# DELAWARE HOSPITAL DISCHARGE SUMMARY REPORT • 2014

Issued June 2019



# **Acknowledgments**

This report was prepared by Don Berry and Ed Ratledge of the University of Delaware's Center for Applied Demography and Survey Research. In addition, Ed Ratledge created the hospital discharge research file and provided technical advice.

We gratefully acknowledge the Delaware Healthcare Association and Delaware's hospitals for providing the data that make this report possible.

# For more information, contact:

Delaware Health Statistics Center
Division of Public Health
417 Federal Street
Dover, DE 19901
302-744-4541
Fax: 302-739-4784

http://www.dhss.delaware.gov/dph/hp/healthstats.html

# **TABLE OF CONTENTS**

Executive Summary	1
Patient Characteristics	3
Why Patients Were Hospitalized	7
Why Patients Were Hospitalized - Injuries	
Why Patients Were Hospitalized - Procedures	1 <sup>-</sup>
Hospitalizations of Delaware Residents	14
How Patients Were Admitted	18
Hospital Charges and Billing	20
How Patients Were Discharged	24
Hospital Specific Data	28
Appendix A	35
Appendix B	41
Appendix C	42
Appendix D	47
Appendix E	48
Appendix F	49
Appendix G	50
Appendix H	51
Hospital Location Maps	52
Technical Notes	62
References	66

# **EXECUTIVE SUMMARY**

# This report describes:

**Patient Characteristics** 

- Most Frequent Reason for Hospitalizations
- Patient Admission Source

Hospital Charges and Billing Patterns
Patient Discharge Status
Patient Distribution

Data in this report will present 2014 Delaware hospital discharge data, as well as trend data for selected characteristics. Hospitalization or hospital discharge refers to any discharge from a non-federal, short-stay, acute-care hospital in Delaware. Hospitalizations are expressed as numbers of discharges, not as unduplicated patients; as a result, a single patient with multiple hospitalizations can be counted more than once. Delaware hospital discharge data are based on inpatient hospitalizations and do not include outpatient, clinic, or emergency room data. Unless otherwise specified, the data presented represent discharges from the following hospitals and systems: Alfred I. duPont Hospital for Children, St. Francis Hospital, Select Specialty Hospital - Wilmington (also referred to as Select Medical Wilmington in some graphs), Christiana Care Health System (which consists of Wilmington Hospital and Christiana Hospital Newark), Bayhealth Medical Center (which consists of Kent General Hospital and Milford Memorial Hospital), Beebe Medical Center, and Nanticoke Memorial Hospital.

More information about the creation of annual files, as well as definitions of terms used in this report, can be found in the Technical Notes.

#### **Key findings:**

- The number of hospital discharges increased slightly from 2013 to 2014 rising from 109,751 in 2013 to 111,341 in 2014. Total aggregate charges increased by 10.6 percent between 2013 and 2014. (see page 20).
- Women accounted for 56.9 percent of all discharges compared to 43.1 percent for men. In the 25 to 34 year old age group, four out of every five discharges were women.
- Inpatient hospitalizations in 2014 generated total charges of \$3 billion; 46 percent of that total (\$1.38 billion) was billed to Medicare.
- In 2014, the average length of stay (ALOS) was 5 days and the mean charge for a hospitalization was \$26,960.
- The most frequent reasons for hospitalization fell under the category of diseases of the circulatory system and included congestive heart failure, coronary artery disease, and cardiac dysrhythmias (irregular heartbeat).
- The point of origin for 21.9 percent of hospitalizations was a clinic or physician's office.
- Non-residents accounted for 12.6 percent of all discharges from Delaware hospitals, most of whom came from Pennsylvania, Maryland, and New Jersey.

<sup>&</sup>lt;sup>1</sup>See the Hospital Profiles at the end of this report for details about each of Delaware's acute care hospitals.

# **EXECUTIVE SUMMARY**

- Hospital stays for previous C-sections represented 11.7 percent of pregnancy related discharges compared to 4.0 percent for normal deliveries.
- The average length of stay for premature and low birth weight babies was 29.5 days compared to 3.8 days for all deliveries.
- Over two-thirds of patients underwent a procedure while hospitalized; 25.1 percent had only one procedure, 17.4 had two procedures, and 26.7 had three or more during their stay.
- Patients who were uninsured and those covered by Medicare were more likely to be classified as emergency/trauma at time of admission; 63.7 percent of uninsured patients and 66.2 percent of Medicare patients were classified as emergency/trauma at admission in 2014.

The primary payers for hospital discharge in 2014 were Medicare (41,8 percent) and private insurers (29.5 percent). Medicaid was the primary payer in 23.2 percent of all hospital stays, and uninsured hospitalizations accounted for 2.9 percent of the total stays. The remaining 2.6 percent of hospitalizations were covered by other specified or unknown programs.

Patients under one year old accounted for 12.2 percent of all discharges in 2014; the majority of these discharges were infants hospitalized by virtue of being born in the hospital. Patients 65 and older were responsible for 36.8 percent of all discharges in 2014.

25,000 Number of Discharges 20,000 15,000 10,000 \_5,000 0 35-44 5-9 10-14 15-19 20-24 25-34 <1 1-4 45-54 55-64 65-74 75+ Age Group

Figure 1. Number of Hospital Discharges by Age Group, Delaware, 2014.

Source: Delaware Department of Health and Social Services, Division of Public Health, Delaware Health Statistics Center

Males made up the majority of discharges in the age groups under 10. For nearly all age groups 15 and higher, females made up the majority of discharges, and in the 20 to 34 year age range, four out of every five discharges were women. In 2014, 56.9 percent of total discharges were women.

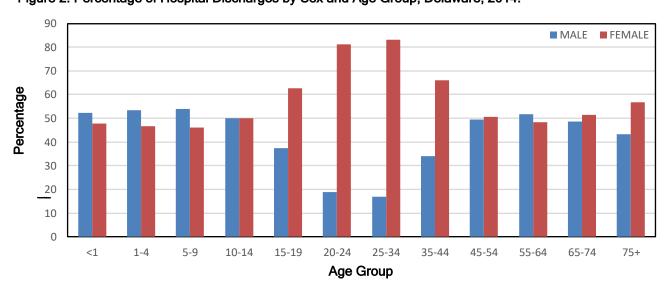


Figure 2. Percentage of Hospital Discharges by Sex and Age Group, Delaware, 2014.

Non-residents accounted for 12.6 percent of all discharges from Delaware hospitals, most of whom came from Pennsylvania, Maryland, and New Jersey. Nearly half of the patients at A.I. duPont Hospital for Children were non-residents (46.7 percent).

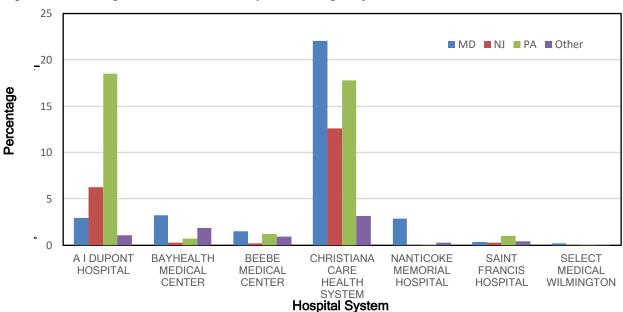


Figure 3. Percentage of Non-Resident Hospital Discharges by State, Delaware, 2014

Source: Delaware Department of Health and Social Services, Division of Public Health, Delaware Health Statistics Center

Hospital admissions increased slightly between 2012 and 2014. Total admissions rose 0.8 percent from 110,427 in 2012 to 111,341 in 2014. The two hospitals with the greatest percent change were Beebe Medical Center, which increased 11.5 percent; and Saint Francis, which decreased 21.0 percent.

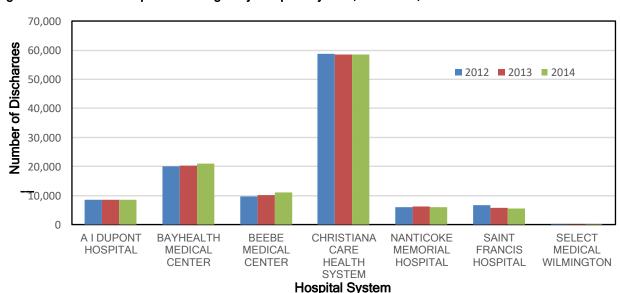


Figure 4. Number of Hospital Discharges by Hospital System, Delaware, 2012-2014

The Average length of stay (ALOS) remained unchanged at 5.0 days in both 2000 and 2014. There was a slight increase in patients staying four to seven days which was balanced by a slight decrease in patients staying more than fifteen days between 2000 and 2014. In 2014, 60.1 percent of patients stayed three or fewer days in the hospital. The largest percentage decline in length of stay occurred for patients admitted for 15 or more days (7.5 percent).

70% 61.3 60.1 60.2 60% **■** 2000 **■** 2007 **■** 2014 50% Percentage 40% 30% 25.2 24.4 24.0 20% 10.1 10% 4.9 5.3 5.0 0% <=3 days 4-7 days 8-14 days 15+ days Average Length of Stay

Figure 5. Percentage of Hospital Discharges by Average Length of Stay, Delaware, 2000, 2007, and 2014

Source: Delaware Department of Health and Social Services, Division of Public Health, Delaware Health Statistics Center

The length of stay varies with the age of the patient. Patients under the age of 18 have the shortest lengths of stay. In 2014, 79.1 percent of patients under 18 had hospital stays of three days or less, compared to 46.9 percent for patients 65 and over. Patients aged 65 and over were nearly four times more likely to have stays of 8 to 14 days than patients under the age of 18.

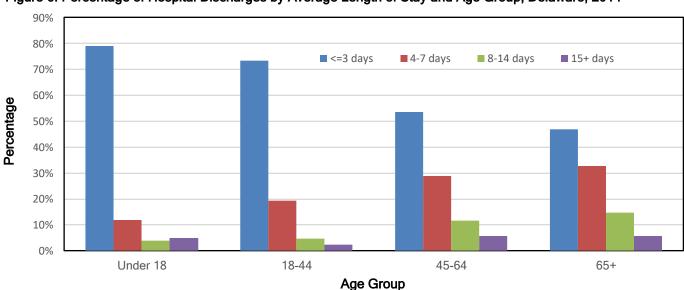


Figure 6. Percentage of Hospital Discharges by Average Length of Stay and Age Group, Delaware, 2014

#### Gender

Between 2000 and 2014, the average length of stay (ALOS) decreased 1.1 percent for male patients and 2.1 percent for female patients. When female obstetrical patients were excluded from the calculation of average length of stay, female patients had slightly lower ALOS figures than males in all time periods. The largest increase in average length of stay from 2000 to 2014 was seen in female obstetrical patients, whose length of stay increased 5.6 percent.

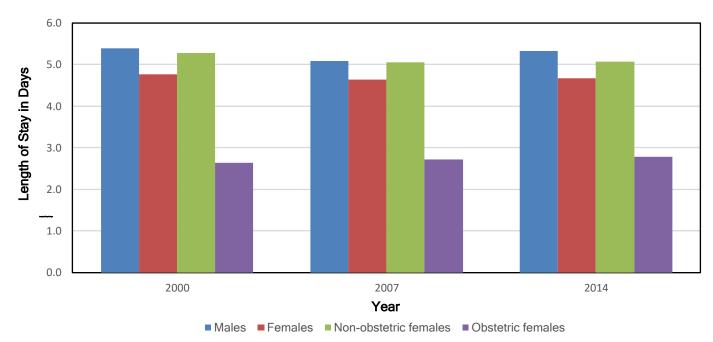


Figure 7. Mean Length of Hospital Stay by Patient Type and Year, Delaware, 2000, 2007, and 2014.

# WHY PATIENTS WERE HOSPITALIZED

# Most frequent reasons for hospitalization by primary diagnosis and body system<sup>2</sup>:

Diseases of the circulatory system accounted for 14.6 percent of the total discharges in 2014 and represented the most common reasons for hospitalization. Some of the most common diagnoses in that category were congestive heart failure, coronary artery disease, irregular heartbeat, heart attack, and stroke. Complications of pregnancy, childbirth, & the puerperium comprised 10.7 percent of the total discharges, while another 10.1 percent of discharges were related to live births, together these two diagnoses accounted for 20.8 percent of total discharges. The above three categories accounted for 35.4 percent of all hospitalizations.

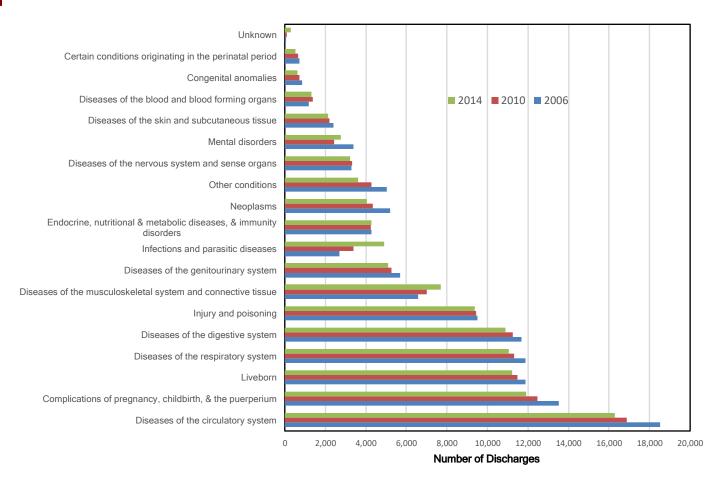


Figure 8. Number of Hospital Discharges by Body System, Delaware, 2006, 2010, and 2014

Source: Delaware Department of Health and Social Services, Division of Public Health, Delaware Health Statistics Center

The largest percent increase (81.7 percent) in hospitalizations from 2006 to 2014 occurred in infections and parasitic diseases. Diseases of the musculoskeletal system and connective tissue also demonstrated a large percentage increase (16.8 percent) from 2006 to 2014. At 12.3 percent, the third largest increase in hospitalizations was due to diseases of the blood and blood forming organs. Other conditions accounted for the largest decrease in hospitalizations (28.3 percent), followed by congenital anomalies (25.3 percent).

See Appendix A for details about the primary diagnoses and body system classifications.

#### WHY PATIENTS WERE HOSPITALIZED

# Most frequent reasons for hospitalization by gender (excluding liveborn infants):

Specific diagnoses varied by gender. Much of the variation was a result of the large number of women hospitalized due to pregnancy and delivery related conditions; four out of the top 10 diagnoses for women were related to pregnancy and childbirth. In Table 1, all of these diagnoses were rolled into the principal diagnosis of "Pregnancy & childbirth". Both men and women experienced high numbers of discharges due to pneumonia, septicemia, osteoarthritis, and congestive heart failure. Table 1 shows the most frequent diagnoses for both men and women, by number, percent, and rank of discharges by gender.

Table 1. Most Frequent Diagnoses (CCS Defined) by Gender, Delaware, 2014

CCS Principal Diagnosis		MALE			FEMALE		
CCS Principal Diagnosis	#	%	Rank	#	%	Rank	
All diagnoses	48,036	100		63,305	100		
Pregnancy & childbirth				11,918	18.8	1	
Liveborn Infant	5,717	11.9	1	5,500	8.7	2	
Septicemia (except in labor)	2,059	4.3	2	2,135	3.4	4	
Osteoarthritis	1,385	2.9	5	2,273	3.6	3	
Congestive heart failure; nonhypertensive	1,714	3.6	3	1,496	2.4	6	
Pneumonia (except that caused by tuberculosis or STD)	1,439	3.0	4	1,560	2.5	5	
Acute cerebrovascular disease	1,124	2.3	6	1,162	1.8	8	
Spondylosis; intervertebral disc disorders; other back problems	1,041	2.2	8	1,102	1.7	10	
Chronic obstructive pulmonary disease and bronchiectasis	882	1.8	14	1,146	1.8	9	
Complication of device; implant or graft	1,026	2.1	10	929	1.5	11	
Skin and subcutaneous tissue infections	1,034	2.2	9	864	1.4	15	
Cardiac dysrhythmias	935	1.9	13	895	1.4	12	
Acute and unspecified renal failure	936	1.9	12	893	1.4	13	
Diabetes mellitus with complications	997	2.1	11	783	1.2	19	
Acute myocardial infarction	1,086	2.3	7	677	1.1	22	

Source: Delaware Department of Health and Social Services, Division of Public Health, Delaware Health Statistics Center

Note: Clinical Classifications Software (CCS) is diagnostic classification system developed by the Agency for Healthcare Research and Quality (AHRQ). See Appendix A for more information. Table ordered based upon most frequent total diagnoses.

#### Most frequent reasons for hospitalization by age groups:

- Excluding liveborn infants, patients under 1 year were hospitalized most often for acute bronchitis, other perinatal conditions, and hemolytic jaundice and perinatal jaundice.
- For those ages 1-17, asthma, pneumonia (except that caused by tuberculosis or a sexually transmitted disease), and Epilepsy convulsions made up the top three diagnoses.
- For those ages 18-44, all of the top 10 diagnoses were associated with pregnancy and childbirth. If
  pregnancy and childbirth were excluded, diabetes mellitus with complications, skin and subcutaneous
  tissue infections, and Septicemia (except in labor) became the three most common reasons for
  hospitalization.
- For those ages 45-64, osteoarthritis, septicemia (except in labor), and spondylosis; intervertebral disc disorders; other back problems comprised the top three diagnoses.
- For those over 65, congestive heart failure; nonhypertensive, congestive heart failure; nonhypertensive, and osteoarthritis were the top three diagnoses.

Though the most common reasons for hospitalization differed by age, pneumonia appeared in the 10 most frequent diagnoses for all five age groups. Septicemia (except in labor) was the most frequent reason for hospitalization.

# Injury hospitalizations:

Injury hospitalizations accounted for 8.4 percent of the total number of discharges and \$316 million in aggregate charges in 2014. The majority of patients were admitted through the emergency department. The average charge for an injury stay ranged from \$12,134 for burns to \$69,638 for spinal cord injuries with an overall average charge of \$33,683 (see Appendix A).

The most common primary diagnosis for an injury hospitalization in 2014 was complication of device; implant or graft, which accounted for 20.9 percent of injury hospitalizations. Complications of surgical procedures or medical care were responsible for another 16.3 percent of injury hospitalizations, followed by other fractures (9.7 percent), fracture of neck of femur (hip) (9.7 percent), and intracranial injury (9.1 percent).

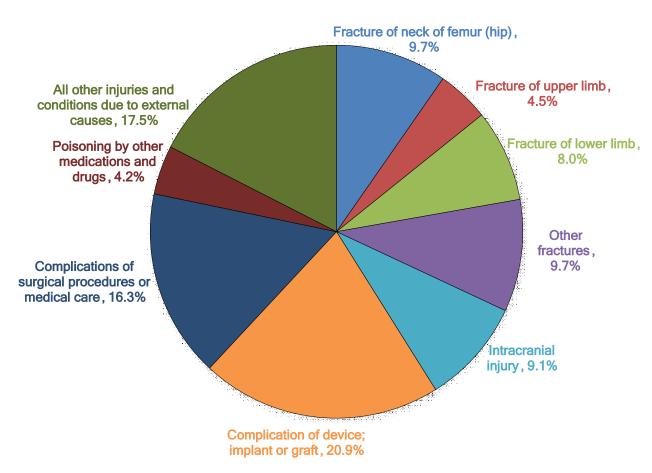


FIGURE 9. Percentage of the Most Frequent Injury Diagnoses, Delaware, 2014

Source: Delaware Department of Health and Social Services, Division of Public Health, Delaware Health Statistics Center

Falls were the most frequently specified external cause of injury (as defined by the Ecode listed on the discharge record). Falls accounted for 60.5 percent of hip fractures, 47.7 percent of upper limb fractures, 31.7 percent of intracranial injuries, and 19.2 percent of spinal cord injuries. Motor vehicle accidents were responsible for 14.8 percent of intracranial injuries and 15.1 percent of spinal cord injuries. Poisoning by psychotropic agents accounted for 2.5 percent of all injuries.

#### Gender

The number of injury hospitalizations was split almost equally between males and females, though the distribution varied by specific injury type. Women were more likely to have been hospitalized for hip fractures and other unspecified fractures, poisoning by other medications and drugs, and complications of surgical procedures or medical care. Men were more likely to have been hospitalized for crushing or internal injuries, open wounds of head, neck, and trunk, skull and face fractures, open wounds of extremities, intracranial injuries, and burns.

80% ■ Male ■ Female 70% 60% Percentage 50% 40% 30% 20% 10% 0% Complications Intracranial Fracture of Other fractures Poisoning by Crushing injury Skull and face Open wounds Open wounds Burns of surgical neck of femur other or internal fractures of head; neck; of extremities procedures or (hip) medications injury and trunk medical care and drugs

**CCS Injury Categories** 

Figure 10. Percentage of Selected Primary Injury Diagnoses by Gender, Delaware, 2014

# WHY PATIENTS WERE HOSPITALIZED - PROCEDURES

# Most frequent reasons for hospitalization by procedure:

In 2014, 69.2 percent of discharges had at least one associated procedure. Of the 77,073 hospital stays with an accompanying procedure, 36.3 percent had only a principal procedure performed; the remaining 63.7 percent had two or more procedures. Each discharge can have up to six procedures; this report examines the number of procedures, or the all-listed procedures.

The most common types of all-listed procedures were miscellaneous diagnostic and therapeutic, cardiovascular, obstetric, and musculoskeletal. Miscellaneous diagnostic and therapeutic procedures accounted for nearly half of the total procedures and included injections, vaccinations and prophylactic inoculations, CT scans, diagnostic ultrasounds, respiratory intubation and mechanical ventilation, and blood transfusions.

Overall, the most frequently performed all-listed procedures were other therapeutic procedures; other procedures to assist delivery, respiratory intubation and mechanical ventilation, and blood transfusion.

Table 2. Most Frequent All-listed Inpatient Procedures, Delaware, 2014

	# of All -listed Procedures			% of Discharges
CCS Procedure	MALE	FEMALE	Total	with a Procedure
Other therapeutic procedures	8,557	12,724	21,281	11.1
Other procedures to assist delivery	0	9,810	9,810	5.1
Respiratory intubation and mechanical ventilation	4,755	4,277	9,032	4.7
Blood transfusion	3,550	3,989	7,539	3.9
Diagnostic cardiac catheterization; coronary arteriography	4,362	2,892	7,254	3.8
Prophylactic vaccinations and inoculations	3,546	3,570	7,116	3.7
Other vascular catheterization; not heart	3,356	3,355	6,711	3.5
Ophthalmologic and otologic diagnosis and treatment	3,123	3,038	6,161	3.2
Spinal fusion	2,611	2,802	5,413	2.8
Other OR procedures on vessels other than head and neck	3,061	2,054	5,115	2.7
Fetal monitoring	0	5,043	5,043	2.6
Circumcision	4,519	0	4,519	2.4
Other diagnostic procedures (interview; evaluation; consultation)	2,293	2,213	4,506	2.3
Repair of current obstetric laceration	0	3,935	3,935	2.1
Cesarean section	0	3,389	3,389	1.8

Source: Delaware Department of Health and Social Services, Division of Public Health, Delaware Health Statistics Center Notes: All-listed procedures refer to all procedures performed during a hospital stay. Table ordered based upon total procedures.

Males most frequently underwent other therapeutic procedures, respiratory intubation and mechanical ventilation; and circumcision. Females most frequently underwent other therapeutic procedures, other procedures to assist delivery, and fetal monitoring. Four of the 10 most commonly performed procedures on females were related to pregnancy and childbirth.

See the definition of Procedure Classes in the Definitions section of the Technical Notes.

A major component of obstetrical procedures is related to cesarean delivery of newborn infants. Since 1999, annual cesarean delivery rates increased for nearly every hospital in Delaware with the exception of Milford Memorial; by 2014, 30.2 percent of all births were delivered by cesarean. Saint Francis Hospital and Christiana Care Health System showed the greatest increases, rising 30.5 percent and 24.4 percent respectively. In 2014, Milford Memorial and Beebe Medical Center had the highest rates, with 33.4 and 32.3 percent of all births being delivered by cesareans. Nanticoke Memorial Hospital had the lowest percentage of births delivered by cesarean (29.0 percent).

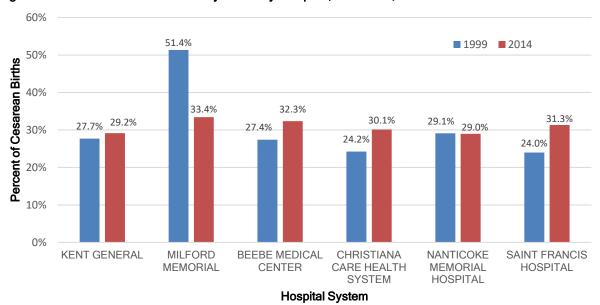


Figure 11. Annual Cesarean Delivery Rates by Hospital, Delaware, 1999 and 2014

Source. Delaware Department of Social Services, Division of Public Health, Delaware Health Statistics Center

# Gender

In 2014, obstetrical procedures accounted for one in four all-listed procedures performed on females and included other procedures to assist delivery, fetal monitoring, cesarean sections, repair of current obstetrical laceration, and artificial rupture of membranes to assist delivery.

For males, other therapeutic procedures accounted for 10.2% percent of the total procedures, followed by respiratory intubation and mechanical ventilation (5.7% percent), and circumcision (5.4% percent).

The following procedures were present in the ten most commonly performed procedures for both males and females:

- other therapeutic procedures
- respiratory intubation and mechanical ventilation
- blood transfusion
- prophylactic vaccinations and inoculations
- other vascular catheterization; not heart
- ophthalmologic and otologic diagnosis and treatment.

# WHY PATIENTS WERE HOSPITALIZED - PROCEDURES

# Age

- For patients under 1 year, prophylactic vaccinations and inoculations, ophthalmologic and otologic diagnosis and treatment, and circumcision were the most common procedures.
- For patients ages 1 to 17, other therapeutic procedures on muscles and tendons, respiratory intubation and mechanical ventilation, and blood transfusion were the most frequently performed procedures.
- Obstetric procedures, specifically other procedures to assist delivery, fetal monitoring, and other therapeutic procedures, were the most common procedures for those ages 18-44.
- Other therapeutic procedures, diagnostic cardiac catheterization; coronary arteriography, and respiratory intubation and mechanical ventilation were the most frequently performed procedures for those 45-64.
- The most commonly performed principal procedures on patients 65 and older were other therapeutic procedures, blood transfusion, and diagnostic cardiac catheterization; coronary arteriography.

Hospital stays for Delaware residents were based on inpatient discharges from Delaware hospitals only; as such, information about residents who went out of state for hospital care are not represented in the following statistics.

Discharge rates of Delaware residents under the age of 1 were higher than the rates of all other age groups except those 65 and older. Discharge rates decreased with each increase in age group between patients under 1 and those ages 10-14. The trend reversed at the 15-19 age group and other than a dip in the rates for females 35-44, rates rose steadily with each older age group. Male and female discharge rates were similar for age groups under 15 and over 44; females in 15-44 age groups had discharge rates 1.9 to 5.1 times that of males.

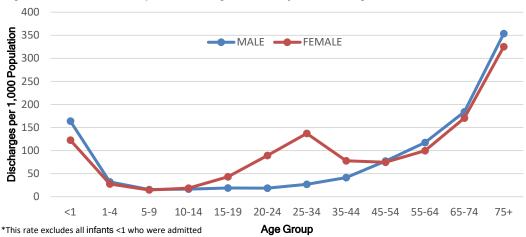
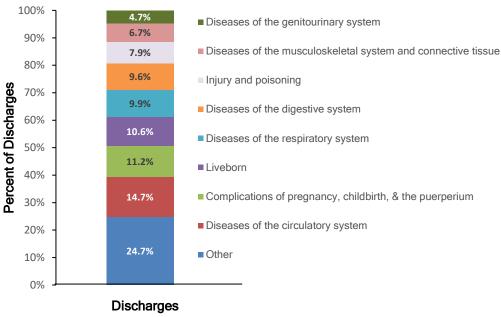


Figure 12. Resident Hospital Discharge Rates\* by Sex and Age, Delaware, 2014

Source: Delaware Department of Health and Social Services, Division of Public Health, Delaware Health Statistics Center

In 2014, Delawareans were discharged most frequently for diseases of the circulatory system, accounting for 14.7 percent of resident hospital stays. The most common diagnoses for diseases of the circulatory system included heart failure. coronary artery disease. and irregular heartbeat. Pregnancy and childbirth; and newborn infants were the second and third most common reasons for resident hospital stays, followed by diseases of the respiratory system, including pneumonia, COPD (chronic obstructive pulmonary disease), and asthma, then diseases of the digestive system, which included biliary tract disease, gastrointestinal

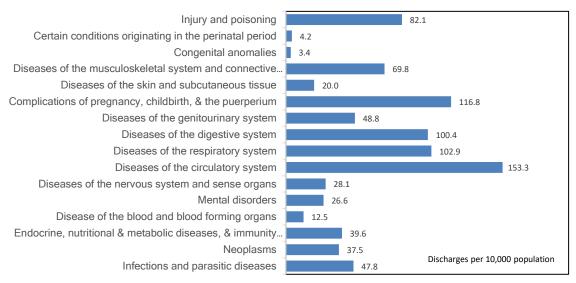
Figure 13. Percentage of Resident Hospital Discharges by Body System, Delaware, 2014



Source: Delaware Department of Health and Social Services, Division of Public Health, Delaware Health Statistics Center

hemorrhage, and intestinal obstruction.

Figure 14. Resident Hospital Discharge Rates by Body System\*, Delaware, 2014

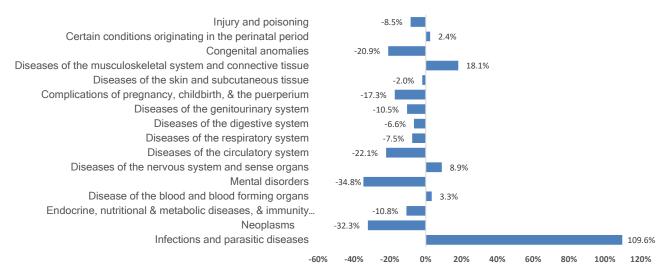


\* Excluding hospitalizations related to pregnancy and liveborn infants.

Source: Delaware Department of Health and Social Services, Division of Public Health, Delaware Health Statistics Center

High hospital discharge rates in 2014 were not necessarily indicative of large rate increases over the previous 10 years. In some categories, like diseases of the circulatory system, high 2014 rates were maintained in spite of declines over the prior 10 year period. In others, such as infectious and parasitic diseases, 2014 rates were comparatively low, despite significant rate increases over the prior 10 year period.

Figure 15. Percent Change in Resident Hospital Discharge Rates by Body System\*, Delaware, 2004 versus 2014



\*Excluding hospitalizations related to pregnancy and liveborn infants.

#### HOSPITALIZATIONS OF DELAWARE RESIDENTS

When the specific diagnoses that comprise each body system were examined, the following 25 principal diagnoses had the highest discharge rates of Delaware residents in 2014.

Table 3. Top 25 CCS Diagnoses with the Highest Hospital Discharge Rates\* for Residents, Delaware, 2004, 2009, 2014

	2004		2009		<u>2014</u>		% Change from
	Number	Rate	Number	Rate	Number	Rate	2004 to 2014
Septicemia (except in labor)	1,211	14.6	2,186	24.5	3,878	41.5	184.2%
Osteoarthritis	1,978	23.8	2,686	30.1	3,208	34.3	44.1%
Congestive heart failure; nonhypertensive	2,935	35.3	2,434	27.3	2,956	31.6	-10.5%
Pneumonia (except that caused by tuberculosis or STD)	2,955	35.6	3,091	34.7	2,698	28.9	-18.8%
Acute cerebrovascular disease	1,365	16.4	1,551	17.4	2,032	21.7	32.3%
Chronic obstructive pulmonary disease and bronchiectasis	1,554	18.7	1,840	20.6	1,912	20.5	9.6%
Spondylosis; intervertebral disc disorders; other back problems	1,580	19.0	1,453	16.3	1,847	19.8	4.2%
Acute and unspecified renal failure	799	9.6	1,239	13.9	1,693	18.1	88.5%
Skin and subcutaneous tissue infections	1,372	16.5	1,711	19.2	1,654	17.7	7.3%
Cardiac dysrhythmias	1,581	19.0	1,876	21.0	1,633	17.5	-7.9%
Complication of device; implant or graft	1,328	16.0	1,491	16.7	1,631	17.4	8.7%
Diabetes mellitus with complications	1,397	16.8	1,419	15.9	1,595	17.1	1.8%
Rehabilitation care; fitting of prostheses; and adjustment of devices	2,272	27.3	1,696	19.0	1,507	16.1	-41.0%
Urinary tract infections	1,349	16.2	1,551	17.4	1,499	16.0	-1.2%
Respiratory failure; insufficiency; arrest (adult)	1,024	12.3	1,545	17.3	1,464	15.7	27.6%
Acute myocardial infarction	1,636	19.7	1,492	16.7	1,428	15.3	-22.3%
Complications of surgical procedures or medical care	1,336	16.1	1,182	13.3	1,336	14.3	-11.2%
Asthma	1,312	15.8	1,562	17.5	1,197	12.8	-19.0%
Gastrointestinal hemorrhage	891	10.7	929	10.4	1,052	11.3	5.6%
Biliary tract disease	954	11.5	1,053	11.8	1,022	10.9	-5.2%
Diverticulosis and diverticulitis	881	10.6	832	9.3	975	10.4	-1.9%
Intestinal obstruction without hernia	809	9.7	913	10.2	949	10.2	5.2%
Intestinal infection	527	6.3	741	8.3	928	9.9	57.1%
Coronary atherosclerosis and other heart disease	2,741	33.0	2,062	23.1	916	9.8	-70.3%
Other nervous system disorders	539	6.5	798	8.9	892	9.5	46.2%

<sup>\*</sup>Hospitalization rate per 10,000, ranked by 2014 figures. Excluding pregnancy-related discharges and liveborn infants.

Diseases of the circulatory system accounted for five of the 25 conditions with the highest hospitalization rates; these included:

- congestive heart failure;
- acute cerebrovascular disease (stroke);
- cardiac dysrhythmias (irregular heartbeat);
- acute myocardial infarction (heart attack).
- coronary atherosclerosis and other heart disease (coronary artery disease);

Four of the circulatory conditions listed above showed significant decreases in their rates since 2004: heart failure, coronary artery disease, irregular heartbeat, and heart attack.

Hospitalization rates for septicemia (except in labor), acute and unspecified renal failure, and intestinal infection demonstrated the greatest increases between 2004 and 2014.

Source: Delaware Health and Social Services, Division of Public Health, Delaware Health Statistics Center

180 160 Discharges per 10,000 Population 140 **■**FEMALE MALE 120 100 80 60 40 20 0 Diseases of the Endocrine. Neoplasms Other conditions Diseases of the Injury and poisoning musculoskeletal genitourinary nutritional & circulatory respiratory digestive system nervous system system and system system system metabolic and sense diseases, & connective tissue organs immunity

Figure 16. Hospital Discharge Rates for Residents by Body System and Gender, Delaware, 2014

Clinical Classifications Software (CCS) Diagnosis

disorders

Source: Delaware Department of Health and Social Sevices, Division of Public Health, Delaware Health Statistics Center

Women's higher discharge rate for diseases of the digestive system was due in large part to their higher discharge rates of biliary tract disease and intestinal infection. Likewise, osteoarthritis and pathological fractures contributed to the female-to-male disparity in hospital discharge rates for diseases of the musculoskeletal system. The largest difference between men and women occurred in the diseases of genitourinary system and was driven primarily by women's higher rate of stays for urinary tract infections. Males had higher discharge rates for heart attack and coronary artery disease, which resulted in their higher overall hospitalization rates for circulatory diseases.

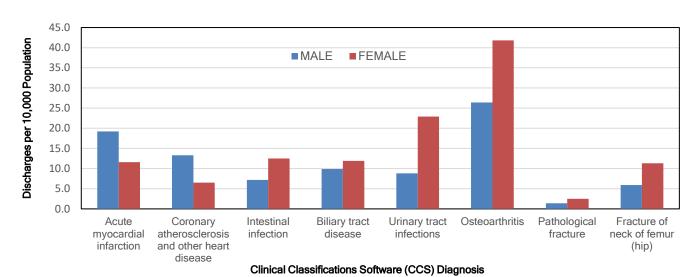
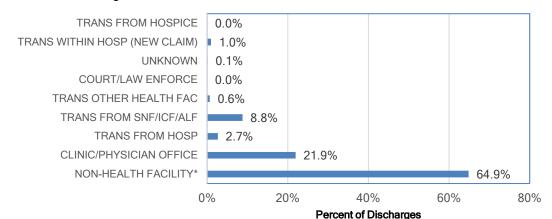


Figure 17 Hospital Discharge Rates for Residents by Gender and Selected Primary Diagnoses, Delaware, 2014

# **Point of Origin:**

Non-health facilities and clinic/physician offices accounted for 86.8 percent of all hospital discharges in 2014. The majority of the remaining points of origin were transfers from nursing homes (skilled nursing facilities (SNF), intermediate care facilities (ICF), assisted living facilities (ALF)) 8.8 percent, and other hospitals, 2.7 percent.

Figure 18. Point of Origin, Delaware, 2014

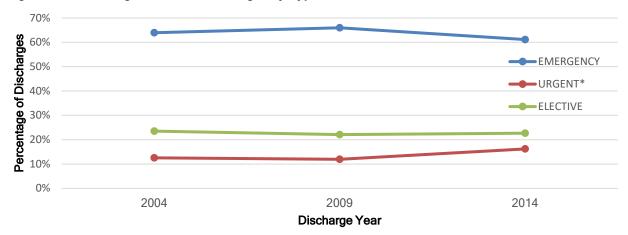


\* Non-Health Care Facility includes walk-ins, auto accidents, and ambulance runs

Source: Delaware Department of Health and Social Services, Division of Public Health, Delaware Health Statistics Center

Between 2004 and 2014, the majority of admissions continued to be classified as emergency in nature. In 2004, emergency admissions accounted for 63.9 percent of all admissions. By 2014, the proportion of emergency admissions had decreased slightly to 61.1 percent, while urgent admissions increased from 12.6 percent to 16.2 percent between 2004 and 2014.

Figure 19. Percentage of Hosital Discharges by Type of Admission, Delaware, 2004-2014



<sup>\*</sup> Urgent encompasses situations that require immediate attention due to a physical or mental disorder but are not life threatening Source: Delaware Department of Health and Social Services, Division of Public Health, Delaware Health Statistics Center

Most primary payers experienced a decrease in the percentage of hospital discharges classified as emergency/trauma at admission, uninsured patients dropped below Medicare for payers with the largest proportion of their discharges classified as emergency/trauma. In 2014, 63.7 percent of uninsured admissions, 66.2 percent of Medicare admissions, 45.7 percent of private admissions, and 46.4 percent of Medicaid admissions were classified as emergency/trauma.

80 70 60 50 Percentage 40 30 10 Medicare Medicaid Private Uninsured 2000 2014 2007 Discharge Year

Figure 20. Percentage of Hospital Discharges classified as Emergency/Trauma at Admission by Payer, Delaware. 2000-2014

Source: Delaware Department of Health and Social Services, Division of Public Health, Delaware Health Statistics Center

The most common diagnoses of patients admitted through the ED were septicemia, pneumonia, and heart failure.

Table 4. Most Common Diagnoses for Emergency Admissions, Delaware, 2014

Admissions, Delaware, 2014	Frequency	Percent *
Septicemia (except in labor)	2,087	6.4
Pneumonia (except that caused by tuberculosis or STD)	1,679	5.1
Congestive heart failure; nonhypertensive	1,627	5.0
Chronic obstructive pulmonary disease and bronchiectasis	1,026	3.1
Respiratory failure; insufficiency; arrest (adult)	991	3.0
Acute and unspecified renal failure	965	2.9
Asthma	943	2.9
Acute cerebrovascular disease	903	2.8
Skin and subcutaneous tissue infections	893	2.7
Cardiac dysrhythmias	888	2.7
Acute myocardial infarction	843	2.6
Urinary tract infections	775	2.4
Diabetes mellitus with complications	742	2.3

<sup>\*</sup> Refers to the percent of discharges that originated in the ED.

- The biggest change in the most common diagnoses originating in the ED from 2013 to 2014 was respiratory failure rising from tenth place to fifth place.
- Three of the most common ED diagnoses were related to circulatory conditions: heart failure, stroke, and irregular heartbeat.
- Another four of the most common ED diagnoses were primarily due to infections: pneumonia, skin infections, septicemia, and urinary tract infections.

#### Inpatient charges:

The total charges for a hospitalization represent the total amount billed for that particular stay. In this report, hospital charges for care are reported, not the actual costs of providing the care or what the hospitals were reimbursed. These charges include accommodations, ancillary services (e.g. pharmacy, lab, radiology and anesthesiology), and services of resident physicians.

In 2014, total aggregate charges for all hospitalizations in Delaware equaled \$3.00 billion, a 40.7 percent increase in aggregate charges from 2006. The number of discharges fell from 118,388 in 2006 to 111,341 in 2014, a 6.0 percent decrease. Total aggregate charges increased by \$286,487,992 between 2013 and 2014.

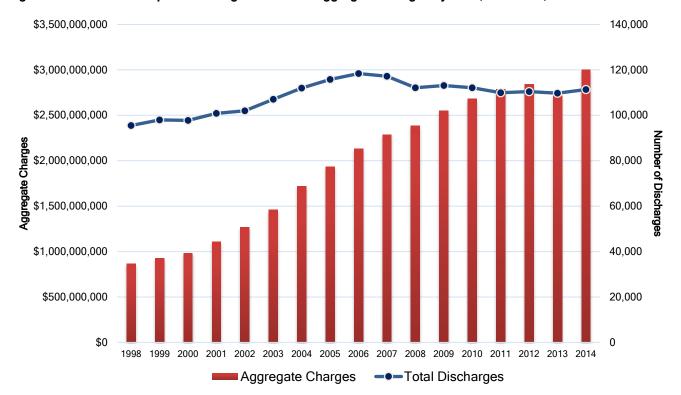


Figure 21 Number of Hospital Discharges and Total Aggregate Charges by Year, Delaware, 1998-2014

Source Delaware Department of Social Services, Division of Public Health, Delaware Health Statistics Center

The average charge for a hospital stay rose in 2014 to \$26,960 compared to \$18,020 in 2006, while the median charge per stay was \$13,860 in 2014 compared to \$9,786 in 2006.

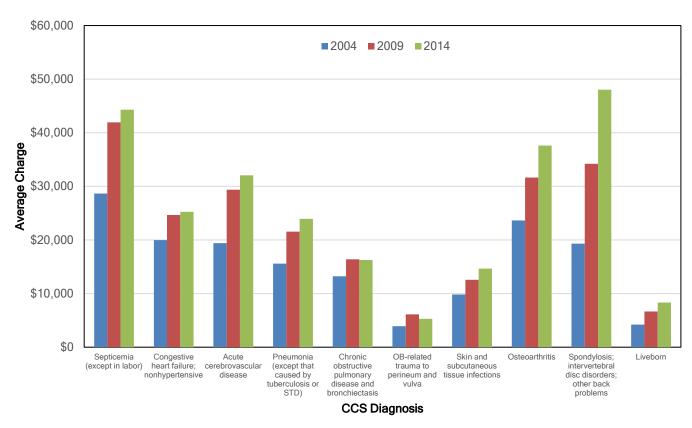
The diagnostic groups with the highest average charges per hospital stay were congenital anomalies, certain conditions originating in the perinatal period, and diseases of the musculoskeletal system and connective tissue, with average charges ranging from \$43,119 to \$197,088. These three diagnostic groups also had the longest average stays, ranging from 3.4 to 14.2 days.

Looking at specific diagnoses within groups showed that the most expensive diagnoses were cardiac and circulatory congenital anomalies, cancer of other male genital organs, retinal detachments; defects; vascular occlusion; and retinopathy, and immunity disorders. However, the ten most expensive diagnoses occurred relatively rarely and accounted for just 0.7 percent of all discharges in 2014. In comparison, the 10 diagnoses that occurred most frequently accounted for 32.0 percent of the total discharges in 2014 (see Appendix E for more information).

From 2004 to 2014, the average charges rose for each of the 10 highest volume diagnoses. The highest volume diagnoses whose average charges increased the most were:

- spondylosis; intervertebral disc disorders; other back problems (149 percent),
- liveborn (98 percent).
- acute cerebrovascular disease (65 percent).

Figure 22. Average Hospital Charges for Highest\* Volume CCS Diagnoses, Delaware, 2004, 2009, and 2014



<sup>\*</sup>Based on 10 most common diagnoses in 2014. Source: Delaware Department of Health and Social Services, Division of Public Health, Delaware Health Statistics Center

Though the average charges of the high-volume diagnoses tended to increase over time, the proportion of total aggregate charges represented by them experienced very little growth.

- In 2004, the aggregate charges for 2014's highest volume diagnoses totaled \$398.6 million and accounted for 23.2 percent of the total aggregate charges for all diagnoses.
- By 2014, the aggregate charges for those same diagnoses had more than doubled to \$900.4 million, which accounted for 30.0 percent of the total aggregate charges.

In 2014, the 10 conditions with the highest total billed charges accounted for 35.1 percent of the total aggregate charges. Septicemia (except in labor) incurred the largest aggregate charges of any diagnosis, resulting in a total hospital bill of \$185.8 million. Although hospital stays for newborns had relatively low average charges, their high frequency resulted in liveborn infants having the sixth highest aggregate charges (see Appendix E for more information).

#### Insurance status:

The following payer sources are listed in this report:

- Medicare
- Medicaid
- Private insurance carriers, such as:
  - Blue Cross Blue Shield
  - HMOs
  - Commercial insurance
- Uninsured
  - Patients who have no insurance and self-pay
- Other types of insurance, such as:
  - Workman's compensation
  - CHAMPUS (Civilian Health and Medical Program of the Uniformed Services)
  - Other government sponsored programs

In 2014, 65.1 percent of hospitalizations were billed to Medicare (41.8 percent) and Medicaid (23.2 percent), 29.5 percent were billed to private insurance, and the remaining 5.5 percent was billed to other types of coverage (4.2 percent) or to the patient (1.3 percent uninsured).

Patients whose care was primarily billed to Medicare had both the highest average charges (\$29,640) and the greatest aggregate charges (\$1.4 billion).

In 2014, Select Specialty - Wilmington had the highest percent of charges billed to Medicare. A I Dupont Hospital had the highest percentage billed to both privately insured and Medicaid covered patients, and Saint Francis Hospital had the highest percent of charges with no coverage.

100% Percent of Hospital System's Total Charges 90% 80% 70% 60% 50% 40% 30% 20% 10% 0% **BAYHEALTH** A I DUPONT **BEEBE CHRISTIANA NANTICOKE** SAINT FRANCIS **SELECT HOSPITAL MEDICAL MEDICAL** CARE HEALTH **MEMORIAL HOSPITAL** SPECIALTY -**HOSPITAL** WILMINGTON **CENTER** CENTER SYSTEM

**Hospital System** 

■ Private Uninsured Other

Figure 23. Distribution of Total Charges by Primary Payer Type and Hospital System, Delaware, 2014

Source: Delaware Department of Health and Social Services, Division of Public Health, Delaware Health and Social Services

Medicaid

Medicare

#### Medicare:

From 2000 to 2014, the percent of hospital stays whose primary payer was Medicare increased from 37.0 to 41.8 percent. Over the same time period, the proportion of aggregate charges billed to Medicare remained stable at around 46 percent.

Four of the 10 most frequent diagnoses for Medicare patients were related to diseases of the circulatory system. The three most frequent diagnoses accounted for 16.0 percent of Medicare hospitalizations. The three most frequent diagnoses for Medicare patients in 2014 were<sup>7</sup>:

- septicemia (except in labor);
- congestive heart failure; nonhypertensive;
- osteoarthritis.

#### Medicaid:

From 2000 to 2014, Medicaid covered hospitalizations increased from 16.8 to 23.8 percent. Over the same time period, the proportion of aggregate charges billed to Medicaid rose from 14.0 to 23.5 percent.

Five of the 10 most frequent diagnoses for Medicaid patients were related to pregnancy and childbirth. The three most frequent diagnoses accounted for 26.7 percent of Medicaid stays. The three most frequent diagnoses for Medicaid patients in 2014 were<sup>7</sup>:

- liveborn infants:
- other complications of birth; puerperium affecting management of mother;
- other complications of pregnancy.

#### **Private Insurers:**

From 2000 to 2014, privately insured stays decreased from 40.0 to 29.8 percent. Over the same time period, the proportion of aggregate charges billed to private insurance decreased from 32.4 to 25.9 percent.

Five of the 10 most frequent diagnoses for patients whose primary payer was private insurance were related to pregnancy and childbirth. The most frequent diagnosis, liveborn infants, accounted for 15.6 percent of all stays covered by private insurers. The three most frequent diagnoses for privately insured patients in 2014 were<sup>7</sup>:

- liveborn infants;
- osteoarthritis;
- ob-related trauma to perineum and vulva.

#### Uninsured:

From 2000 to 2014, uninsured hospitalizations decreased from 2.8 to 1.3 percent. Over the same time period, the proportion of aggregate charges billed to uninsured patients decreased from 2.2 to 1.0 percent. The three most frequent diagnoses accounted for 19.7 percent of uninsured stays.

The three most frequent diagnoses for uninsured patients in 2014 were<sup>7</sup>:

- liveborn;
- septicemia (except in labor);
- alcohol-related disorders.

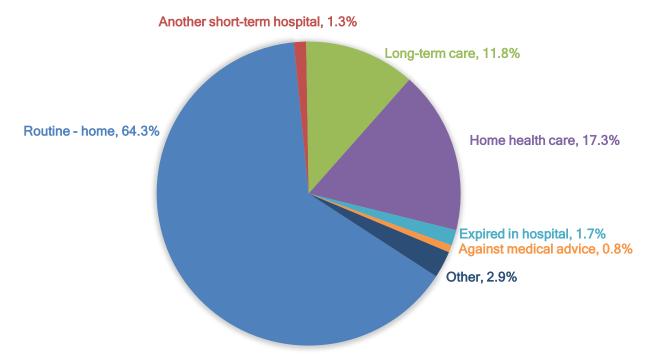
See Appendix F for the top 10 principal diagnoses by payer type.

# HOW PATIENTS WERE DISCHARGED

# Patient Hospital Discharge Status:

A patient's discharge status refers to how a person is discharged from the hospital and includes discharges to home, long-term care and other non-acute care facilities, other short-term hospitals, patients who left against medical advice, and patients who died while in the hospital. In 2014 the majority of patients (64.3 percent) were discharged to their homes, less than two percent of patients died in the hospital, and less than one percent left against medical advice.

Figure 24. Percentage of Hospital Discharges by Discharge Status, Delaware, 2014



Source: Delaware Department of Health and Social Services, Delaware Health Statistics Center

# How Patients Were Discharged

#### **Expired Patients:**

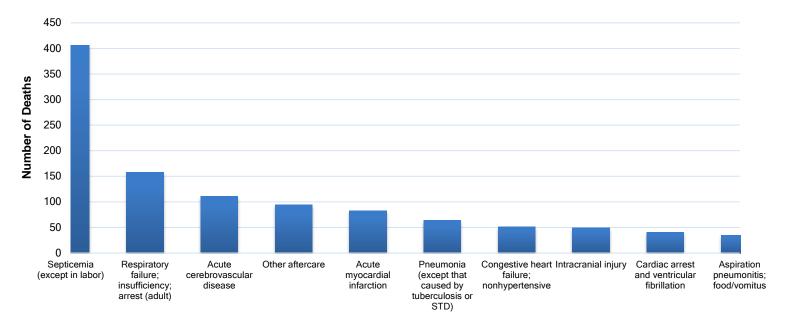
Patients who died during their hospital stay contributed to the "in-hospital mortality" figures. Data about in-hospital mortality are expressed as either numbers of deaths or percentages of deaths. Both the frequencies and percentages are presented, as each statistic provides a different perspective for reviewing the data.

# **Frequencies**

Patients with the following diagnoses experienced the highest numbers of in-hospital mortality:

- septicemia (except in labor);
- respiratory failure; insufficiency; arrest (adult);
- acute cerebrovascular disease.

Figure 25. Diagnoses with the Greatest Numbers of In-Hospital Deaths, Delaware, 2014



**CCS Diagnosis** 

Source: Delaware Department of Health and Social Services, Division of Public Health, Delaware Health Statistics Center

The most frequent causes of in-hospital mortality varied by age group. Other perinatal conditions accounted for the largest number of deaths to those under one, while respiratory failure; insufficiency; arrest (adult) caused the highest number of deaths to those ages 1 to 17. Intracranial injury was the most frequent cause of death for ages 18-44, while Septicemia (except in labor) was most frequent cause of death for all other age groups.

Patients ages 65 and older accounted for 67.7 percent of all in-hospital mortality. For more information see Appendices G and H.

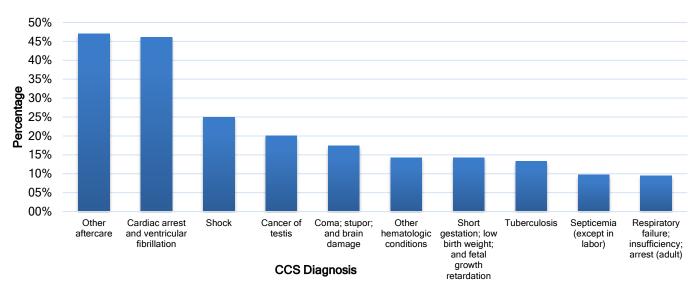
# How Patients Were Discharged

# **Percentages**

Those diagnoses with the greatest percentages of in-hospital mortality were:

- other aftercare:
- cardiac arrest and ventricular fibrillation;
- shock;
- cancer of testis.

Figure 26. CCS Diagnoses with the Greatest Percentage of In-Hospital Mortality, Delaware, 2014



Source: Delaware Department of Health and Social Services, Division of Public Health, Delaware Health Statistics Center

# Patients who left against medical advice:

Around 1 percent of patients left the hospital against medical advice. Males were twice as likely as females to leave the hospital against medical advice; uninsured patients were about 10 times as likely when compared to privately insured patients.

The three most frequent diagnoses of patients who left the hospital against medical advice were alcohol-related disorders, diabetes mellitus with complications, and chronic obstructive pulmonary disease and bronchiectasis.

- For women, septicemia (except in labor), alcohol-related disorders, and chronic obstructive pulmonary disease and bronchiectasis made up the top three.
- For men, alcohol-related disorders, diabetes mellitus with complications, and chronic obstructive pulmonary disease and bronchiectasis made up the top three.

# Patients transferred to another facility:

The majority of patients discharged to another facility were transferred to a long-term care (LTC) facility. For those 65 and older, each 10-year increase in patient age saw at least a ten percent increase in the likelihood of being transferred to LTC facilities. In 2014, around 3 percent of those under 65 were discharged to long-term care facilities, compared to 16.0 percent of those ages 65-74, 27.6 percent of those ages 75-84, and 43.3 percent of those 85 and older.

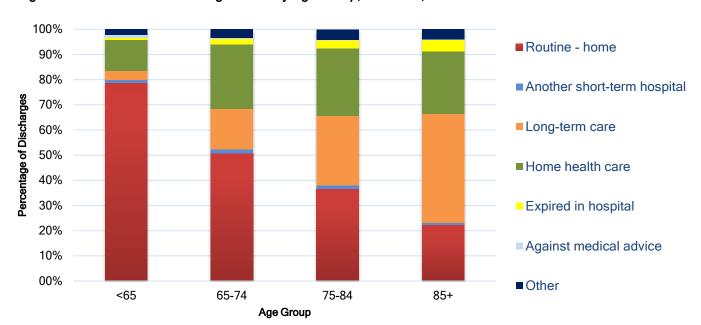


Figure 27. Distribution of Discharge Status by Age Group, Delaware, 2014

Source: Delaware Department of Health and Social Services, Division of Public Health, Delaware Health Statistics Center

In 2014, the most common diagnoses for patients discharged to LTC facilities were; septicemia (except in labor), osteoarthritis, and congestive heart failure; nonhypertensive.

- The three most common diagnoses for patients under 65 (excluding liveborn infants) were septicemia (except in labor), osteoarthritis, and complication of device; implant or graft.
- For patients ages 65-74, septicemia (except in labor), osteoarthritis, and acute cerebrovascular disease were the three most common diagnoses.
- For patients ages 75-84, septicemia (except in labor), osteoarthritis, and congestive heart failure; nonhypertensive were the three most common diagnoses.
- For patients 85 and older, septicemia (except in labor), fracture of neck of femur (hip), and urinary tract infections were the three most common diagnoses.

# A.I. duPont Hospital for Children

2014 Disc	harge Dis	tribution				
Zip / State	Number	%_		2012	2013	2014
PA	2,590	30.0%	Aggregate charges	\$453,606,539	\$471,255,479	\$538,716,405
NJ	879	10.2%	Average charges	\$52,549	\$55,124	\$62,496
19720	450	5.2%	Average charge per day	\$9,047	\$9,660	\$10,769
19805	418	4.8%	Number of Discharges	8,632	8,549	8,620
MD	408	4.7%	Total All-listed Procedures <sup>1</sup>	10,986	10,099	10,595
19702	313	3.6%	Non-operating room procedures 2	6,041	5,597	6,174
19802	252	2.9%	Valid operating room procedures 2	4,945	4,502	4,421
			Average Lenth of Stay	5.5	5.3	5.6
19701	219	2.5%	Primary Payer Distribution		:	
19709	204	2.4%	Medicare	0.3%	0.3%	0.6%
19713	204	2.4%	Medicaid	42.3%	43.3%	45.2%
19711	171	2.0%	Private Insurance	52.6%	52.1%	50.6%
19808	168	1.9%	Uninsured	2.7%	1.9%	0.2%
19801	151	1.8%	Other	2.1%	2.4%	3.3%
Other State	150	1.7%	Point of Origin Distribution		•	
19901	148	1.7%	Home-Work-etc.	53.1%	55.2%	54.4%
19804	133	1.5%	Clinic/Physician Office	30.2%	26.0%	24.0%
19703	129	1.5%	Transfers-Health Facility	15.3%	18.3%	21.0%
19810	112	1.3%	Newborn	0.0%	0.0%	0.0%
19977	111	1.3%	Other/Unknown	1.3%	0.5%	0.7%
19904	110	1.3%	Discharge Status Distribution			
19947	97	1.1%	Routine - home	91.1%	92.9%	93.1%
19963	92	1.1%	Another short-term hospital	0.7%	0.5%	0.7%
19809	91	1.1%	Long-term care facility	1.3%	1.2%	0.9%
19973	91	1.1%	Home health care	5.4%	3.8%	3.1%
19803	89	1.0%	Expired in hospital	0.6%	0.5%	0.6%
19707	65	0.8%	Left against medical advice	0.2%	0.0%	0.1%
19966	58	0.7%	Other/Unknown	0.7%	0.9%	1.5%
19734	55	0.6%	Sex			•
19934	55	0.6%	Male	52.5%	52.6%	52.9%
19933	44	0.5%	Female	47.5%	47.4%	47.1%
19938	44	0.5%	Age		:	
19945	44	0.5%	<1	21.2%	21.5%	20.0%
19962	42	0.5%	1-4	24.8%	24.7%	23.6%
19943	39	0.5%	<i>5-9</i>	17.6%	17.8%	17.4%
19956	36	0.4%	10-14	19.1%	19.3%	21.4%
19960	34	0.4%	<i>15-19</i>	16.5%	15.7%	16.3%
19953	33	0.4%	20-24	0.8%	1.0%	1.2%
19958	30	0.3%	<i>25-34</i>	0.0%	0.0%	0.1%
19952	27	0.3%	<i>35-44</i>	0.0%	0.0%	0.0%
19806	26	0.3%	<i>45-54</i>	0.0%	0.0%	0.0%
19950	26	0.3%	<i>55-64</i>	0.0%	0.0%	0.0%
19971	24	0.3%	<i>65-74</i>	0.0%	0.0%	0.0%
19968	23	0.3%	<i>75+</i>	0.0%	0.0%	0.0%
19908	23 20	0.3% 0.2%	Unknown	0.0%	0.0%	0.1%
19939	20 19	0.2%	Notes:		<del></del>	
			1. Total all-listed procedures represents the total numl	ber of procedures performe	ed; up to six procedures n	nay be
19946	18	0.2%	recorded per discharge, as a result the total number o	of all-listed procedures can	exceed the total number	of
19975	16	0.2%	discharges.			
19940	14	0.2%	2. Procedures were classified using AHRQ's HCUP pr	ocedure class software. Se	e AHRQ's website for m	ore information:

Undisclosed\*

Total

48

8,620

0.6%

100.0%

 $<sup>2.\</sup> Procedures\ were\ class\ if ied\ using\ AHRQ's\ HCUP\ procedure\ class\ software.\ See\ AHRQ's\ website\ for\ more\ information:$ http://www.hcup-us.ahrq.gov/toolssoftware/procedure/procedure.jsp.

<sup>3.</sup> Percentages may not sum to 100 due to rounding.

Source: Delaware Health and Social Services, Division of Public Health, Delaware Health Statistics Center

<sup>\*</sup>Zip codes with less than 10 cases

# BayHealth Medical Center (includes both Milford Memorial and Kent General Hospitals)

2014 Disc	harge Dis	stribution				
Zip / State	Number	<u>%</u>		2012	2013	2014
19901	3,838	18.2%	Aggregate charges	\$472,916,209	\$482,847,351	\$548,672,174
19904	3,287	15.6%	Average charges	\$23,414	\$23,864	\$26,028
19963	2,088	9.9%	Average charge per day	\$6,095	\$6,145	\$6,545
19977	1,680	8.0%	Number of Discharges	20,198	20,233	21,080
19943	1,154	5.5%	Total All-listed Procedures <sup>1</sup>	19,934	20,010	20,048
19934	1,138	5.4%	Non-operating room procedures 2	13,017	13,364	12,969
19952	1,116	5.3%	Valid operating room procedures <sup>2</sup>	6,917	6,646	7,079
19962	961	4.6%	Average Lenth of Stay	5.0	4.9	5.1
19960	554	2.6%	Primary Payer Distribution	-		
19938	548	2.6%	Medicare	45.6%	46.4%	47.7%
MD	456	2.2%	Medicaid	24.3%	24.2%	25.2%
19946	427	2.0%	Private Insurance	21.3%	20.7%	20.0%
19953	388	1.8%	Uninsured	2.5%	3.2%	1.7%
19950	367	1.7%	Other	6.3%	5.5%	5.4%
19947	298	1.4%	Point of Origin Distribution			
Other State	264	1.3%	Home-Work-etc.	82.2%	82.9%	83.3%
19968	239	1.1%	Clinic/Physician Office	5.7%	5.2%	3.9%
19941	198	0.9%	Transfers-Health Facility	0.9%	1.0%	1.9%
19966	196	0.9%	Newborn	11.1%	11.0%	11.0%
19973	174	0.8%	Other/Unknown	.0%	.0%	.0%
19734	167	0.8%	Discharge Status Distribution	-		
19954	161	0.8%	Routine - home	67.7%	65.1%	66.0%
19958	142	0.7%	Another short-term hospital	3.0%	3.0%	3.1%
19709	134	0.6%	Long-term care facility	13.7%	14.0%	11.0%
19933	128	0.6%	Home health care	11.5%	14.1%	12.5%
19964	118	0.6%	Expired in hospital	2.1%	2.0%	2.1%
PA	99	0.5%	Left against medical advice	1.2%	1.0%	1.1%
19956	95	0.5%	Other/Unknown	0.9%	0.8%	4.1%
19936	79	0.4%	Sex			
19979	73	0.3%	Male	42.0%	41.6%	42.2%
19971	65	0.3%	Female	58.0%	58.4%	57.8%
19903	42	0.2%	Age			
NJ	38	0.2%	<1	12.2%	12.0%	11.9%
19955	31	0.1%	1-4	0.7%	0.6%	0.5%
19702	28	0.1%	<i>5-9</i>	0.4%	0.4%	0.3%
19701	25	0.1%	10-14	0.3%	0.2%	0.2%
19945	24	0.1%	<i>15-19</i>	1.7%	1.5%	1.3%
19939	23	0.1%	20-24	5.0%	5.1%	4.6%
19720	21	0.1%	<i>25-34</i>	9.7%	9.8%	10.1%
19980	18	0.1%	<i>35-44</i>	6.2%	6.5%	6.1%
19713	17	0.1%	<i>45-54</i>	11.6%	10.8%	10.5%
19801	17	0.1%	<i>55-64</i>	13.0%	13.5%	13.7%
19902	17	0.1%	<i>65-74</i>	16.7%	16.8%	17.1%
19970	17	0.1%	<i>75+</i>	22.5%	22.9%	23.8%
19975	15	0.1%	Notes:		·	
19808	12	0.1%	Total all-listed procedures represents the total number.	ber of procedures performe	ed; up to six procedures n	nay be
19940	12	0.1%	recorded per discharge, as a result the total number of			•
19961	12	0.1%	discharges.	,		
Undisclosed*	79	0.4%	Procedures were classified using AHRQ's HCUP pro	ocedure class software. Se	ee AHRQ's website for m	ore information:
			http://www.hcup-us.ahrq.gov/toolssoftware/procedure/			
Total	21,080	100.0%	Percentages may not sum to 100 due to rounding.			

<sup>\*</sup>Zip codes with less than 10 cases

<sup>3.</sup> Percentages may not sum to 100 due to rounding.

Source: Delaware Health and Social Services, Division of Public Health, Delaware Health Statistics Center

#### **Beebe Medical Center**

2014	Disc	harge	Distri	bution

2014 Discharge Distribution							
Zip / State	Number	<u>%</u>					
19966	2,569	23.1%					
19958	2,139	19.2%					
19971	1,037	9.3%					
19947	1,015	9.1%					
19968	836	7.5%					
19970	487	4.4%					
19939	349	3.1%					
19945	334	3.0%					
19975	239	2.1%					
19963	225	2.0%					
MD	213	1.9%					
PA	168	1.5%					
19951	155	1.4%					
19960	155	1.4%					
19973	152	1.4%					
19930	147	1.3%					
Other State	131	1.2%					
19956	117	1.1%					
19941	80	0.7%					
19950	79	0.7%					
19933	77	0.7%					
19967	54	0.5%					
19952	45	0.4%					
NJ	30	0.3%					
19901	28	0.3%					
19943	26	0.2%					
19946	21	0.2%					
19954	21	0.2%					
19934	18	0.2%					
19969	18	0.2%					
19904	17	0.2%					
19940	17	0.2%					
19711	10	0.1%					
Undisclosed*	108	1.0%					
Total	11,117	100.0%					

<sup>\*</sup>Zip codes with less than 10 cases

# **Utilization Characteristics**

<u> </u>	2012	2013	2014
Aggregate charges	\$324,736,166	\$343,490,741	\$398,595,606
Average charges	\$33,002	\$33,782	\$35,855
Average charge per day	\$9,724	\$9,948	\$10,710
Number of Discharges	9,840	10,168	11,117
Total All-listed Procedures <sup>1</sup>	14,468	15,099	15,800
Non-operating room procedures <sup>2</sup>	9,075	9,728	10,192
Valid operating room procedures <sup>2</sup>	5,393	5,371	5,608
Average Lenth of Stay	3.9	3.9	4.1
Primary Payer Distribution	0.0	0.0	
Medicare	52.0%	55.6%	57.4%
Medicaid	18.5%	17.2%	17.5%
Private Insurance	25.3%	23.6%	22.2%
Uninsured	2.8%	2.4%	1.8%
Other	1.4%	1.1%	1.1%
Point of Origin Distribution	·	•	
Home-Work-etc.	31.4%	28.9%	27.0%
Clinic/Physician Office	59.3%	62.8%	65.2%
Transfers-Health Facility	0.1%	0.0%	0.0%
Newborn	9.2%	8.3%	7.8%
Other/Unknown	0.0%	0.1%	0.0%
Discharge Status Distribution		•	
Routine - home	58.4%	57.5%	55.0%
Another short-term hospital	1.8%	1.8%	1.6%
Long-term care facility	17.2%	17.7%	17.3%
Home health care	19.1%	19.6%	21.3%
Expired in hospital	2.0%	1.9%	1.9%
Left against medical advice	0.6%	0.6%	0.6%
Other/Unknown	0.9%	1.0%	2.2%
Sex			
Male	44.8%	45.8%	45.2%
Female	55.2%	54.2%	54.8%
Age	2 = 2/	0.40/	2 40/
<1	9.5%	8.4%	8.1%
1-4	0.2%	0.1%	0.1%
5-9	0.1%	0.1%	0.1%
10-14	0.1%	0.1%	0.1%
<i>15-19</i>	1.1%	0.9%	0.8%
<i>20-24</i>	3.5%	2.7%	2.5%
<i>25-34</i>	7.3%	7.6%	6.5%
35-44 45-54	5.1%	4.6%	4.6%
45-54 55-64	9.6%	9.1%	9.2%
<i>55-64</i>	14.7%	14.4%	14.1%
65-74 75-1	20.3%	23.5%	23.8%
75+	28.5%	28.6%	30.1%

#### Notes:

<sup>1.</sup> Total all-listed procedures represents the total number of procedures performed; up to six procedures may be recorded per discharge, as a result the total number of all-listed procedures can exceed the total number of discharges.

<sup>2.</sup> Procedures were classified using AHRQ's HCUP procedure class software. See AHRQ's website for more information: <a href="http://www.hcup-us.ahrq.gov/toolssoftware/procedure/

<sup>3.</sup> Percentages may not sum to 100 due to rounding.

Source: Delaware Health and Social Services, Division of Public Health, Delaware Health Statistics Center

# Christiana Care Health System (includes both Wilmington and Christiana Hospitals)

2014 Disc	charge Dis	tribution	Utilization Characteristics						
Zip / State	Number	%		2012	2013	2014			
9720	6,242	10.7%	Aggregate charges	\$1,296,911,416	\$1,126,291,531	\$1,214,327,405			
9702	4,202	7.2%	Average charges	\$22,067	\$19,249	\$20,736			
9805 9808	3,784 3,588	6.5% 6.1%	Average charge per day	\$5,716	\$4,506	\$4,880			
9711	3,357	5.7%	Number of Discharges	58,771	58,512	58,561			
9713	3,313	5.7%	Total All-listed Procedures <sup>1</sup>						
9701	3,095	5.3%		125,901	127,752	127,016			
ID 0700	3,085	5.3%	Non-operating room procedures 2	95,950	96,643	95,859			
9709 9802	2,749 2,651	4.7% 4.5%	Valid operating room procedures 2	29,951	31,109	31,157			
A	2,485	4.2%	Average Lenth of Stay	4.8	4.9	5.0			
9804	1,959	3.3%	Primary Payer Distribution	· · · · · · · · · · · · · · · · · · ·					
9801	1,815	3.1%	Medicare	42.0%	43.2%	42.9%			
J 9810	1,759 1,758	3.0% 3.0%	Medicaid	16.1%	18.2%	18.5%			
9803	1,752	3.0%	Private Insurance	22.0%	33.0%	32.5%			
9703	1,118	1.9%	Uninsured	2.4%	3.5%	1.1%			
9809	1,101	1.9%	Other	17.5%	2.1%	5.0%			
9707	1,061 938	1.8%		17.570	2.1/0	5.0 /			
9806 9734	938 878	1.6% 1.5%	Point of Origin Distribution		24.22	00.40			
9977	788	1.3%	Home-Work-etc.	62.3%	64.3%	63.1%			
9807	537	0.9%	Clinic/Physician Office	23.4%	21.8%	21.9%			
9904	474	0.8%	Transfers-Health Facility	3.3%	3.0%	3.6%			
ther State 9901	444 375	0.8% 0.6%	Newborn	11.0%	10.9%	11.4%			
9938	298	0.5%	Other/Unknown	.0%	.0%	.0%			
9706	258	0.4%	Discharge Status Distribution						
9973	231	0.4%	Routine - home	64.0%	62.3%	61.8%			
9966	203	0.3%	Another short-term hospital	1.3%	0.5%	0.4%			
9958 9963	193 184	0.3% 0.3%	-	10.9%	13.6%	12.0%			
934	156	0.3%	Long-term care facility						
9947	145	0.2%	Home health care	19.5%	20.5%	20.9%			
9943	139	0.2%	Expired in hospital	2.6%	1.5%	1.4%			
9956 9971	116 115	0.2% 0.2%	Left against medical advice	0.7%	0.7%	0.6%			
9968	89	0.2%	Other/Unknown	1.0%	1.1%	2.8%			
9962	84	0.1%	Sex						
9952	81	0.1%	Male	40.9%	41.5%	42.0%			
9933	72	0.1%	Female	59.1%	58.5%	58.0%			
9730 9953	69 61	0.1% 0.1%	Age	•	:				
9960	55	0.1%	<1	11.2%	11.1%	11.6%			
9714	54	0.1%	1-4	0.1%	0.1%	0.0%			
945	54	0.1%							
9946	54	0.1%	5-9	0.1%	0.0%	0.0%			
950 9733	54 49	0.1% 0.1%	10-14	0.1%	0.1%	0.1%			
9970	41	0.1%	<i>15-19</i>	1.5%	1.3%	1.1%			
939	38	0.1%	20-24	4.1%	4.0%	3.7%			
9899	37	0.1%	<i>25-34</i>	11.8%	11.3%	11.4%			
9975 9964	34 30	0.1% 0.1%	<i>35-44</i>	8.4%	8.3%	8.0%			
9940	27	0.1%	<i>45-54</i>	12.8%	11.7%	11.2%			
9731	24	0.0%	<i>55-64</i>	14.5%	14.8%	15.0%			
9850	19	0.0%	<i>65-74</i>	14.2%	15.5%	16.2%			
9941	19	0.0%	75+	21.1%					
9954 9710	19 18	0.0% 0.0%		Z1.170	21.7%	21.6%			
9930	17	0.0%	Notes:						
9732	16	0.0%	Total all-listed procedures represents the total num	ber of procedures perform	ed; up to six procedures i	may be			
9951	14	0.0%	recorded per discharge, as a result the total number of	of all-listed procedures can	exceed the total number	of			
9936	13	0.0%	discharges.						

discharges.

19955

19712

Total

Undisclosed\*

11

10

52

58,561

0.0%

0.0%

0.1%

100.0%

<sup>2.</sup> Procedures were classified using AHRQ's HCUP procedure class software. See AHRQ's website for more information: http://www.hcup-us.ahrq.gov/toolssoftware/procedure/procedure.jsp.

<sup>3.</sup> Percentages may not sum to 100 due to rounding.

Source: Delaware Health and Social Services, Division of Public Health, Delaware Health Statistics Center

# **Nanticoke Memorial Hospital**

2014 Discharge Dist	rihution

2014 Discharge Distribution				
Zip / State	Number	<u>%</u>		
19973	2,289	37.3%		
19956	1,052	17.1%		
19933	602	9.8%		
19947	592	9.6%		
MD	405	6.6%		
19966	278	4.5%		
19950	221	3.6%		
19940	192	3.1%		
19963	68	1.1%		
19945	53	0.9%		
19975	47	0.8%		
19939	40	0.7%		
Other State	39	0.6%		
19960	27	0.4%		
19952	23	0.4%		
19901	21	0.3%		
19968	18	0.3%		
19941	17	0.3%		
19958	17	0.3%		
19934	15	0.2%		
19971	14	0.2%		
19931	12	0.2%		
PA	12	0.2%		
19904	10	0.2%		
Undisclosed*	72	1.2%		
Total	6,136	100.0%		

<sup>\*</sup>Zip codes with less than 10 cases

# **Utilization Characteristics**

	2012	2013	2014
Aggregate charges	\$95,314,614	\$108,338,052	\$107,306,566
Average charges	\$15,833	\$17,384	\$17,488
Average charge per day	\$5,034	\$5,103	\$5,440
Number of Discharges	6,020	6,232	6,136
Total All-listed Procedures <sup>1</sup>	11,498	11,958	12,057
Non-operating room procedures 2	9,818	10,259	10,212
Valid operating room procedures 2	1,680	1,699	1,845
Average Lenth of Stay	3.4	3.6	3.5
Primary Payer Distribution			
Medicare	43.8%	45.6%	45.9%
Medicaid	34.4%	32.0%	33.1%
Private Insurance	16.7%	16.9%	17.3%
Uninsured	3.0%	3.5%	1.7%
Other	2.1%	1.9%	1.9%
Point of Origin Distribution			
Home-Work-etc.	63.7%	64.9%	63.2%
Clinic/Physician Office	23.3%	22.3%	22.9%
Transfers-Health Facility	0.0%	0.0%	0.0%
Newborn	13.0%	12.8%	14.0%
Other/Unknown	0.0%	0.0%	0.0%
Discharge Status Distribution			
Routine - home	67.6%	62.9%	59.6%
Another short-term hospital	3.3%	2.9%	2.9%
Long-term care facility	13.9%	16.6%	16.2%
Home health care	11.9%	13.2%	16.5%
Expired in hospital	1.2%	1.9%	1.9%
Left against medical advice	0.8%	0.9%	0.9%
Other/Unknown	1.3%	1.6%	2.0%
Sex			
Male	39.4%	41.3%	42.4%
Female	60.6%	58.7%	57.6%
Age			
<1	15.6%	14.8%	15.1%
1-4	0.7%	0.6%	0.6%
<i>5-9</i>	0.5%	0.4%	0.3%
10-14	0.2%	0.1%	0.3%
<i>15-19</i>	2.1%	2.0%	1.7%
20-24	5.4%	4.7%	4.7%
25-34	10.2%	10.5%	10.6%
35-44	6.3%	5.8%	5.9%
45-54	9.7%	8.8%	8.6%
55-64	13.1%	13.4%	12.8%
<i>65-74</i>	14.1%	15.1%	16.0%
75+	22.0%	23.8%	23.6%

#### Notes:

<sup>1.</sup> Total all-listed procedures represents the total number of procedures performed; up to six procedures may be recorded per discharge, as a result the total number of all-listed procedures can exceed the total number of discharges.

<sup>2.</sup> Procedures were classified using AHRQ's HCUP procedure class software. See AHRQ's website for more information: <a href="http://www.hcup-us.ahrq.gov/toolssoftware/procedure/procedure.jsp.">http://www.hcup-us.ahrq.gov/toolssoftware/procedure/procedure.jsp.</a>

<sup>3.</sup> Percentages may not sum to 100 due to rounding.

# St. Francis Hospital

2014 Discharge Distribution				
Zip / State	Number	<u>%</u>		
19805	1,442	26.2%		
19802	579	10.5%		
19801	533	9.7%		
19720	479	8.7%		
19806	293	5.3%		
19810	255	4.6%		
19804	198	3.6%		
19703	197	3.6%		
19803	172	3.1%		
19809	172	3.1%		
19808	166	3.0%		
19702	140	2.5%		
PA	139	2.5%		
19711	122	2.2%		
19701	115	2.1%		
19713	83	1.5%		
19709	56	1.0%		
Other State	56	1.0%		
19707	52	0.9%		
MD	46	0.8%		
19807	37	0.7%		
NJ	37	0.7%		
19734	22	0.4%		
19901	17	0.3%		

\*Zip codes with less than 10 cases

12

12

71

5.503

0.2%

0.2%

1.3%

100.0%

19904

19977

Total

Undisclosed\*

# **Utilization Characteristics**

Otilizati	2012	2013	2014
Aggregate charges	\$159,643,186	\$153,277,399	\$149,319,914
Average charges	\$23,974	\$26,395	\$27,134
Average charge per day	\$7,519	\$7,604	\$8,004
Number of Discharges	6,659	5,807	5,503
Total All-listed Procedures <sup>1</sup>	6,996	6,063	5,628
Non-operating room procedures 2	4,724	4,021	3,636
Valid operating room procedures 2	2,272	2,042	1,992
Average Lenth of Stay	3.8	4.3	4.2
Primary Payer Distribution	•		
Medicare	36.1%	36.2%	34.3%
Medicaid	28.5%	31.2%	33.7%
Private Insurance	29.2%	27.0%	28.5%
Uninsured	5.6%	4.9%	2.6%
Other	0.6%	0.7%	1.0%
Point of Origin Distribution			
Home-Work-etc.	81.2%	82.5%	83.0%
Clinic/Physician Office	1.5%	0.6%	1.0%
Transfers-Health Facility	4.9%	3.4%	2.3%
Newborn	9.8%	12.1%	12.6%
Other/Unknown	2.6%	1.4%	1.2%
Discharge Status Distribution			
Routine - home	62.9%	60.6%	65.3%
Another short-term hospital	1.5%	2.1%	2.1%
Long-term care facility	12.1%	12.6%	11.1%
Home health care	15.3%	17.3%	13.1%
Expired in hospital	5.2%	3.7%	3.0%
Left against medical advice	2.0%	1.8%	2.2%
Other/Unknown	1.1%	1.9%	3.2%
Sex	00.40/	00.00/	22.22
Male	39.4%	39.2%	39.6%
Female	60.6%	60.8%	60.4%
Age <1	11 10/	10.20/	10.00/
1-4	11.1% 0.0%	12.3% 0.0%	12.8% 0.0%
7-4 5-9	0.0%	0.0%	0.0%
10-14	0.0%	0.0%	0.0%
15-19	1.3%	1.6%	1.5%
20-24	4.1%	4.4%	4.7%
25-34	12.1%	12.7%	13.2%
<i>35-44</i>	9.7%	9.3%	10.4%
45-54	14.9%	13.8%	12.9%
55-64	13.7%	14.4%	14.3%
65-74	12.2%	12.5%	11.0%
75+	20.9%	19.0%	19.3%
701	20.370	13.070	13.3/0

#### Notes:

Total all-listed procedures represents the total number of procedures performed; up to six procedures may be recorded per discharge, as a result the total number of all-listed procedures can exceed the total number of discharges.

<sup>2.</sup> Procedures were classified using AHRQ's HCUP procedure class software. See AHRQ's website for more information: <a href="http://www.hcup-us.ahrq.gov/toolssoftware/procedure/procedure.jsp.">http://www.hcup-us.ahrq.gov/toolssoftware/procedure/procedure.jsp.</a>

<sup>3.</sup> Percentages may not sum to 100 due to rounding.

<sup>4.</sup> St. Francis hospital does not operate a pediatric service. ER patients are admitted at Al Dupont.

Source: Delaware Health and Social Services, Division of Public Health, Delaware Health Statistics Center

# Select Specialty Hospital - Wilmington

# 2014 Discharge Distribution

Zip / State	Number	<u>%</u>
19805	33	10.2%
MD	25	7.7%
19802	19	5.9%
19720	18	5.6%
19901	15	4.6%
19977	15	4.6%
19966	14	4.3%
19904	11	3.4%
PA	10	3.1%
Undisclosed*	164	50.6%
Total	324	100.0%

<sup>\*</sup>Zip codes with less than 10 cases

# **Utilization Characteristics**

Othizatio	2012	2013	2014
Aggregate charges	\$39,836,974	\$29,736,447	\$44,786,921
Average charges	\$129,762	\$118,946	\$138,231
Average charge per day	\$3,910	\$4,225	\$4,440
Number of Discharges	307	250	324
Total All-listed Procedures <sup>1</sup>	541	566	801
Non-operating room procedures <sup>2</sup>	467	505	653
Valid operating room procedures <sup>2</sup>	74	61	148
Average Lenth of Stay	32.1	28.5	30.5
Primary Payer Distribution	<u> </u>		
Medicare	76.5%	78.8%	75.0%
Medicaid	0.3%	1.2%	0.3%
Private Insurance	21.5%	19.6%	23.8%
Uninsured	0.0%	0.0%	0.0%
Other	1.6%	0.4%	0.9%
Point of Origin Distribution	,	:	
Home-Work-etc.	0.0%	0.0%	0.0%
Clinic/Physician Office	0.0%	0.0%	0.0%
Transfers-Health Facility	99.3%	100.0%	100.0%
Newborn	0.0%	0.0%	0.0%
Other/Unknown	0.7%	0.0%	0.0%
Discharge Status Distribution	•	•	
Routine - home	5.5%	6.4%	16.0%
Another short-term hospital	10.4%	10.4%	3.4%
Long-term care facility	50.8%	56.4%	50.6%
Home health care	24.8%	19.6%	14.2%
Expired in hospital	6.8%	6.0%	7.1%
Left against medical advice	1.3%	0.4%	1.2%
Other/Unknown	0.3%	0.8%	7.4%
Sex	·		
Male	49.8%	53.2%	51.2%
Female	50.2%	46.8%	48.8%
Unknown	0.0%	0.0%	0.0%
Age			
<1	0.0%	0.0%	0.0%
1-4	0.0%	0.0%	0.0%
<i>5-9</i>	0.0%	0.0%	0.0%
10-14	0.0%	0.0%	0.0%
<i>15-19</i>	0.0%	0.0%	0.0%
20-24	0.3%	0.4%	0.3%
<i>25-34</i>	2.6%	4.0%	5.2%
<i>35-44</i>	4.2%	3.2%	6.8%
45-54	15.3%	12.4%	13.6%
<i>55-64</i>	24.4%	25.2%	21.9%
<i>65-74</i>	26.4%	28.4%	25.9%
<i>75+</i>	26.7%	26.4%	26.2%
Notes:			

<sup>1.</sup> Total all-listed procedures represents the total number of procedures performed; up to six procedures may be recorded per discharge, as a result the total number of all-listed procedures can exceed the total number of discharges.

 $<sup>2.\</sup> Procedures\ were\ class\ if ied\ using\ AHRQ's\ HCUP\ procedure\ class\ software.\ See\ AHRQ's\ website\ for\ more\ information:$ http://www.hcup-us.ahrq.gov/toolssoftware/procedure/procedure.jsp.

<sup>3.</sup> Percentages may not sum to 100 due to rounding.

# APPENDIX A

#### Clinical classification system:

Diagnoses and procedures were reported using the International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM). These codes were then aggregated into broader diagnostic categories according to the Clinical Classification System (CCS) developed by the Agency of Healthcare Research and Quality (AHRQ). The CCS diagnoses are used to categorize clinically similar diagnoses for ease in presentation and interpretation of hospital discharge data. A complete listing of CCS diagnostic codes and selected corresponding measures are presented below.

# A1. Number and Percentage of Hospital Discharges, Mean Length of Stay, Mean Charges, Percentage Expired, And Percentage with an Emergency Priority at Admission by Principal Diagnosis, Delaware, 2014

Clinical Class	ifications Software Categories and Chapter Headings	Number of Discharges	Percent of Discharges	Length of Stay	Mean Total Charges	Percent Expired	Percent Emergenc Priority
Infections and	Tuberculosis	15	0.3%	19.1	\$53,562	13.3%	66.7
parasitic	Septicemia (except in labor)	4,194	85.4%	8.8	\$44,311	9.7%	83.3
diseases	Bacterial infection; unspecified site	28	0.6%	10.5	\$64,470	3.6%	75.0
	Mycoses	79	1.6%	9.4	\$38,004	5.1%	83.5
	HIV infection	136	2.8%	13.7	\$57,475	8.1%	86.8
	Hepatitis	98	2.0%	4.9	\$18,550	1.0%	84.7
	Viral infection	267	5.4%	2.9	\$13,553	0.0%	81.3
	Other infections; including parasitic	67	1.4%	6.1	\$35,440	0.0%	73.1
	Sexually transmitted infections (not HIV or hepatitis)	23	0.5%	6.0	\$24,951	0.0%	78.3
	Immunizations and screening for infectious disease	3	0.1%	4.0	\$11,094	0.0%	66.7
	Total	4,910	100.0%	8.6	\$42,298	8.7%	83.0
	Cancer of head and neck	89	2.2%	8.4	\$41,383	3.4%	41.6
Neoplasms	Cancer of esophagus	28	0.7%	10.8	\$73,137	7.1%	39.3
	Cancer of stomach	44	1.1%	8.4	\$36,848	0.0%	47.7
	Cancer of colon	256	6.3%	8.7	\$53,999	3.5%	32.4
	Cancer of rectum and anus	116	2.9%	9.5	\$48,445	0.9%	24.1
	Cancer of liver and intrahepatic bile duct	46	1.1%	7.3	\$72,628	4.3%	58.7
	Cancer of pancreas	104	2.6%	8.0	\$39,795	6.7%	58.7
	Cancer of other GI organs; peritoneum	60	1.5%	10.2	\$48,139	0.0%	45.0
	Cancer of bronchus; lung	364	9.0%	6.0	\$37,377	6.0%	51.9
	Cancer; other respiratory and intrathoracic	6	0.1%	4.3	\$12,183	0.0%	66.
	Cancer of bone and connective tissue	50	1.2%	5.8	\$54,820	0.0%	12.0
	Melanomas of skin	17	0.4%	2.0	\$18,634	0.0%	11.8
	Other non-epithelial cancer of skin	15	0.4%	3.5	\$11,387	0.0%	26.
	Cancer of breast	104	2.6%	3.1	\$19,611	1.0%	20.2
	Cancer of uterus	77	1.9%	6.0	\$29,395	2.6%	19.
	Cancer of cervix	26	0.6%	5.8	\$30,813	3.8%	15.4
	Cancer of ovary	64	1.6%	8.7	\$42,877	0.0%	28.
	Cancer of other female genital organs	22	0.5%	3.2	\$17,636	0.0%	4.
	Cancer of prostate	65	1.6%	3.3	\$27,720	0.0%	23.
	Cancer of testis	5	0.1%	6.2	\$35,381	20.0%	80.
	Cancer of other male genital organs	2	0.0%	0.0	\$0	0.0%	0.
	Cancer of bladder	69	1.7%	7.3	\$35,969	1.4%	46.
	Cancer of kidney and renal pelvis	123	3.0%	5.1	\$34,760	0.8%	17.
	Cancer of other urinary organs	4	0.1%	6.3	\$29,410	0.0%	0.
	Cancer of brain and nervous system	91	2.2%	8.9	\$67,189	1.1%	53.
	Cancer of thyroid	49	1.2%	1.5	\$10,421	0.0%	2.
	Hodgkin's disease	10		7.9	\$46,254	0.0%	40.

Clinical Classi	fications Software Categories and Chapter Headings	Number of Discharges	Percent of Discharges	Length of Stay	Mean Total Charges	Percent Expired	Percent Emergend Priority
	Non-Hodgkin`s lymphoma	117	2.9%	9.4	\$65,763	5.1%	48.7
	Leukemias	137	3.4%	18.3	\$157,485	6.6%	47.4
	Multiple myeloma	43		9.1		7.0%	
	Cancer; other and unspecified primary		1.1%		\$44,357		53.5
		19	0.5%	6.5	\$42,908	0.0%	42.1
	Secondary malignancies	551	13.6%	6.0	\$32,295	4.7%	58.8
	Malignant neoplasm without specification of site	28	0.7%	7.0	\$33,384	3.6%	53.6
	Neoplasms of unspecified nature or uncertain behavior	117	2.9%	6.2	\$51,928	4.3%	39.3
	Maintenance chemotherapy; radiotherapy	400	9.9%	5.8	\$42,419	0.5%	1.0
	Benign neoplasm of uterus	316	7.8%	2.4	\$16,173	0.0%	2.5
	Other and unspecified benign neoplasm	421	10.4%	5.1	\$35,700	0.2%	16.6
	Total	4,055	100.0%	6.6	\$42,635	2.6%	32.2
Endosino	Thyroid disorders	159	3.7%	3.4	\$14,831	0.0%	43.4
Endocrine, nutritional &	Diabetes mellitus without complication	75	1.7%	3.0	\$14,137	0.0%	76.0
metabolic	Diabetes mellitus with complications	1,780	41.5%	5.3	\$22,861	0.8%	79.5
diseases, &	Other endocrine disorders	209	4.9%	6.1	\$23,376	1.0%	66.0
immunity	Nutritional deficiencies	39	0.9%	14.1	\$49,161	0.0%	66.7
disorders	Disorders of lipid metabolism	3	0.1%	3.0	\$16,780	0.0%	100.0
	Gout and other crystal arthropathies	67	1.6%	4.1	\$13,433	0.0%	85.
	Fluid and electrolyte disorders	937	21.9%	4.1	\$13,433	0.0%	85.0
	Cystic fibrosis						
	•	34	0.8%	8.5	\$91,486	0.0%	23.
_	Immunity disorders	4	0.1%	32.3	\$235,092	0.0%	25.0
	Other nutritional; endocrine; and metabolic disorders	980	22.9%	3.0	\$29,899	0.1%	15.5
	Total	4,287	100.0%	4.5	\$23,765	0.6%	63.6
Discours of the	Deficiency and other anemia	531	40.2%	4.0	\$24,165	1.1%	70.
Disease of the blood	Acute posthemorrhagic anemia	175	13.2%	4.3	\$21,413	0.6%	66.
forming organs	Sickle cell anemia	341	25.8%	4.8	\$24,312	0.0%	80.9
0 1 0	Coagulation and hemorrhagic disorders	118	8.9%	4.1	\$63,083	2.5%	50.0
	Diseases of white blood cells	142	10.7%	5.1	\$27,218	2.8%	71.1
	Other hematologic conditions	14	1.1%	4.0	\$30,572	14.3%	85.7
	Total	1,321	100.0%	4.4	\$27,711	1.2%	71.2
	Adjustment disorders	12	0.4%	3.2	\$16,602	0.0%	50.0
Mental disorders	Anxiety disorders	46	1.7%	3.9	\$11,465	0.0%	84.8
	Attention-deficit	5	0.2%	1.6	\$8,103	0.0%	60.0
	Delirium	215	7.8%	8.9	\$19,689	0.9%	88.4
	Developmental disorders	4	0.1%	5.5	\$21,284	0.0%	50.0
	Disorders usually diagnosed in infancy	6	0.2%	2.2	\$17,297	0.0%	66.
	Impulse control disorders	0	0.2 %	N/A	\$17,297 N/A	0.0 % N/A	100.
	Mood disorders						
		779		7.6	\$13,756	0.0%	81.
	Personality disorders	8	0.3%	11.3	\$29,586	0.0%	87.
	Schizophrenia and other psychotic disorders	193	7.0%	8.9	\$17,824	0.5%	85.
	Alcohol-related disorders	671	24.3%	5.0	\$17,787	0.1%	85.
	Substance-related disorders	437	15.8%	4.9	\$20,094	4.1%	78.0
	Screening and history of mental health and substance abuse codes	223	8.1%	6.0	\$25,919	1.8%	80.3
	Miscellaneous disorders	162	5.9%	3.7	\$13,552	0.0%	59.3
	Total	2,761	100.0%	6.3	\$17,484	0.9%	81.2
Diseases of the	Meningitis (except that caused by tuberculosis or STD)	119	3.7%	3.7	\$19,074	0.0%	83.
nervous system	Encephalitis (except that caused by tuberculosis or STD)	28	0.9%	13.3	\$73,846	3.6%	75.
and sense	Other CNS infection and poliomyelitis	38	1.2%	12.9	\$55,028	2.6%	55.
organs	Parkinson's disease	24	0.7%	3.7	\$12,097	0.0%	75.
	Multiple sclerosis	65	2.0%	3.9	\$12,793	0.0%	76.
	Other hereditary and degenerative nervous system conditions	135	4.2%	6.3	\$42,659	1.5%	51.
	Paralysis	57			\$105,170		
			1.8%	8.0		0.0%	28.
	Epilepsy; convulsions	980	30.3%	4.4	\$21,575	0.6%	75.
	Headache; including migraine	301	9.3%	2.7	\$12,269	0.0%	92.
	Coma; stupor; and brain damage	46	1.4%	6.8	\$33,535	17.4%	87.

Clinical Classi	fications Software Categories and Chapter Headings	Number of Discharges	Percent of Discharges	Length of Stay	Mean Total Charges	Percent Expired	Percent Emergency Priority
	Cataract	0	0.0%	N/A	N/A	N/A	N/A
	Retinal detachments; defects; vascular occlusion; and retinopathy	12	0.4%	22.4	\$279,377	0.0%	75.09
	Glaucoma	2	0.1%	5.0	\$24,753	0.0%	100.09
	Blindness and vision defects	34	1.1%	2.2	\$8,341	0.0%	88.29
	Inflammation; infection of eye (except that caused by	80	2.5%	3.2	\$14,649	0.0%	81.39
	tuberculosis or sexually transmitteddisease)	80	2.5 /0	5.2	\$14,043	0.0 %	01.3
	Other eye disorders	33	1.0%	2.3	\$8,826	0.0%	87.9
	Otitis media and related conditions	40	1.2%	2.8	\$17,655	0.0%	80.0
	Conditions associated with dizziness or vertigo	193	6.0%	2.5	\$8,132	0.0%	93.8
	Other ear and sense organ disorders	28	0.9%	2.5	\$12,010	0.0%	78.6
	Other nervous system disorders	1,015	31.4%	5.3	\$29,327	1.5%	66.1
	Total	3,230	100.0%	4.7	\$25,762	1.0%	74.0
Diseases of the	Heart valve disorders	343	2.1%	6.5	\$90,053	2.3%	22.7
circulatory system	Peri-; endo-; and myocarditis; cardiomyopathy (except that caused by tuberculosis or STD)	240	1.5%	8.6	\$77,634	4.2%	55.8
System	Essential hypertension	139	0.9%	2.6	\$11,565	0.0%	86.3
	Hypertension with complications and secondary hypertension	586	3.6%	5.1	\$24,483	0.9%	86.2
	Acute myocardial infarction	1,763	10.8%	4.6	\$50,766	4.7%	72.0
	Coronary atherosclerosis and other heart disease	1,082	6.6%	4.0	\$50,022	0.7%	44.5
	Nonspecific chest pain	610	3.7%	2.2	\$11,767	0.0%	88.9
	Pulmonary heart disease	723	4.4%	5.2	\$28,803	3.6%	79.5
	Other and ill-defined heart disease	41	0.3%	3.7	\$21,226	2.4%	73.2
	Conduction disorders	190	1.2%	3.7	\$46,180	1.6%	66.8
	Cardiac dysrhythmias	1,830	11.2%	3.6	\$25,203	1.6%	74.7
	Cardiac arrest and ventricular fibrillation	89	0.5%	8.9	\$76,958	46.1%	85.4
	Congestive heart failure; nonhypertensive	3,210	19.7%	5.6	\$25,258	1.6%	77.3
	Acute cerebrovascular disease	2,286	14.0%	6.8	\$32,073	4.9%	81.0
	Occlusion or stenosis of precerebral arteries	393	2.4%	2.1	\$23,587	0.8%	15.8
	Other and ill-defined cerebrovascular disease	111	0.7%	3.0	\$19,509	0.0%	36.9
	Transient cerebral ischemia	700	4.3%	2.3	\$10,572	0.0%	93.1
	Late effects of cerebrovascular disease	54	0.3%	4.5	\$18,047	1.9%	90.7
	Peripheral and visceral atherosclerosis	425	2.6%	6.2	\$46,023	3.1%	45.4
	Aortic; peripheral; and visceral artery aneurysms	288	1.8%	5.6	\$79,973	6.6%	36.1
	Aortic and peripheral arterial embolism or thrombosis	106	0.7%	6.6	\$55,340	2.8%	56.6
	Other circulatory disease	485	3.0%	4.0	\$19,395	0.8%	80.6
	Phlebitis; thrombophlebitis and thromboembolism	433	2.7%	4.9	\$24,318	0.2%	75.1
	Varicose veins of lower extremity	6	0.0%	8.3	\$23,242	0.0%	83.3
	Hemorrhoids	86	0.5%	4.0	\$14,494	1.2%	83.7
	Other diseases of veins and lymphatics	78	0.5%	5.0	\$24,967	3.8%	69.2
	Total	16,297	100.0%	4.9	\$33,482	2.6%	71.5
Diseases of Alt -	Pneumonia (except that caused by tuberculosis or STD)	2,999	27.1%	5.2	\$23,937	2.1%	80.9
Diseases of the respiratory	Influenza	376	3.4%	4.1	\$18,352	0.0%	78.5
system	Acute and chronic tonsillitis	104	0.9%	2.1	\$12,786	0.0%	52.9
<u>.</u> · · ·	Acute bronchitis	713	6.4%	3.4	\$12,780	0.0%	82.5
	Other upper respiratory infections	323	2.9%	2.6	\$17,524	0.4%	77.7
	Chronic obstructive pulmonary disease and bronchiectasis	2,028	18.3%	4.3	\$17,524	0.0%	89.6
	Asthma	1,437	13.0%	2.7	\$15,599	0.6%	
	Aspiration pneumonitis; food/vomitus						83.8 66.3
	Pleurisy; pneumothorax; pulmonary collapse	526	4.8%	7.0	\$30,564	6.7%	
		358	3.2%	6.4	\$29,598	2.0%	71.2
	Respiratory failure; insufficiency; arrest (adult)	1,670	15.1%	10.2	\$70,490	9.5%	65.0
	Lung disease due to external agents  Other lower respiratory disease	19	0.2%	4.5	\$18,601	0.0%	84.2
	Other lower respiratory disease	361	3.3%	4.4	\$23,085	3.0%	75.3
	Other upper respiratory disease	142	1.3%	4.1	\$18,951	1.4%	72.5
	Total	11,056	100.0%	5.3	\$28,440	2.7%	78.8

Clinical Classi	fications Software Categories and Chapter Headings	Number of Discharges	Percent of Discharges	Length of Stay	Mean Total Charges	Percent Expired	Percent Emergence Priority
	Intestinal infection	1,119	10.3%	4.7	\$18,425	0.8%	77.3
Diseases of the	Disorders of teeth and jaw	72	0.7%	3.3	\$27,108	0.0%	48.6
ligestive system	Diseases of mouth; excluding dental	74	0.7%	3.8	\$16,006	0.0%	82.4
	Esophageal disorders	331	3.0%	4.0	\$19,660	0.3%	77.9
	Gastroduodenal ulcer (except hemorrhage)	109	1.0%	7.1	\$35,837	0.9%	74.3
	Gastritis and duodenitis	287	2.6%	4.8	\$22,431	0.3%	86.8
	Other disorders of stomach and duodenum	309	2.8%	5.1	\$22,182	1.3%	83.8
	Appendicitis and other appendiceal conditions	613	5.6%	3.2	\$22,683	0.2%	73.4
	Abdominal hernia	635	5.8%	5.3	\$31,923	0.6%	29.9
	Regional enteritis and ulcerative colitis	317	2.9%	5.3	\$27,299	0.9%	72.6
	Intestinal obstruction without hernia	1,092	10.0%	6.6	\$28,753	1.4%	75.5
	Diverticulosis and diverticulitis	1,082	9.9%	5.2	\$23,909	0.4%	62.7
	Anal and rectal conditions	127	1.2%	4.5	\$22,722	0.0%	63.0
	Peritonitis and intestinal abscess	103	0.9%	7.6	\$34,100	2.9%	63.
	Biliary tract disease	1,141	10.5%	3.8	\$23,352	0.4%	64.1
	Other liver diseases	356	3.3%	5.4	\$25,897	2.2%	72.5
	Pancreatic disorders (not diabetes)	972	8.9%	5.5	\$23,303	0.6%	78.3
	Gastrointestinal hemorrhage	1,154	10.6%	5.0	\$23,837	2.0%	83.
	Noninfectious gastroenteritis	334	3.1%	3.5	\$14,829	0.3%	79.9
	Other gastrointestinal disorders	670	6.1%	5.5	\$27,635	0.5 %	59.
	Total	10,897	100.0%	5.0	\$24,176	0.8%	70.7
	Nephritis; nephrosis; renal sclerosis	58	1.1%	7.0	\$41,427	1.7%	55.2
Diseases of the	Acute and unspecified renal failure	1,829	36.0%	5.5	\$21,159	1.7%	79.
genitourinary	Chronic renal failure	52	1.0%	4.8		0.0%	79. 55.8
system	Urinary tract infections				\$53,594		
	Calculus of urinary tract	1,670	32.8%	4.4	\$14,624	0.8%	84.
	Other diseases of kidney and ureters	457	9.0%	2.3	\$14,501	0.0%	78.
	Other diseases of kidney and dreters Other diseases of bladder and urethra	125	2.5%	3.8	\$27,600	0.0%	35.:
		64	1.3%	6.2	\$42,394	1.6%	56.3
	Genitourinary symptoms and ill-defined conditions	127	2.5%	4.9	\$17,077	0.8%	76.4
	Hyperplasia of prostate	49	1.0%	4.5	\$20,334	0.0%	67.3
	Inflammatory conditions of male genital organs	71	1.4%	3.5	\$15,218	0.0%	74.0
	Other male genital disorders	43	0.8%	4.8	\$24,543	0.0%	65.
	Nonmalignant breast conditions	49	1.0%	3.7	\$15,116	0.0%	61.:
	Inflammatory diseases of female pelvic organs	96	1.9%	3.8	\$16,092	0.0%	69.
	Endometriosis	36	0.7%	2.9	\$16,709	0.0%	16.
	Prolapse of female genital organs	64	1.3%	1.6	\$15,926	0.0%	0.0
	Menstrual disorders	109	2.1%	2.4	\$17,457	0.0%	25.
	Ovarian cyst	80	1.6%	2.5	\$16,370	0.0%	35.
	Menopausal disorders	18	0.4%	4.6	\$22,283	0.0%	38.
	Female infertility	0	0.0%	N/A	N/A	N/A	١
	Other female genital disorders	90	1.8%	3.3	\$20,454	1.1%	31.
	Total	5,087	100.0%	4.5	\$18,825	0.8%	74.0
Complications of	Contraceptive and procreative management	0	0.0%	N/A	N/A	N/A	١
pregnancy,	Spontaneous abortion	22	0.2%	1.6	\$6,408	0.0%	54.
childbirth, & the	Induced abortion	7	0.1%	1.1	\$4,618	0.0%	100.
puerperium	Postabortion complications	3	0.0%	1.7	\$16,377	0.0%	100.0
	Ectopic pregnancy	21	0.2%	1.8	\$16,960	0.0%	95.2
	Other complications of pregnancy	1,529	12.8%	2.5	\$7,495	0.1%	48.
	Hemorrhage during pregnancy; abruptio placenta; placenta previa	157	1.3%	5.8	\$14,462	0.0%	45.2
	Hypertension complicating pregnancy; childbirth and the puerperium	893	7.5%	3.6	\$10,119	0.0%	38.
	Early or threatened labor	549	4.6%	3.1	\$7,015	0.0%	67.:
	Prolonged pregnancy	959	8.0%	2.7	\$6,575	0.0%	21.
	Diabetes or abnormal glucose tolerance complicating pregnancy; childbirth; or the puerperium	375	3.1%	2.7	\$7,594	0.0%	24.

Clinical Classi	ifications Software Categories and Chapter Headings	Number of Discharges	Percent of Discharges	Length of Stay	Mean Total Charges	Percent Expired	Percent Emergency Priority
	Malposition; malpresentation	399	3.3%	3.0	\$9,213	0.0%	26.8%
	Fetopelvic disproportion; obstruction	72	0.6%	2.5	\$9,306	0.0%	29.2%
	Previous C-section	1,399	11.7%	2.8	\$8,757	0.0%	14.9%
	Fetal distress and abnormal forces of labor	464	3.9%	2.9	\$8,065	0.0%	44.0%
	Polyhydramnios and other problems of amniotic cavity	732	6.1%	3.4	\$8,145	0.0%	55.9%
	Umbilical cord complication	529	4.4%	2.3	\$6,587	0.0%	36.3%
	OB-related trauma to perineum and vulva	1,580	13.3%	2.2	\$5,286	0.0%	50.5%
	Forceps delivery	13	0.1%	2.4	\$8,957	0.0%	23.1%
	Other complications of birth; puerperium affecting management of mother	1,739	14.6%	2.9	\$8,659	0.0%	33.7%
	Normal pregnancy and/or delivery	476	4.0%	2.3	\$7,814	0.0%	20.0%
	Total	11,918	100.0%	2.8	\$7,835	0.0%	37.6%
Diseases of the	Skin and subcutaneous tissue infections	1,898	88.7%	4.2	\$14,664	0.1%	77.1%
skin and	Other inflammatory condition of skin	22	1.0%	3.1	\$13,037	0.0%	77.3%
subcutaneous	Chronic ulcer of skin	180	8.4%	11.1	\$43,024	0.0%	50.0%
tissue	Other skin disorders	39	1.8%	4.2	\$13,744	0.0%	61.5%
	Total	2,139	100.0%	4.8	\$17,017	0.0%	74.5%
Diseases of the	Infective arthritis and osteomyelitis (except that caused by tuberculosis or STD)	327	4.2%	10.5	\$43,247	0.0%	56.9%
musculo-	Rheumatoid arthritis and related disease	47	0.6%	3.6	\$24,491	0.0%	61.7%
skeletal system and connective	Osteoarthritis	3,658	47.5%	2.6	\$37,611	0.0%	0.9%
tissue	Other non-traumatic joint disorders	160	2.1%	3.7	\$38,574	0.0%	43.1%
	Spondylosis; intervertebral disc disorders; other back problems	2,143	27.8%	2.8	\$48,042	0.1%	16.9%
	Osteoporosis	0	0.0%	N/A	N/A	N/A	N/A
	Pathological fracture	201	2.6%	5.7	\$36,342	1.0%	67.7%
	Acquired foot deformities	32	0.4%	2.8	\$46,937	0.0%	3.1%
	Other acquired deformities	243	3.2%	3.4	\$67,450	0.0%	0.8%
	Systemic lupus erythematosus and connective tissue disorders	63	0.8%	10.0	\$61,589	0.0%	69.8%
	Other connective tissue disease	490	6.4%	4.6	\$21,818	0.6%	70.2%
	Other bone disease and musculoskeletal deformities	334	4.3%	4.0	\$90,312	0.0%	10.5%
	Total	7,698	100.0%	3.4	\$43,119	0.1%	16.1%
Congenital	Cardiac and circulatory congenital anomalies	196	30.5%	24.8	\$401,082	3.1%	9.2%
anomalies	Digestive congenital anomalies	107	16.7%	14.0	\$150,325	0.0%	32.7%
	Genitourinary congenital anomalies	63	9.8%	4.1	\$45,807	0.0%	9.5%
	Nervous system congenital anomalies	44	6.9%	10.7	\$72,889	4.5%	2.3%
	Other congenital anomalies	232	36.1%	8.8	\$110,953	0.9%	6.5%
	Total	642	100.0%	14.2	197,088	1.6%	11.7%
	Short gestation; low birth weight; and fetal growth retardation	42	7.7%	29.5	\$139,647	14.3%	4.8%
Certain	Intrauterine hypoxia and birth asphyxia	15	2.8%	17.0	\$115,115	6.7%	6.7%
conditions originating in the	Respiratory distress syndrome	45	8.3%	21.8	\$166,331	2.2%	4.4%
perinatal period	Hemolytic jaundice and perinatal jaundice	128	23.5%	1.8	\$6,920	0.0%	34.4%
,	Birth trauma	6	1.1%	8.0	\$48,524	0.0%	16.7%
	Other perinatal conditions	308	56.6%	10.6	\$89,170	2.3%	34.7%
	Total	544	100.0%	11.0	\$80,364	2.8%	28.9%
Injury and	Joint disorders and dislocations; trauma-related	71	0.8%	3.3	\$32,141	0.0%	39.4%
poisoning	Fracture of neck of femur (hip)	907	9.7%	5.8	\$38,012	1.5%	78.6%
	Spinal cord injury	73	0.8%	9.8	\$69,638	2.7%	89.0%
	Skull and face fractures	140		4.4	\$25,415	0.7%	85.7%
	Fracture of upper limb	426	4.5%	3.9	\$27,313	0.5%	75.1%
	Fracture of lower limb	749	8.0%	4.7	\$33,747	0.8%	78.6%
			0.70/	г о		1 20/	00.40/
	Other fractures	912	9.7%	5.2	\$24,792	1.2%	83.4%
	Other fractures Sprains and strains	912 85		3.2	\$24,792 \$17,620	0.0%	83.4% 60.0%

# APPENDIX A

Clinical Classi	fications Software Categories and Chapter Headings	Number of Discharges	Percent of Discharges	Length of Stay	Mean Total Charges	Percent Expired	Percent Emergency Priority
	Crushing injury or internal injury	353	3.8%	7.2	\$38,940	4.2%	90.1%
	Open wounds of head; neck; and trunk	121	1.3%	4.0	\$21,089	1.7%	90.9%
	Open wounds of extremities	109	1.2%	5.0	\$25,747	0.9%	85.3%
	Complication of device; implant or graft	1,955	20.9%	6.1	\$47,837	1.7%	45.8%
	Complications of surgical procedures or medical care	1,529	16.3%	6.4	\$29,705	1.0%	59.3%
	Superficial injury; contusion	120	1.3%	4.1	\$15,000	0.0%	89.2%
	Burns	12	0.1%	2.8	\$12,134	0.0%	83.3%
	Poisoning by psychotropic agents	230	2.5%	3.6	\$16,901	0.4%	83.5%
	Poisoning by other medications and drugs	398	4.2%	3.4	\$18,192	3.0%	75.4%
	Poisoning by nonmedicinal substances	45	0.5%	4.6	\$26,917	2.2%	66.7%
	Other injuries and conditions due to external causes	280	3.0%	4.6	\$27,177	3.9%	82.9%
	Total	9,369	100.0%	5.6	\$33,683	1.9%	70.8%
Liveborn	Liveborn	11,217	100.0%	3.8	\$8,335	0.3%	0.1%
	Total	11,217	100.0%	3.8	\$8,335	0.3%	0.1%
O. I	Syncope	530	14.6%	2.6	\$11,769	0.0%	87.2%
Other conditions	Fever of unknown origin	139	3.8%	3.0	\$13,317	0.0%	67.6%
	Lymphadenitis	58	1.6%	2.7	\$14,924	0.0%	70.7%
	Gangrene	120	3.3%	9.5	\$57,433	0.8%	31.7%
	Shock	8	0.2%	6.3	\$49,160	25.0%	75.0%
	Nausea and vomiting	71	2.0%	3.7	\$13,869	0.0%	78.9%
	Abdominal pain	322	8.9%	3.5	\$13,327	0.3%	80.4%
	Malaise and fatigue	38	1.1%	2.6	\$10,443	2.6%	86.8%
	Allergic reactions	98	2.7%	2.5	\$11,227	0.0%	85.7%
	Rehabilitation care; fitting of prostheses; and adjustment of devices	1,664	46.0%	12.6	\$33,370	0.1%	1.7%
	Administrative/social admission	3	0.1%	4.0	\$13,670	0.0%	66.7%
	Medical examination/evaluation	61	1.7%	3.5	\$35,995	1.6%	18.0%
	Other aftercare	200	5.5%	7.7	\$6,109	47.0%	8.5%
	Other screening for suspected conditions (not mental disorders or infectious disease)	14	0.4%	2.6	\$9,961	0.0%	57.1%
	Residual codes; unclassified	293	8.1%	4.0	\$17,945	0.7%	74.4%
	Total	3,619	100.0%	8.0	\$24,149	2.8%	37.5%
Total All CCS Dia	gnostic Codes	111,047	100.0%	4.9	\$27,000	1.7%	55.0%

# APPENDIX B

# Clinical classification system for Ecodes:

Ecodes are supplementary classifications of external causes of injury and poisoning. They provide additional information regarding the nature of the condition, or to allow more detailed analysis of the external cause of the diagnosis. Ecodes were coded according to the International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM). These codes were then aggregated into broader diagnostic categories using the Clinical Classification System (CCS) developed by the Agency of Healthcare Research and Quality (AHRQ). The CCS classification system for Ecodes is used to categorize clinically similar diagnoses for ease in presentation and interpretation of hospital discharge data. A complete listing of CCS Ecodes and selected corresponding measures are presented below.

B1. Number and Percentage of Discharges, Mean Length of Stay, Mean Charges, Percentage Expired, and Percentage with an Emergency Priority at Admission by Ecode, Delaware, 2014

Clinical Classifications Software Categories for Ecodes	Number of Discharges	Percent of Discharges	Mean LOS	Mean Total Charges	Percent Expired	Percent Emergency Admission
E Codes: Cut/pierce	51	0.7%	4.0	\$27,410	0.0	72.5
E Codes: Drowning/submersion	10	0.1%	1.7	\$19,452	0.0	30.0
E Codes: Fall	1,829	26.1%	5.4	\$33,961	2.1	52.6
E Codes: Fire/burn	15	0.2%	6.3	\$56,829	0.0	66.7
E Codes: Firearms	9	0.1%	12.9	\$97,337	0.0	100.0
E Codes: Machinery	9	0.1%	3.8	\$28,916	0.0	88.9
E Codes: Motor vehicle traffic (MVT)	261	3.7%	5.0	\$45,062	1.1	69.7
E Codes: Pedal cyclist; not MVT	31	0.4%	3.1	\$27,452	0.0	58.1
E Codes: Pedestrian; not MVT	7	0.1%	5.3	\$72,390	14.3	100.0
E Codes: Transport; not MVT	43	0.6%	2.9	\$28,817	0.0	67.4
E Codes: Natural/environment	120	1.7%	3.2	\$18,187	0.0	75.0
E Codes: Overexertion	38	0.5%	6.6	\$59,464	0.0	39.5
E Codes: Poisoning	461	6.6%	3.2	\$24,362	1.7	57.3
E Codes: Struck by; against	102	1.5%	2.9	\$26,554	0.0	65.7
E Codes: Suffocation	39	0.6%	9.5	\$127,737	12.8	48.7
E Codes: Adverse effects of medical care	1,515	21.6%	14.7	\$140,650	3.3	27.2
E Codes: Adverse effects of medical drugs	1,965	28.0%	7.7	\$63,681	2.0	43.9
E Codes: Other specified and classifiable	111	1.6%	8.7	\$54,321	0.0	47.7
E Codes: Other specified; NEC	100	1.4%	5.7	\$78,086	7.0	52.0
E Codes: Unspecified	249	3.5%	7.2	\$52,292	4.0	57.4
E Codes: Place of occurrence	50	0.7%	4.6	\$39,755	6.0	72.0
Total	7,015	100.0%	7.9	\$67,068	2.3	46.7

# C1. Number of All-listed Procedures Performed during the Inpatient Stay by Procedure and Sex of Patient, Delaware, 2014

Single level CCS	·	Male	Female	Total
Operations on	Incision and excision of CNS	234	188	422
•	Insertion; replacement; or removal of extracranial ventricular shunt	66	70	136
	Laminectomy; excision intervertebral disc	923	929	1,852
System	Diagnostic spinal tap	493	532	1,025
	Insertion of catheter or spinal stimulator and injection into spinal canal	97	119	216
	Decompression peripheral nerve	27	13	40
	Other diagnostic nervous system procedures	22	16	38
	Other non-OR or closed therapeutic nervous system procedures	49	101	150
	Other OR therapeutic nervous system procedures	390	296	686
	Total	2,301	2,264	4,565
Operations on	Thyroidectomy; partial or complete	43	106	149
the endocrine	Diagnostic endocrine procedures	13	18	31
system	Other therapeutic endocrine procedures	96	113	209
	Total	152	237	389
Oneretiene en	Corneal transplant	3	1	4
Incision and excision of CNS Insertion; replacement; or removal of extracranial ventricular shunt Incision and excision of CNS Insertion; replacement; or removal of extracranial ventricular shunt Incision of catheter or spinal stimulator and injection into spinal canal Diagnostic spinal tap Incision of catheter or spinal stimulator and injection into spinal canal Decompression peripheral nerve Other diagnostic nervous system procedures Other ono-OR or closed therapeutic nervous system procedures Other office	6			
the eye	Repair of retinal tear; detachment	1	0	1
	Destruction of lesion of retina and choroid	3	1	4
	Diagnostic procedures on eye	2	0	2
	Other therapeutic procedures on eyelids; conjunctiva; cornea	60	40	100
	Other intraocular therapeutic procedures	9	5	14
	·	9	11	20
	·	93		151
	Tympanoplasty	_	2	2
•				83
the ear				10
	•			12
				67
	·			174
Operations on				78
-	- ·			34
•				211
<del>-</del>	·			75
pilaryiix	· · · · · · · · · · · · · · · · · · ·			79
	· · · · · · · · · · · · · · · · · · ·			244
	· · ·			249
				970
				351
Operations on				
the respiratory				256
system				233
				824
				28
	· · · · · · · · · · · · · · · · · · ·			1,457
	· · · · · · · · · · · · · · · · · · ·			93
	· · · · · · · · · · · · · · · · · · ·			235
	. , , ,			228
				3,705
Operations on				402
-		904	249	1,153
	Percutaneous transluminal coronary angioplasty (PTCA)	1,059	577	1,636
	Coronary thrombolysis	0	1	1
-,	Diagnostic cardiac catheterization; coronary arteriography	4,362	2,892	7,254
	Insertion; revision; replacement; removal of cardiac pacemaker or cardioverter/defibrillator	705	542	1,247
	Other OR heart procedures	383	253	636
	Extracorporeal circulation auxiliary to open heart procedures	727	324	1,051

Single level CCS	Procedure Categories and Chapter Headings	Male	Female	Total
	Endarterectomy; vessel of head and neck	219	136	355
	Aortic resection; replacement or anastomosis	158	50	208
	Varicose vein stripping; lower limb	0	0	(
	Other vascular catheterization; not heart	3,356	3,355	6,711
	Peripheral vascular bypass	156	97	253
	Other vascular bypass and shunt; not heart	20	24	44
	Creation; revision and removal of arteriovenous fistula or vessel-to-vessel cannula for dialysis	73	43	116
	Hemodialysis	1,414	1,003	2,417
	Other OR procedures on vessels of head and neck	117	155	272
	Embolectomy and endarterectomy of lower limbs	102	53	155
	Other OR procedures on vessels other than head and neck	3,061	2,054	5,11
	Other diagnostic cardiovascular procedures	193	116	309
	Other non-OR therapeutic cardiovascular procedures	1,318	772	2,090
	Total	18,576	12,849	31,42
Oneretiene en	Bone marrow transplant	18,370	12,049	31,423
Operations on	•			
	Bone marrow biopsy	152	117	269
lymphatic	Procedures on spleen	44	34	78
system	Other therapeutic procedures; hemic and lymphatic system	374	483	85
	Total	588	651	1,23
Operations on	Injection or ligation of esophageal varices	0	0	
the digestive	Esophageal dilatation	30	33	63
system	Upper gastrointestinal endoscopy; biopsy	1,530	1,798	3,32
oyotom:	Gastrostomy; temporary and permanent	285	233	518
	Colostomy; temporary and permanent	82	101	183
	lleostomy and other enterostomy	81	74	15
	Gastrectomy; partial and total	123	484	60
	Small bowel resection	143	207	35
	Colonoscopy and biopsy	526	575	1,10
	Proctoscopy and anorectal biopsy	106	104	210
	Colorectal resection	514	574	1,08
	Local excision of large intestine lesion (not endoscopic)	2	6	1,00
	Appendectomy	350	321	67
	Hemorrhoid procedures	8	11	19
	Endoscopic retrograde cannulation of pancreas (ERCP)	22	27	4
	Biopsy of liver	105	95	20
	Cholecystectomy and common duct exploration	413	599	1,01
	Inguinal and femoral hernia repair	96	39	13!
	·			
	Other hernia repair	326	714 53	1,04
	Laparoscopy (Gl only)	34		8
	Abdominal paracentesis	534	475	1,00
	Exploratory laparotomy	33	21	5-
	Excision; lysis peritoneal adhesions	303	693	99
	Peritoneal dialysis	88	75	16
	Other bowel diagnostic procedures	24	42	6
	Other non-OR upper GI therapeutic procedures	427	353	78
	Other OR upper GI therapeutic procedures	220	391	61
	Other non-OR lower GI therapeutic procedures	342	293	63
	Other OR lower GI therapeutic procedures	468	456	92
	Other gastrointestinal diagnostic procedures	90	155	24
	Other non-OR gastrointestinal therapeutic procedures	442	464	90
	Other OR gastrointestinal therapeutic procedures	376	530	90
	Total	8,123	9,996	18,11
	Endoscopy and endoscopic biopsy of the urinary tract	149	189	33
Operations on	Transurethral excision; drainage; or removal urinary obstruction	247	128	37
the urinary	Ureteral catheterization	354	468	82
system				
	Nephrotomy and nephrostomy	61	85	14

Single level CCS	Procedure Categories and Chapter Headings	Male	Female	Total
	Nephrectomy; partial or complete	91	78	16
	Kidney transplant	22	8	3
	Genitourinary incontinence procedures	3	39	4
	Extracorporeal lithotripsy; urinary	9	6	1
	Indwelling catheter	173	94	26
	Procedures on the urethra	55	3	5
	Other diagnostic procedures of urinary tract	48	38	8
	Other non-OR therapeutic procedures of urinary tract	172	213	38
	Other OR therapeutic procedures of urinary tract	152	170	32
	Total	1,536	1,519	3,05
	Transurethral resection of prostate (TURP)	38	0	3
()narations on	Open prostatectomy	54	0	54
the male	Circumcision	4,518	1	4,51
genital organs			-	
	Diagnostic procedures; male genital	14	0	14
	Other non-OR therapeutic procedures; male genital	48	0	48
	Other OR therapeutic procedures; male genital	94	0	94
	Total	4,766	1	4,76
Operations on	Oophorectomy; unilateral and bilateral	0	549	549
the female	Other operations on ovary	0	123	123
genital organs	Ligation or occlusion of fallopian tubes	0	767	767
geriitai organis	Other operations on fallopian tubes	0	187	187
	Hysterectomy; abdominal and vaginal	0	649	649
	Other excision of cervix and uterus	0	97	97
	Abortion (termination of pregnancy)	0	5	
	Dilatation and curettage (D&C); aspiration after delivery or abortion	0	42	42
	Diagnostic dilatation and curettage (D&C)	0	27	27
	Repair of cystocele and rectocele; obliteration of vaginal vault	0	51	5
	Other diagnostic procedures; female organs	0	60	60
	Other non-OR therapeutic procedures; female organs	0	42	42
	Other OR therapeutic procedures; female organs	0	196	196
	Total	0	2,795	2,79
	Removal of ectopic pregnancy	0	15	15
Obstetrical	Episiotomy	0	223	223
procedures	Cesarean section	1	3,388	3,389
procedures	Forceps; vacuum; and breech delivery	1 1	613	614
	Artificial rupture of membranes to assist delivery	0	3,021	3,02
	Other procedures to assist delivery	0	9,810	
	Diagnostic amniocentesis	0		9,610
	Fetal monitoring	0	5,043	5,043
	•			
	Repair of current obstetric laceration	0	3,935	3,93
	Other therapeutic obstetrical procedures	0	308	308
	Total	2	26,363	26,36
	Partial excision bone	803	710	1,513
Operations on the	Bunionectomy or repair of toe deformities	10	15	2
musculoskeletal	Treatment; facial fracture or dislocation	84	26	11
system	Treatment; fracture or dislocation of radius and ulna	125	124	24
	Treatment; fracture or dislocation of hip and femur	442	654	1,09
	Treatment; fracture or dislocation of lower extremity (other than hip or femur)	448	374	82
	Other fracture and dislocation procedure	394	331	72
	Arthroscopy	12	9	2
	Division of joint capsule; ligament or cartilage	20	22	4
	Excision of semilunar cartilage of knee	2	5	
	Arthroplasty knee	1,018		
	Hip replacement; total and partial	1,085	1,511	2,59

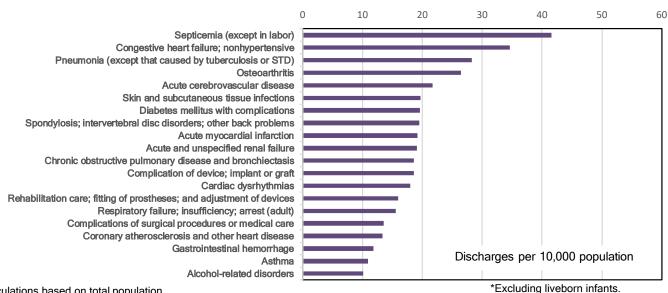
Single level CCS	S Procedure Categories and Chapter Headings	Male	Female	Total
-	Arthroplasty other than hip or knee	93	134	227
	Arthrocentesis	161	90	251
	Injections and aspirations of muscles; tendons; bursa; joints and soft tissue	30	32	62
	Amputation of lower extremity	400	180	580
	Spinal fusion	2,611	2,802	5,413
	Other diagnostic procedures on musculoskeletal system	131	152	283
	Other therapeutic procedures on muscles and tendons	927	670	1,597
	Other OR therapeutic procedures on bone	395	323	718
	Other OR therapeutic procedures on joints	261	207	468
	Other non-OR therapeutic procedures on musculoskeletal system	765	1,173	1,938
	Other OR therapeutic procedures on musculoskeletal system	83	49	132
	Total	10,300	11,359	21,659
	Breast biopsy and other diagnostic procedures on breast	0	24	24
Operations on	Lumpectomy; quadrantectomy of breast	0	16	16
the	Mastectomy	2	81	83
integumentary	Incision and drainage; skin and subcutaneous tissue	508	396	904
system	Debridement of wound; infection or burn	497	399	896
	Excision of skin lesion	73	70	143
	Suture of skin and subcutaneous tissue	322	211	533
	Skin graft	143	96	239
	Other diagnostic procedures on skin and subcutaneous tissue	43		76
	Other non-OR therapeutic procedures on skin and breast		33 362	
	Other OR therapeutic procedures on skin and breast	307		669
	Total	123	251	374
		2,018	1,939	3,957
Miscellaneous	Other organ transplantation Computerized axial tomography (CT) scan head	5	6	11
diagnostic and	CT scan chest	5	4	9
therapeutic	CT scan abdomen	20	11	31
procedures	Other CT scan	17	17	34
		18	21	39
	Myelogram	3	2	
	Mammography  Positive shoot V rev	0	2	2
	Routine chest X-ray	1	0	1
	Intraoperative cholangiogram	22	33	55
	Upper gastrointestinal X-ray	4	4	8
	Intravenous pyelogram	5		9
	Cerebral arteriogram	112	147	259
	Contrast aortogram	281	186	467
	Contrast arteriogram of femoral and lower extremity arteries	626		1,086
	Arterio- or venogram (not heart and head)	677	474	1,151
	Diagnostic ultrasound of head and neck	20		38
	Diagnostic ultrasound of heart (echocardiogram)	920		1,651
	Diagnostic ultrasound of gastrointestinal tract	30	44	74
	Diagnostic ultrasound of urinary tract	4	4	8
	Diagnostic ultrasound of abdomen or retroperitoneum	16		43
	Other diagnostic ultrasound	73	395	468
	Magnetic resonance imaging	110	107	217
	Electroencephalogram (EEG)	53	63	116
	Nonoperative urinary system measurements	2	0	2
	Cardiac stress tests	15	16	31
	Electrocardiogram	0	1	1
	Electrographic cardiac monitoring	0	0	C

# APPENDIX C

Single level CCS Procedure	Categories and Chapter Headings	Male	Female	Total
Swan-Ganz	catheterization for monitoring	39	23	62
Arterial blood	d gases	0	1	-
Microscopic	examination (bacterial smear; culture; toxicology)	2	8	10
Radioisotope	e bone scan	0	3	3
Radioisotope	pulmonary scan	0	0	C
Radioisotope	e scan and function studies	0	2	2
Other radiois	sotope scan	2	10	12
Therapeutic	radiology for cancer treatment	60	59	119
Diagnostic p	hysical therapy	1	3	4
Physical the	rapy exercises; manipulation; and other procedures	366	316	682
Traction; spl	ints; and other wound care	170	175	345
Other physic	al therapy and rehabilitation	523	442	965
Respiratory i	ntubation and mechanical ventilation	4,755	4,277	9,032
Other respira	atory therapy	375	468	843
Psychologica	al and psychiatric evaluation and therapy	25	31	56
Alcohol and	drug rehabilitation/detoxification	63	22	85
Ophthalmolo	ogic and otologic diagnosis and treatment	3,123	3,038	6,161
Nasogastric	tube	181	159	340
Blood transfu	usion	3,550	3,989	7,539
Enteral and p	parenteral nutrition	547	612	1,159
Cancer cher	notherapy	354	326	680
Conversion	of cardiac rhythm	530	352	882
Other diagno	ostic radiology and related techniques	396	428	824
Other diagno	ostic procedures (interview; evaluation; consultation)	2,293	2,213	4,506
Prophylactic	vaccinations and inoculations	3,546	3,570	7,116
Nonoperative	e removal of foreign body	38	43	8-
Other therap	eutic procedures	8,557	12,724	21,281
Total		32,535		68,606

# APPENDIX D

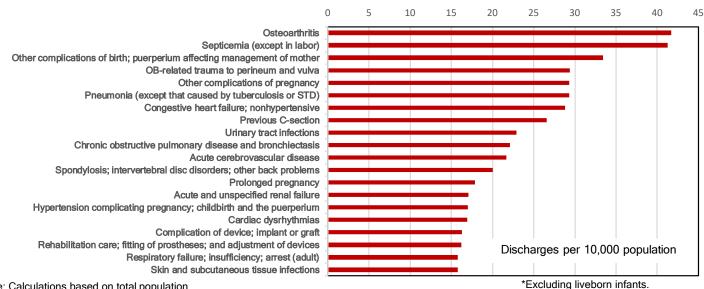
#### D1. Annual Hospitalization Rates for the 20 Most Frequent Diagnoses\* of Male Residents, Delaware, 2014



Note: Calculations based on total population.

Source: Delaware Health and Social Services, Division of Public Health, Delaware Health Statistics Center

### D2. Annual Hospitalization Rates for the 20 Most Frequent Diagnoses\* of Female Residents, Delaware, 2014



Note: Calculations based on total population.

# E1. Conditions with the 10 Highest Total Charges, Delaware, 2014

Rank	CCS Principal Diagnoses	Total Billed Charges	% of Total Charges	Number of Discharges
1	Septicemia (except in labor)	\$185,839,390	6.2%	4,194
2	Osteoarthritis	\$137,579,578	4.6%	3,658
3	Respiratory failure; insufficiency; arrest (adult)	\$117,718,411	3.9%	1,670
4	Spondylosis; intervertebral disc disorders; other back problems	\$102,953,331	3.4%	2,143
5	Complication of device; implant or graft	\$93,520,412	3.1%	1,955
6	Liveborn	\$93,495,132	3.1%	11,217
7	Acute myocardial infarction	\$89,499,601	3.0%	1,763
8	Congestive heart failure; nonhypertensive	\$81,076,965	2.7%	3,210
9	Cardiac and circulatory congenital anomalies	\$78,612,057	2.6%	196
10	Acute cerebrovascular disease	\$73,318,641	2.4%	2,286
Total for 1	0 most expensive conditions	\$1,053,613,519	35.1%	32,292
Total aggre	egate charges for all discharges	\$3,001,724,992	100.0%	111,341

Source: Delaware Health and Social Services, Division of Public Health, Delaware Health Statistics Center

# E2. Hospital Discharges with the Highest Mean Charges, Delaware, 2014

CCS Principal Diagnosco	Number Discharges		% of Total Discharges			Mean Charges			
CCS Principal Diagnoses	2004	2009	2014	2004	2009	2014	2004	2009	2014
Total All Discharges	112,026	113,101	111,341	100.0%	100.0%	100.0%	\$15,345	\$22,571	\$26,960
Cardiac and circulatory congenital anomalies	351	222	196	0.3%	0.2%	0.2%	\$89,126	\$194,041	\$401,082
Cancer of other male genital organs	2	1	2	0.0%	0.0%	0.0%	\$18,570	\$10,514	\$366,832
Retinal detachments; defects; vascular	9	10	12	0.0%	0.0%	0.0%	\$11,419	\$14,757	\$279,377
Immunity disorders	8	2	4	0.0%	0.0%	0.0%	\$62,361	\$17,197	\$235,092
Respiratory distress syndrome	46	31	45	0.0%	0.0%	0.0%	\$38,390	\$60,765	\$166,331
Leukemias	152	117	137	0.1%	0.1%	0.1%	\$51,892	\$101,495	\$157,485
Digestive congenital anomalies	119	126	107	0.1%	0.1%	0.1%	\$29,973	\$69,963	\$150,325
Short gestation; low birth weight; and fetal	74	78	42	0.1%	0.1%	0.0%	\$83,823	\$73,243	\$139,647
Intrauterine hypoxia and birth asphyxia	0	7	15	0.0%	0.0%	0.0%	\$0	\$51,433	\$115,115
Other congenital anomalies	338	224	232	0.3%	0.2%	0.2%	\$27,672	\$78,207	\$110,953

Source: Delaware Health and Social Services, Division of Public Health, Delaware Health Statistics Center

# E3. Number, Percentage, and Mean Charges for the Highest Volume of Hospital Discharges, Delaware, 2014

CCS Principal Diagnoses		Number Discharges		% of Total Discharges			Mean Charges		
CCS Fillicipal Diaglioses	2004	2009	2014	2004	2009	2014	2004	2009	2014
Total All Discharges	112,026	113,101	111,341	100.0%	100.0%	100.0%	\$15,345	\$22,571	\$26,960
Liveborn	11,423	11,759	11,217	10.2%	10.4%	10.1%	\$4,201	\$6,660	\$8,335
Septicemia (except in labor)	1,327	2,345	4,194	1.2%	2.1%	3.8%	\$28,671	\$41,938	\$44,311
Osteoarthritis	2,225	3,039	3,658	2.0%	2.7%	3.3%	\$23,638	\$31,630	\$37,611
Congestive heart failure; nonhypertensive	3,136	2,645	3,210	2.8%	2.3%	2.9%	\$19,973	\$24,667	\$25,258
Pneumonia (except that caused by tuberculosis or STD)	3,217	3,505	2,999	2.9%	3.1%	2.7%	\$15,580	\$21,542	\$23,937
Acute cerebrovascular disease	1,526	1,744	2,286	1.4%	1.5%	2.1%	\$19,395	\$29,369	\$32,073
Spondylosis; intervertebral disc disorders; other back	1,886	1,705	2,143	1.7%	1.5%	1.9%	\$19,309	\$34,205	\$48,042
Chronic obstructive pulmonary disease and bronchiectasis	1,628	1,940	2,028	1.5%	1.7%	1.8%	\$13,225	\$16,391	\$16,281
Complication of device; implant or graft	1,654	1,790	1,955	1.5%	1.6%	1.8%	\$26,858	\$37,847	\$47,837
Skin and subcutaneous tissue infections	1,551	1,993	1,898	1.4%	1.8%	1.7%	\$9,814	\$12,573	\$14,664

# F1. Top 10 Most Frequent Diagnoses for Medicare, Delaware, 2014

CCC Diagnosia	Number of	Percent of hospitalizations for this
CCS Diagnosis	Discharges	condition billed to Medicare
Septicemia (except in labor)	2,779	6.0%
Congestive heart failure; nonhypertensive	2,565	5.5%
Osteoarthritis	2,107	4.5%
Pneumonia (except that caused by tuberculosis or STD)	1,866	4.0%
Acute cerebrovascular disease	1,526	3.3%
Chronic obstructive pulmonary disease and bronchiectasis	1,517	3.3%
Acute and unspecified renal failure	1,354	2.9%
Cardiac dysrhythmias	1,343	2.9%
Rehabilitation care; fitting of prostheses; and adjustment of devices	1,196	2.6%
Urinary tract infections	1,195	2.6%

#### F2. Top 10 Most Frequent Diagnoses for Medicaid, Delaware, 2014

CCS Diagnosis	Number of	Percent of hospitalizations for this
CC3 Diagnosis	Discharges	condition billed to Medicaid
Liveborn	5,312	20.5%
Other complications of birth; puerperium affecting management of mother	804	3.1%
Other complications of pregnancy	787	3.0%
Previous C-section	665	2.6%
Asthma	596	2.3%
OB-related trauma to perineum and vulva	576	2.2%
Septicemia (except in labor)	564	2.2%
Pneumonia (except that caused by tuberculosis or STD)	504	1.9%
Diabetes mellitus with complications	486	1.9%
Skin and subcutaneous tissue infections	462	1.8%

# F3. Top 10 Most Frequent Diagnoses for Privately Insured, Delaware, 2014

CCS Diagnosis	Number of	Percent of hospitalizations for this
CC3 Diagnosis	Discharges	condition billed to Private Insurers
Liveborn	5,104	15.6%
Osteoarthritis	1,243	3.8%
OB-related trauma to perineum and vulva	897	2.7%
Other complications of birth; puerperium affecting management of mother	851	2.6%
Previous C-section	670	2.0%
Spondylosis; intervertebral disc disorders; other back problems	653	2.0%
Septicemia (except in labor)	646	2.0%
Other complications of pregnancy	635	1.9%
Skin and subcutaneous tissue infections	543	1.7%
Pneumonia (except that caused by tuberculosis or STD)	531	1.6%

#### F4. Top 10 Most Frequent Diagnoses for Uninsured, Delaware, 2014

CCS Diagnosis	Number of Discharges	Percent of hospitalizations for this condition billed to Uninsured Patients			
Liveborn	171	11.7%			
Septicemia (except in labor)	65	4.5%			
Alcohol-related disorders	51	3.5%			
Acute myocardial infarction	48	3.3%			
Diabetes mellitus with complications	42	2.9%			
Skin and subcutaneous tissue infections	41	2.8%			
Pancreatic disorders (not diabetes)	36	2.5%			
Mood disorders	36	2.5%			
Acute cerebrovascular disease	34	2.3%			
Asthma	31	2.1%			

# G1. Conditions with the Highest Number of In-Hospital Deaths by Age Group<sup>1</sup>, Delaware, 2014

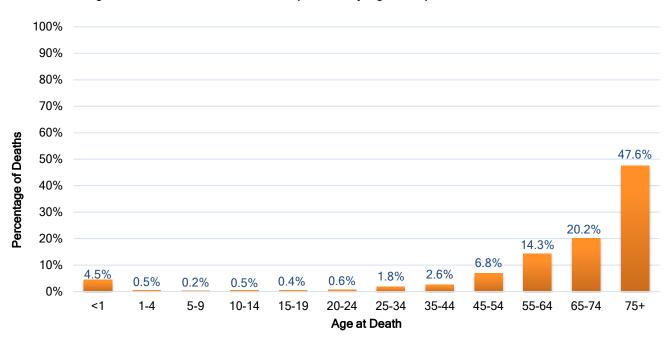
Age Group in Years					TOTAL	
Diagnosis	Under 1	1-17	18-44	45-64	65+	TOTAL
Septicemia (except in labor)	0	1	10	101	294	406
Respiratory failure; insufficiency; arrest (adult)	4	5	5	43	101	158
Acute cerebrovascular disease	0	2	3	18	88	111
Other aftercare	0	0	0	21	73	94
Acute myocardial infarction	0	0	2	17	64	83
Pneumonia (except that caused by tuberculosis or STD)	0	0	0	7	57	64
Congestive heart failure; nonhypertensive	0	0	0	4	47	51
Intracranial injury	0	1	15	9	24	49
Cardiac arrest and ventricular fibrillation	3	0	2	12	24	41
Aspiration pneumonitis; food/vomitus	0	0	1	4	30	35
Complication of device; implant or graft	0	1	2	11	20	34
Liveborn	34	0	0	0	0	34
Pulmonary heart disease	0	0	0	8	18	26
No diagnosis	17	0	0	0	7	24
Cancer of bronchus; lung	0	0	0	8	14	22
Substance-related disorders	0	1	14	3	0	18
Complications of surgical procedures or medical care	0	0	2	4	10	16
Crushing injury or internal injury	0	1	8	2	4	15
Poisoning by other medications and drugs	0	0	5	6	1	12
HIV infection	0	0	5	5	1	11
Other injuries and conditions due to external causes	1	1	3	2	4	11
Peri-; endo-; and myocarditis; cardiomyopathy (except that	0	2	1	2	5	10
Leukemias	0	2	0	2	5	9
Coma; stupor; and brain damage	0	2	1	3	2	8
Other perinatal conditions	7	0	0	0	0	7
Cardiac and circulatory congenital anomalies	6	0	0	0	0	6
Epilepsy; convulsions	0	1	0	1	4	6
Short gestation; low birth weight; and fetal growth retardation	6	0	0	0	0	6
Nervous system congenital anomalies	2	0	0	0	0	2
Other congenital anomalies	1	1	0	0	0	2
Encephalitis (except that caused by tuberculosis or STD)	0	1	0	0	0	1
Intrauterine hypoxia and birth asphyxia	1	0	0	0	0	1
All Discharges to Death	83	26	99	392	1,259	1,859

# Notes:

<sup>1.</sup> Diagnoses selected by taking the top ten diagnoses for each age group.

# APPENDIX H

# H1. Percentage of Patients who Died while Hospitalized by Age Group, Delaware, 2014



#### Methods:

Hospital discharge data is recorded in the state's uniform claims and billing database, which is maintained under contract by the University of Delaware. Pursuant to the Uniform Health Data Act (16 Del Code, C.20), Delaware hospitals must submit uniform claims and billing data each quarter. These quarterly submissions are checked for data quality and completeness, and collated into an annual file by the University of Delaware. Each annual data file is stored at the Delaware Health Statistics Center, which is responsible for all data analysis, reports, and fulfilling of data requests.

### Rate calculations and significance testing:

Hospital Discharge Rates were calculated using the Delaware Population Consortium's (DPC) October 2014 population projections, and were presented as the number of discharges per 10,000 population. Significance testing for the difference between rates was performed using the following formula:

<u>Rates</u> - When the absolute value of the following statistic is greater than 1.96, then the difference between two rates  $(R_1 - R_2)$  is considered statistically significant at the 95-percent confidence level.

$$z = \frac{\frac{R}{1} - \frac{R}{2}}{\sqrt{\left(\frac{R^{2}}{N_{1}} + \frac{R^{2}}{N_{2}}\right)}}$$

where

R<sub>1</sub> = first rate

 $R_2$  = second rate

 $N_1$  = first number of discharges

 $N_2$  = second number of discharges

<u>Percents</u> - When the absolute difference between two proportions is greater than the statistic in the formula below, the difference is considered statistically significant at the 95-percent confidence level.

$$1.96 \times \sqrt{p(-p)*} \left(\frac{1}{1} + \frac{1}{1}\right)$$
 $N_1 \quad N_2$ 

where

 $N_1$  = first denominator

 $N_1$  = second denominator

p<sub>1</sub>=the first percent

p<sub>2</sub>=the second percent

#### **Definitions:**

**Admission source** - The source of the patient's admission, e.g., emergency, another hospital, or long term care facility, which describes how the patient was admitted.

Aggregate charges - The sum of all charges for all hospital stays.

**Body System** - In this report, it represents the more generalized grouping of CCS categories that correspond with ICD-9 CM chapter headings.

Clinical Classification System (CCS) - This refers to the classification system developed at the Agency for Healthcare Research and Quality (AHRQ) used to aggregate ICD-9-CM codes into broader, homogeneous groups. In this report, the 2014 version of the single-level diagnosis classification scheme is used for both diagnoses and procedures. Because CCS codes are based on ICD-9-CM diagnoses, they can be mapped to ICD-9-CM chapter headings. Data in this report are presented by both CCS diagnoses and by ICD-9-CM chapters. For more information, see <a href="https://www.ahrq.gov/research/data/hcup/index.html">https://www.ahrq.gov/research/data/hcup/index.html</a>.

**Discharge** - A completed inpatient hospitalization. A hospitalization may be completed by death or by releasing the patient to his or her home, a long-term care facility, another hospital, or if the patient leaves against medical advice.

**Discharge Status** - The disposition of a patient at discharge from the hospital into one of the following categories:

- Home or routine discharge patient returned to previous place of residence after discharge from the hospital.
- Long-term care facility patient entered a nursing home including skilled nursing facilities, extended care facilities, custodial care facilities, or other long term care placement upon discharge from the hospital.
- Another short-term hospital patient transferred to another short-term hospital at discharge, including short-term maternity hospitals.
- Against medical advice (AMA) patient left the hospital against medical advice.
- Expired patient who died during the inpatient stay.
- Home health care patient discharge to home where care is provided by a home health care agency for the
  purpose of promoting, maintaining, or restoring health, or for minimizing the effects of disability and illness,
  including terminal illness.
- Unknown patient whose status was not entered.

**Ecodes -** Indicate the external causes of injuries and poisonings as well as the adverse effects of drugs and substances. They are intended to provide data for injury research and evaluation of injury prevention strategies. These codes capture how the injury or health condition happened (cause), the intent (unintentional or accidental; or intentional, such as suicide or assault), the place where the event occurred, the activity of the patient at the time of the event, and the person's status (e.g. civilian, military).

**Expected source of payment** - The principal expected source of payment for the hospitalization.

- Medicare The health insurance program for the aged and disabled administered by the Centers for Medicare and Medicaid Services (formerly the Health Care Financing Administration).
- Medicaid A jointly funded Federal-State health insurance program providing medical care to those unable to afford it.
- Worker's compensation A State or municipal disability insurance or industrial accident insurance.
- Private health insurance- Includes HMO/PPO. Blue Cross/Blue Shield, and other private insurance.
  - HMO/PPO Any health maintenance organization (HMO) or preferred provider organization (PPO) sponsored by consumers, communities, physicians, or hospitals.
  - Blue Cross/Blue Shield and other private A private insurance plan not specified as an HMO/PPO. This
    includes Blue Cross/Blue Shield plans, medical coverage provided by life insurance companies,
    casualty insurance companies, health insurance companies, and independent plans such as employer/
    union-sponsored plans and/or self-funded plans (partial or total).
- Self-pay The majority of the costs for the hospitalization were expected to be paid by the patient, spouse, family, or next-of-kin.

- Other government Other Federal, State, or local government other than worker's compensation, Medicare, and Medicaid not listed separately, including casualty insurance paid by the State, Federal or State medical research grant.
- No charge Patients admitted with the understanding that payment would not be expected because the medical services are free, e.g., charity patients or research or teaching patients.
- Other and not stated.

Hospital charges - The amount the hospital charged for the entire hospital stay.

International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) - The official system of assigning codes to diagnoses and procedures associated with hospital stays in the United States. The ICD-9-CM is based on and is compatible with the World Health Organization's International Classification of Diseases, Ninth Revision. ICD-9-CM is divided into 17 chapters and two supplemental classifications. Diagnoses are grouped under chapters arranged primarily by body system. In addition, there are chapters for infectious and parasitic diseases; neoplasms; endocrine, metabolic, and nutritional diseases; mental disorders; complications of pregnancy, childbirth and puerperium; certain conditions originating in the perinatal period; congenital anomalies; and symptoms, signs and ill-defined conditions. The two supplemental classifications are for factors influencing health status and contact with health services and classification of external causes of injury and poisoning. More information can be found online at: <a href="https://www.cdc.gov/nchs/icd/icd9cm.htm">https://www.cdc.gov/nchs/icd/icd9cm.htm</a>.

Length of stay - The number of nights the patient remained in the hospital for this stay.

**Liveborn** - The term for the hospitalization that results from an infant being born in the hospital, also referred to as newborn. They are identified by a specific range of ICD-9 CM codes on the discharge record. Records of infants born in the hospital are separate and distinct from the mothers' discharge records, so excluding liveborn infants does not remove the mother's discharge data from the analysis.

**Long-term care facility** - A facility that provides a specific level of personal or medical care or supervision to residents. Types of long-term care facilities include licensed nursing homes, skilled nursing facilities (SNF), intermediate care facilities (ICF), hospice medical facilities, and other health care institutions, such as institutions for those with intellectual disabilities.

**Mean length of stay** - Average length of stay for discharges. It is calculated by dividing the total number of days of care by the number of discharges.

Obstetric (OB) - The branch of care that deals with the management of pregnancy, labor, and the puerperium.

**Primary diagnosis** - The diagnosis chiefly responsible for the admission of the patient to the hospital; it is the first-listed diagnosis specified on the discharge summary of the medical record.

Procedures - Up to six procedures, the principal and five additional, may be recorded on a single hospital stay.

- Principal procedure refers to the first-listed procedure, which is the procedure performed as a specific treatment for the hospitalization, or the one most closely related to the principal diagnosis.
- All-listed procedures refers to the principal plus any secondary procedures appearing on a single discharge record/performed during a hospital stay. Because patients often receive more than one procedure, the number of all-listed procedures usually exceeds the number of discharge with procedures.

**Procedure classes** - Refers to AHRQ's HCUP classification system for procedures, which are categorized into four general categories: minor diagnostic, minor therapeutic, major diagnostic, and major therapeutic. The two minor categories are considered non-operating procedures and the two major categories are considered valid operating procedures. This report uses the 2014 version of the classification system. More information can be found at: <a href="http://www.hcup-us.ahrq.gov/toolssoftware/procedure/procedure.jsp">http://www.hcup-us.ahrq.gov/toolssoftware/procedure/procedure.jsp</a>.

**Puerperium** - The period or state of confinement after labor and giving birth.

**Rate** - A rate is a measure of an event, disease, or condition in relation to a unit of population for a specified time. For example, the five-year average discharge rate per 10,000 population is calculated as follows:

(Five-year total number of discharges / Five-year total population) \*10,000

**Short-stay Hospitals** - A short-stay hospital is one where the average length of stay is less than 30 days.

Uninsured patients - A term for those patients whose primary payer is listed as self-pay.

#### REFERENCES

CMS National Health Expenditure Data. Accessed 3/24/2006. <a href="https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/nationalHealthAccountsHistorical.html">https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/nationalHealthAccountsHistorical.html</a>

DeFrances CJ, Hall MJ, Podogornik MN. *2003 National Hospital Discharge Survey*. Advance data from vital and health statistics; no 359. Hyattsville, MD: National Center for Health Statistics. 2005.

DHSC Hospital Discharge Summary Report, 1992-2000. Division of Public Health, Delaware Health and Social Services, Jan 2002. Doc. No. 350520-020106.

Elixhauser A, Steiner C, Palmer L. Clinical Classifications Software (CCS), 2014. U.S. Agency for Healthcare Research and Quality. Available: https://www.hcup-us.ahrq.gov/toolssoftware/ccs/CCSUsersGuide.pdf

HCUPnet, Healthcare Cost and Utilization Project. Agency for Healthcare Research and Quality, Rockville, MD. http://www.ahrq.gov/HCUPnet/

Levit K, Ryan K, Elixhauser A, Stranges E, Kassed C, Coffey R. *HCUP Facts and Figures: Statistics on Hospital-based Care in the United States in 2005.* Rockville, MD: Agency for Healthcare Research and Quality, 2007. <a href="http://www.hcup-us.ahrq.gov/reports.jsp">http://www.hcup-us.ahrq.gov/reports.jsp</a>

Merrill CT, Elixhauser A. *Hospitalization in the United States, 2002.* Rockville, MD: Agency for Healthcare Research and Quality, 2005. HCUP Fact Book No. 6. AHRW Publication No. 05-0056. ISBN 1-58763-217-9.

National Center for Health Statistics. *Health, United States, 2005 with Chartbook on Trends in the Health of Americans.* Hyattsville, Maryland: 2005.

National Center for Health Statistics. *National Trends in Injury Hospitalizations 1979-2001*. Hyattsville, Maryland: 2005. https://www.cdc.gov/nchs/injury/injury\_chartbook.htm

The National Health Expenditure Accounts (NHEA). <a href="https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/nationalHealthAccountsHistorical.html">https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/nationalHealthAccountsHistorical.html</a>

Owens P, Myers M, Elixhauser A, Brach C. *Care of Adults With Mental Health and Substance Abuse Disorders in U.S. Community Hospitals*, 2004. Agency for Healthcare Research and Quality, 2007. HCUP Fact Book No.10. AHRQ Publication No.0 7-0008.I SBN 1-58763-229-2.

The National Association of Health Data Organizations. 2005. *Public Health Data Dissemination Guidelines: NAHDO Working Technical Paper Series.*https://www.nahdo.org/data\_resources/data\_dissemination