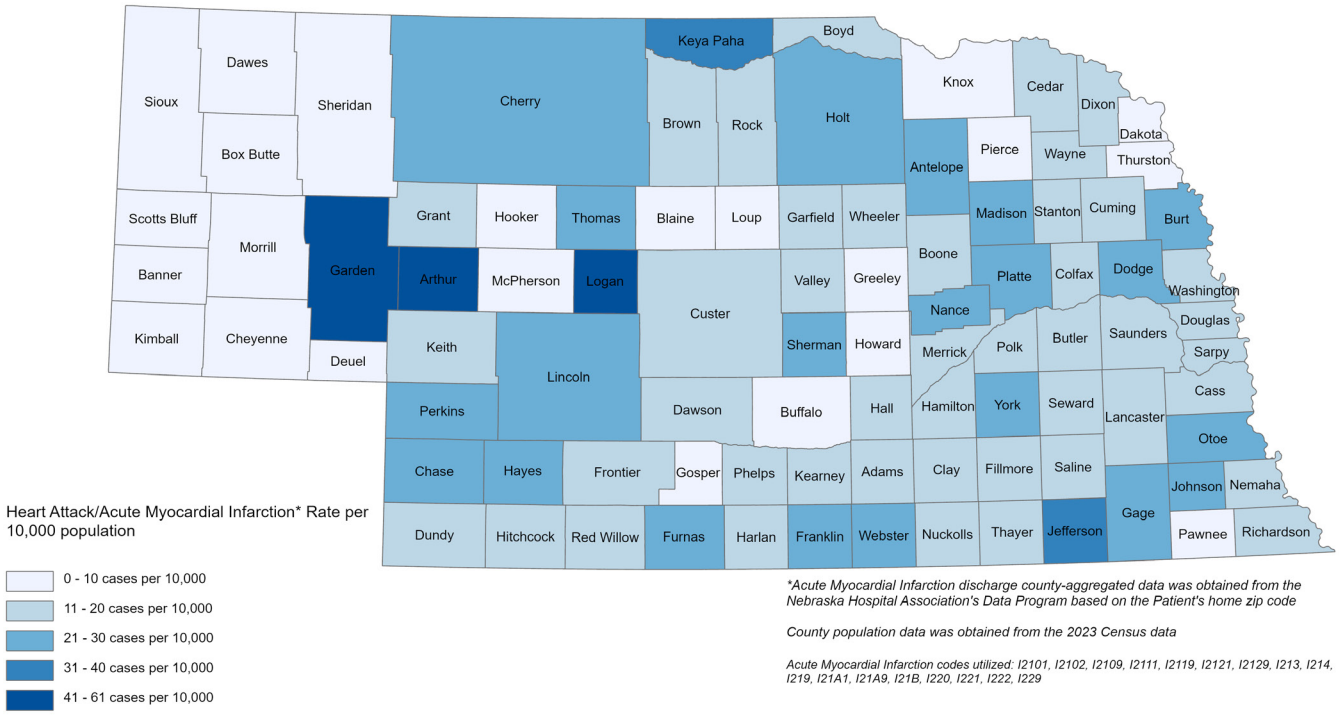
61-145 cases per 10,000

Diabetes Resources

- ADA Standards of Care
- AACE Guidelines
- CDC

Acute Myocardial Infarction

Inpatient Hospitalizations - CY 2023



Acute Myocardial Infarction discharge county-aggregated data was obtained from the Nebraska Hospital Association's Data Program based on the Patient's home zip code

County population data was obtained from the 2023 Census data

Acute Myocardial Infarction codes utilized: I2101, I2102, I2109, I2111, I2119, I2121, I2129, I213, I214, I219, I21A1, I21A9, I21B, I220, I221, I222, I229

How to Use This Data

1. Pull individual hospital and market data
2. Review trends of acute myocardial infarction
3. Consider geographic information such as patient residences and public health statistics
4. Analyze potential risk factors such as socioeconomic status
5. Review readmission and mortality rates associated with acute myocardial infarction
6. Review policies and procedures for acute myocardial infarction
7. Identify gaps to improve patient care
8. Collaborate with local EMS services to improve response times
9. Examine cardiac rehabilitation program
10. Collaborate with clinic and community to improve early treatment recommendations for cardiac dysfunction and lifestyle factors that may be associated with heart health
11. Seek assistance from the NHA quality team for data and/or process improvement support

Counties with Highest Rates

Garden Arthur Logan

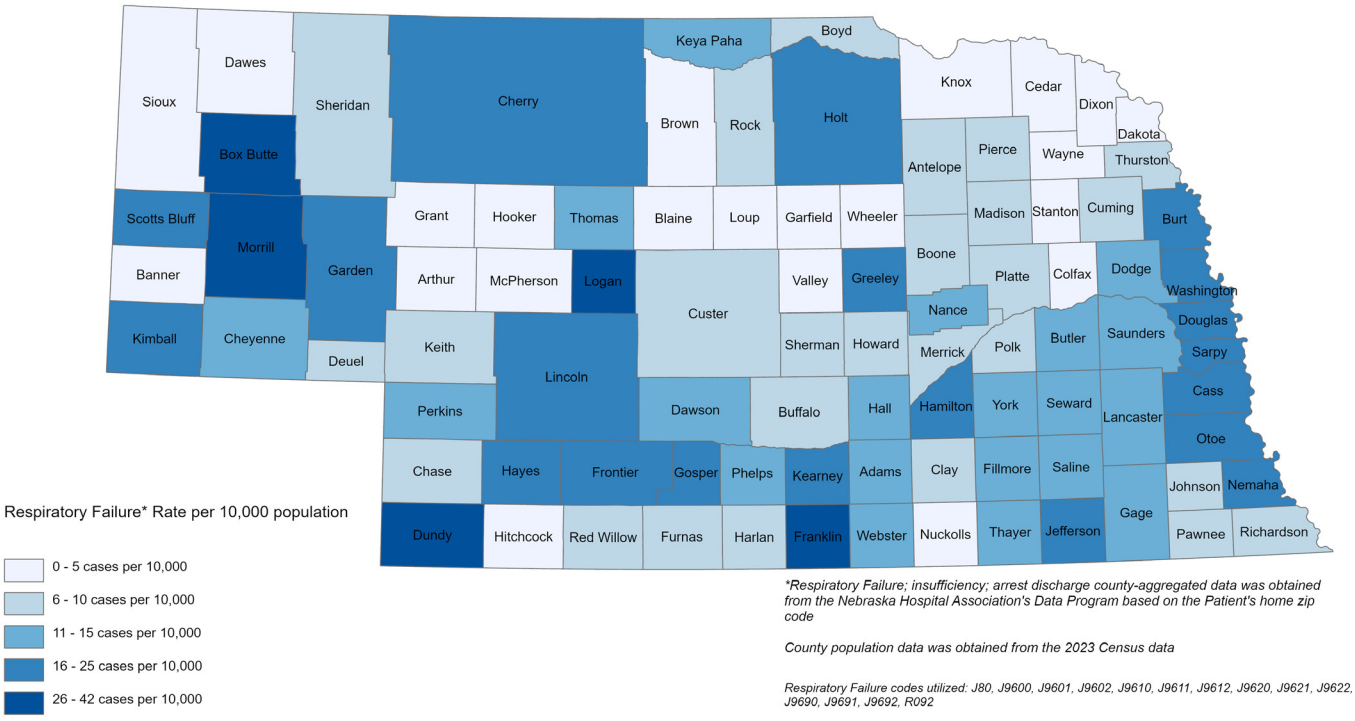
41-61 cases per 10,000

Cardiac Resources

- ACC/AHA Clinical Guidelines

Respiratory Failure

Inpatient Hospitalizations - CY 2023



**Respiratory Failure; insufficiency; arrest discharge county-aggregated data was obtained from the Nebraska Hospital Association's Data Program based on the Patient's home zip code*

County population data was obtained from the 2023 Census data

Respiratory Failure codes utilized: J80, J9600, J9601, J9602, J9610, J9611, J9612, J9620, J9621, J9622, J9690, J9691, J9692, R092

How to Use This Data

1. Pull individual hospital and market data
2. Review trends of respiratory failure (acute vs. chronic, seasonal)
3. Analyze correlations with outbreaks for related respiratory conditions
4. Evaluate transfers associated with respiratory failure
5. Consider geographic information such as patient residences and public health statistics
6. Analyze potential risk factors such as socioeconomic status
7. Review readmission and mortality rates associated with respiratory failure
8. Review policies and procedures for respiratory failure
9. Identify gaps to improve patient care
10. Examine pulmonary rehabilitation program
11. Collaborate with clinic and community to improve early treatment recommendations for respiratory failure
12. Seek assistance from the NHA quality team for data and/or process improvement support

Counties with Highest Rates

Box Butte Morrill Dundy

Logan Franklin

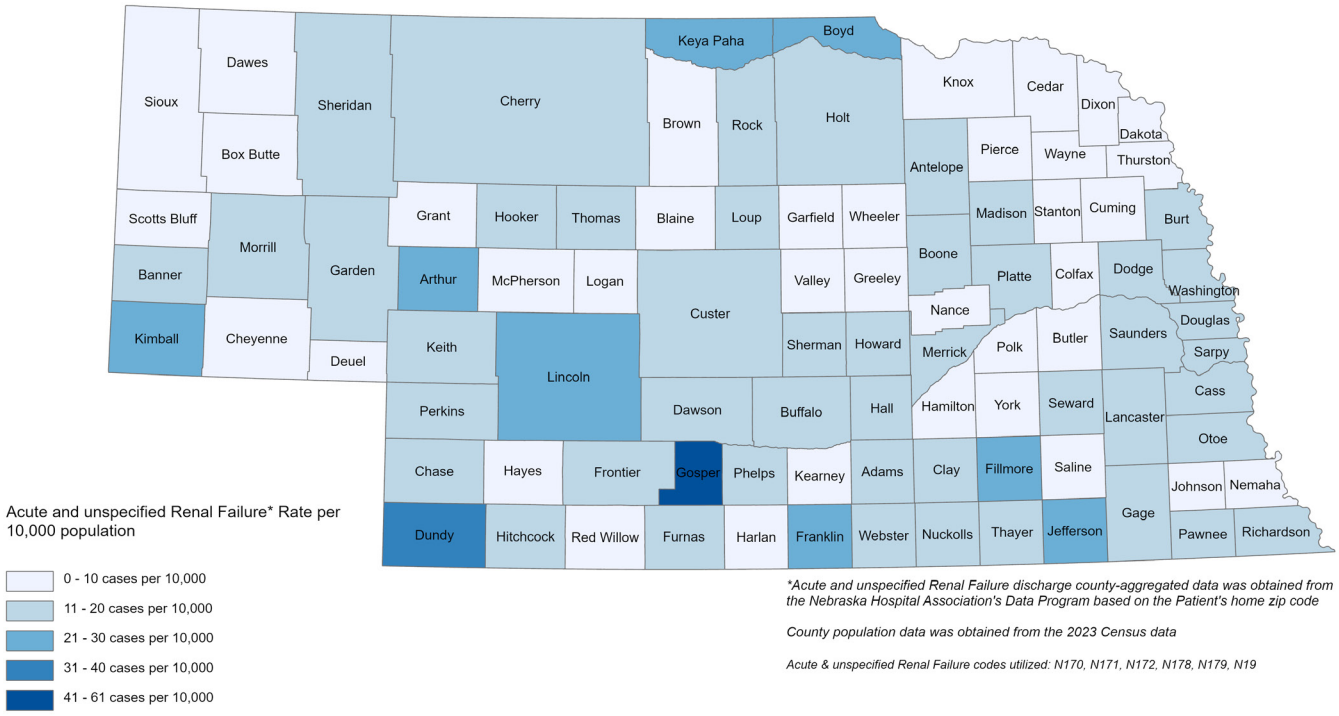
26-42 cases per 10,000

Respiratory Resources

- ATS Guidelines

Renal Failure

Inpatient Hospitalizations - CY 2023



*Acute and unspecified Renal Failure discharge county-aggregated data was obtained from the Nebraska Hospital Association's Data Program based on the Patient's home zip code

County population data was obtained from the 2023 Census data

Acute & unspecified Renal Failure codes utilized: N170, N171, N172, N178, N179, N19

How to Use This Data

1. Pull individual hospital and market data
2. Review trends of renal failure
3. Consider geographic information such as patient residences and public health statistics
4. Analyze potential risk factors such as socioeconomic status
5. Review readmission and mortality rates associated with renal failure
6. Review policies and procedures for renal failure
7. Identify gaps to improve patient care
8. Evaluate dialysis centers in your region
9. Review transportation access in your region
10. Collaborate with clinic and community to improve early treatment recommendations for renal failure
11. Seek assistance from the NHA quality team for data and/or process improvement support

Counties with Highest Rates

Gosper

41-61 cases per 10,000

Renal Resources

- SRD Network Resources
- KDIGO Guidelines

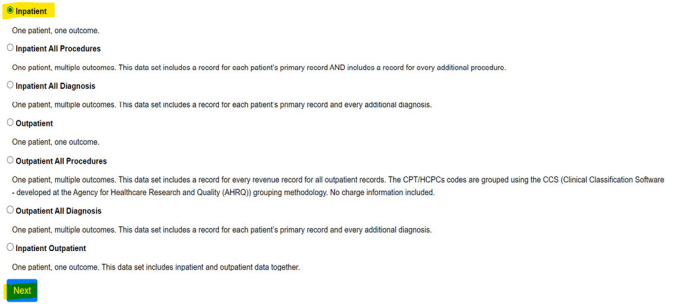
How To Extract Your Organization's Data

Step 1:

Go to "Slice and Dice" and click "View Cubes".

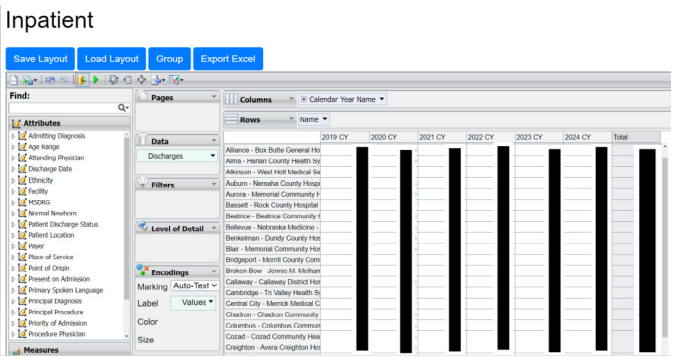
Step 2:

Click on the "inpatient" cube to assess the TOP 10 reason for inpatient hospitalizations.



Step 3:

Default "inpatient" cube template will open.

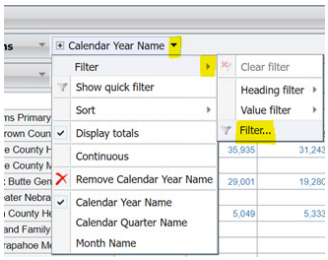


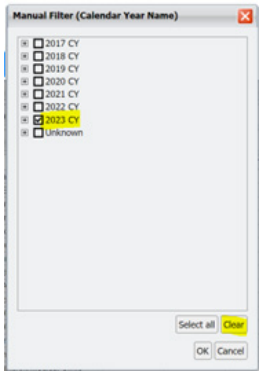
Step 4:

Applying Filters

4(a):

<u>Example 1</u>: "Calendar Year Name" - Click on the down arrow button on the calendar year name in the 'columns' section. Select the year you want to choose (for the purposes of this document, 2023 is selected.

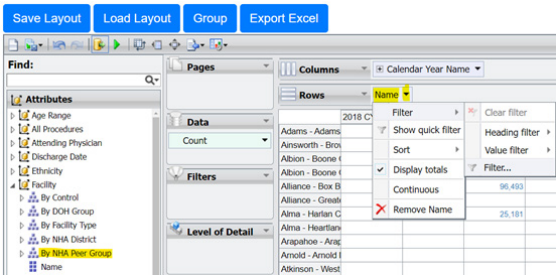




To select 2023, click on the 'clear' button first, and then select 2023. By clicking on the '+', you can further filter by quarters or months.

4(b):

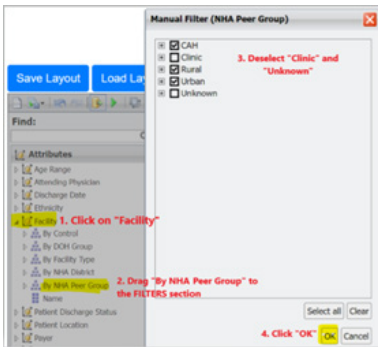
<u>Example 2</u>: Facility (Hospital/RHC) "Name" - Click on the down arrow button on the "Name" button in the 'Rows' section.



Select specific hospitals for your analysis, if needed. If you want a generic number, you can choose to keep all hospitals - go to step 4(c).

4(c):

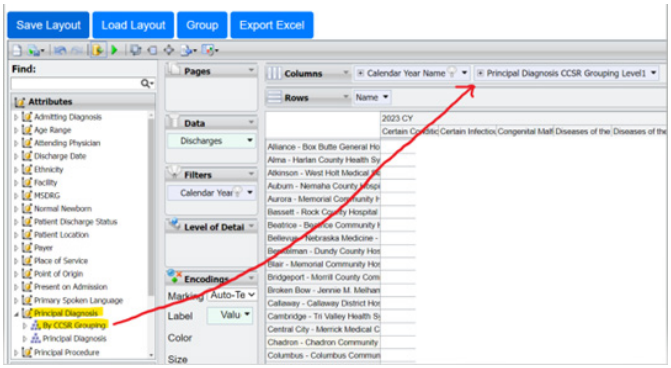
Filter out hospitals. Note: Starting July 2023, NHA began collecting hospital-owned Rural Health Clinic data. This is valuable if you want data for all facilities but may not be a necessary step if you only look at hospital data.



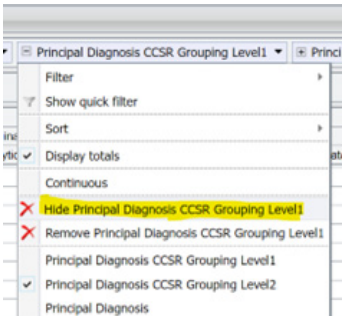
4(d):

Go to "Principal Diagnosis" to filter out particular ICD-10 codes as needed.
Note: It can be used to filter any diagnoses.
There are 2 ways to look at the procedures:

1. By CCS (Clinical Classifications Software) Grouping - This will provide you with the generic categories. You can expand a category by clicking on the '+' button. Drag "By CCSR Grouping" to the column section

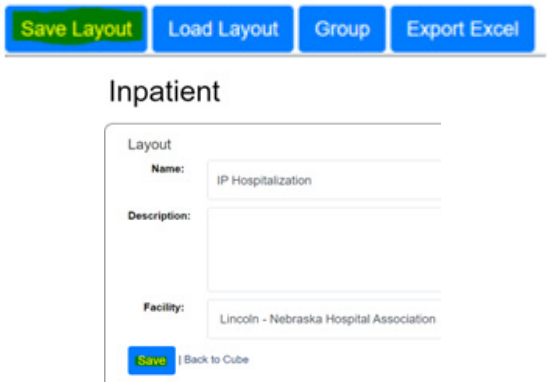


2. Expand "Principal Diagnosis CCSR Grouping Level1" by clicking on the '+' button.
3. Hide "Principal Diagnosis CCSR Grouping Level1.



Step 5:

Saving the LAYOUT - Once you have finalized your custom report and would like to save the layout for future report extractions (usually beneficial if you want to download the same report whenever NHA publishes quarterly data), go to "Save Layout" on the top left corner of the page.

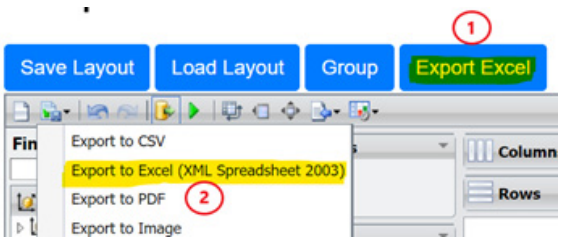


Note: You can access the reports you created by using the "Load Layout" feature. Make sure to remember which cube you created the report in as you will have to access that cube to extract future reports.
All users within your organization that have access to Dimensions should be able to access the layout.

Step 6:

Downloading the Data

1. Export Excel - This format is great for creating pivot charts and tables.
2. Export to Excel (XML Spreadsheet 2003) - If you would like to download the data exactly how it appears on the cube output, use this option. Download the XML format > Open the file > 'Save As' in an Excel format.



The above instructions can be used to create population data using RHC data.

NHA | NEBRASKA HOSPITALS

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November 2024