
DELWARE HOSPITAL
DISCHARGE SUMMARY
REPORT ■ 2007



DELAWARE HEALTH AND SOCIAL SERVICES

Division of Public Health

Acknowledgments

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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 2007 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 upon 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: A.I. duPont, St. Francis, Christiana Care Health System (which consists of Wilmington and Christiana Care), Bayhealth Medical Center (which consists of Kent General and Milford), Beebe, and Nanticoke¹.

More information on how annual files are created, as well as definitions of terms used in this report, can be found in the Technical Notes.

Maps displaying patient distribution and hospital location are located in the Maps section.

Key findings:

- There were 100,681 discharges from acute care hospitals in Delaware in 2001. By 2007, that had increased by 16.2 percent to 117,034 discharges. During the same time, aggregate charges more than doubled, from \$1.09 billion to \$2.27 billion.
- Six diagnoses accounted for one-fifth of the total billed charges in 2007: coronary atherosclerosis and other heart disease, osteoarthritis, acute myocardial infarction (heart attack), congestive heart failure, septicemia, and respiratory failure.
- In 2007, the average length of stay was 4.8 days and the mean charge for a hospitalization was \$19,375.
- The most frequent reasons for hospitalization fell under the category of diseases of the circulatory system, and included congestive heart failure, coronary atherosclerosis (coronary artery disease), and cardiac dysrhythmias (irregular heart beat).
- Admissions from the emergency department (ED) accounted for 53 percent of all hospital admissions in 2007; 44 percent came from physicians, and the remaining 3 percent were admitted from clinics, HMOs, or transferred from other facilities.
- Thirteen percent of all discharges from Delaware hospitals were non-residents, most of which came from Pennsylvania, Maryland, and New Jersey.

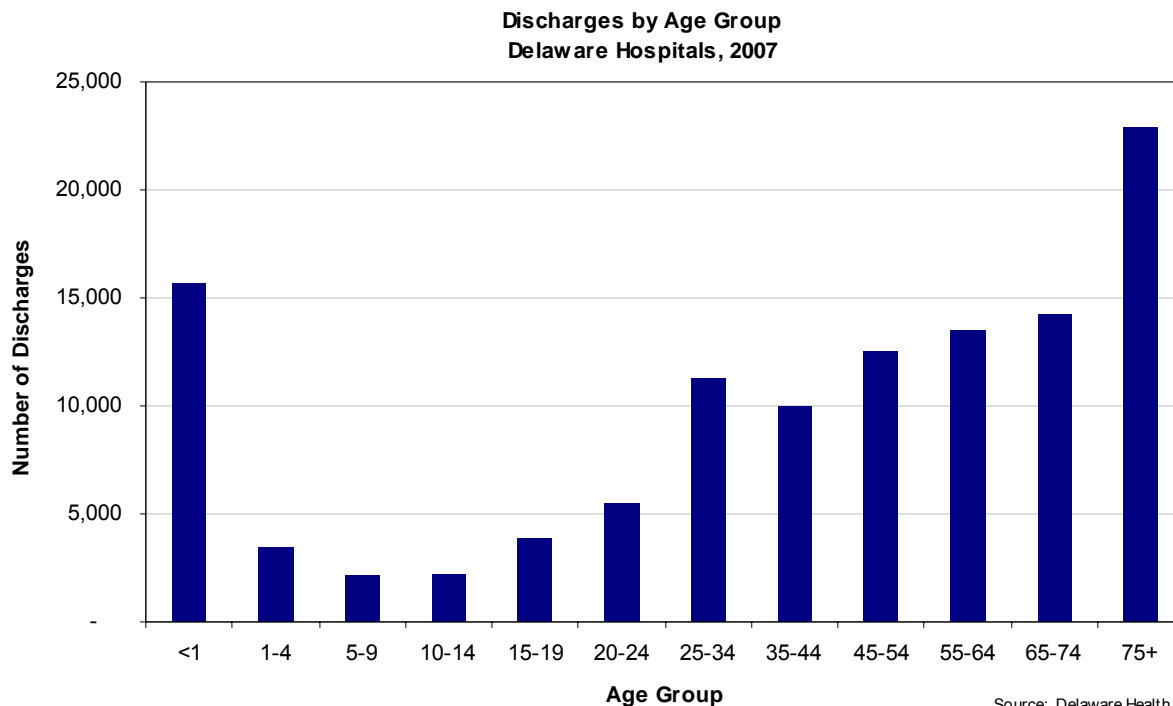
¹See the Hospital Profiles at the end of this report for details about each of Delaware's acute care hospitals.

EXECUTIVE SUMMARY

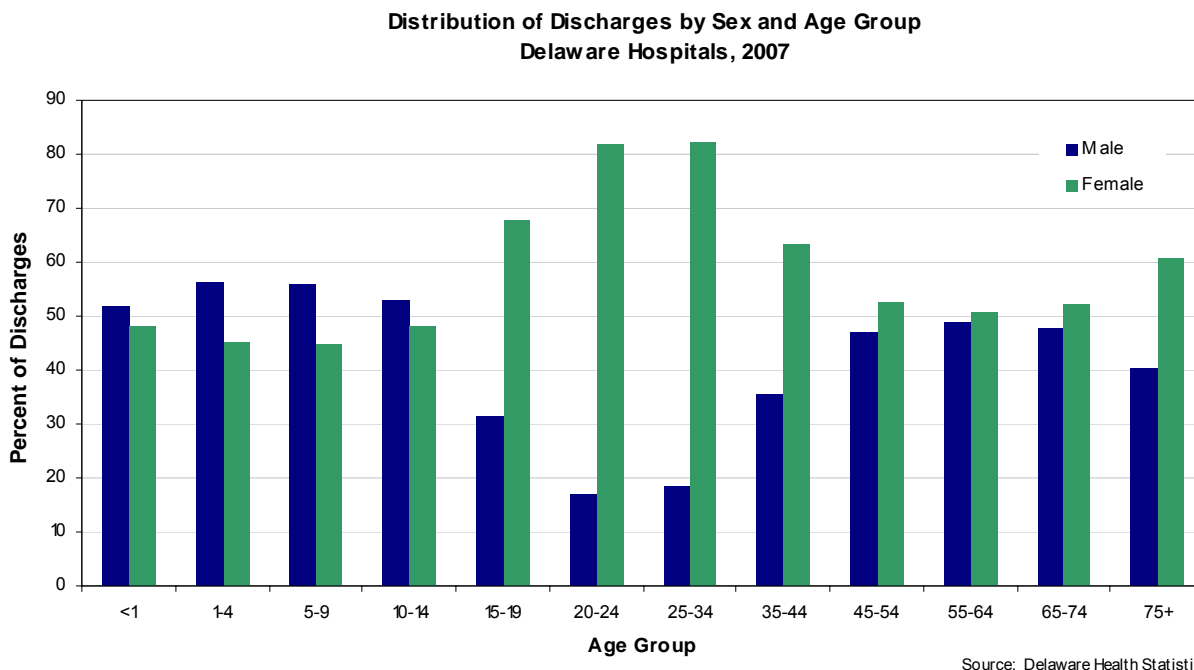
- Hospital stays for liveborn infants varied by type of delivery and plurality.
 - The average length of stay (ALOS) for infants delivered by cesarean section was 3.6 days, versus 2.3 days for infants delivered vaginally, and
 - The ALOS for infants who were part of a plural birth was more than three times that of singleton births (11 days versus 3 days).
- Women accounted for 58.4 percent of all discharges. In the 20 to 34 year age group, four out of every five discharges were women.
- The three most frequently performed principal procedures were related to pregnancy and childbirth; together, they accounted for 16 percent of all principal procedures.
- Patients who were uninsured were more frequently admitted through the ED than any other route; 74.3 percent of uninsured patients were admitted through the ED in 2007, a proportion that has increased 20 percent since 1995.
- Medicare and private insurers were the primary payers in 37 and 35 percent of all hospital discharges in 2007. Medicaid was the primary payer in 23 percent of all hospital stays, and uninsured hospitalizations accounted for 3 percent of the total stays. The remaining 2 percent of hospitalizations were covered by other programs or were unknown.

PATIENT CHARACTERISTICS

Patients under 1 accounted for almost 13 percent of all discharges in 2007; the majority of these discharges were infants hospitalized by virtue of being born in the hospital. Patients 65 and older were responsible for 32 percent of all discharges in 2007.



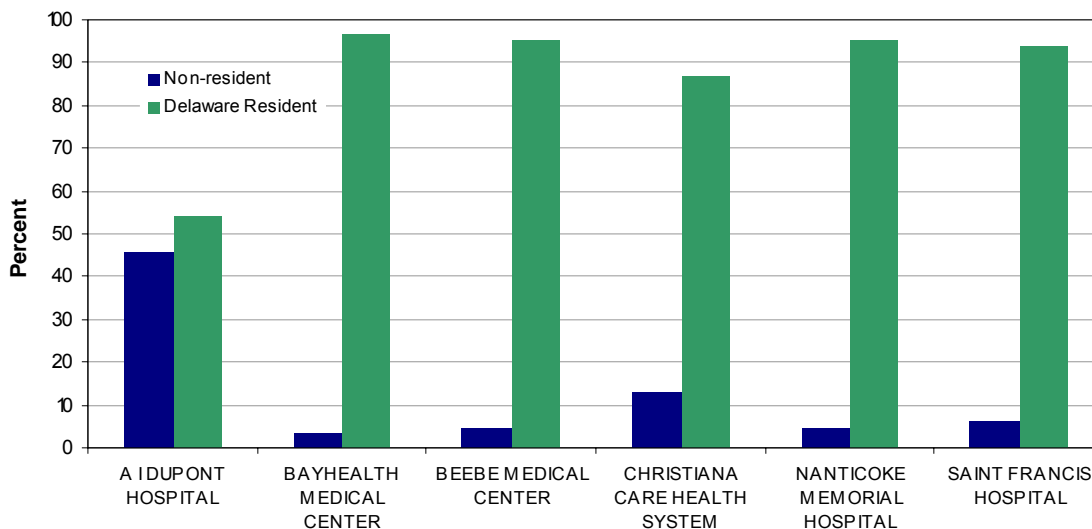
Males made up the majority of discharges in the age groups under 15. For those age groups 15 and higher, females made up the majority of discharges, and in the 20 to 34 year age range, four out of every five discharges were women. In 2007, 58.4 percent of all discharges were women.



PATIENT CHARACTERISTICS

Thirteen percent of all discharges from Delaware hospitals were non-residents, most of whom came from Pennsylvania, Maryland, and New Jersey. With nearly half of their patients coming from out-of-state, A.I. duPont hospital had the largest proportion of non-resident patients.

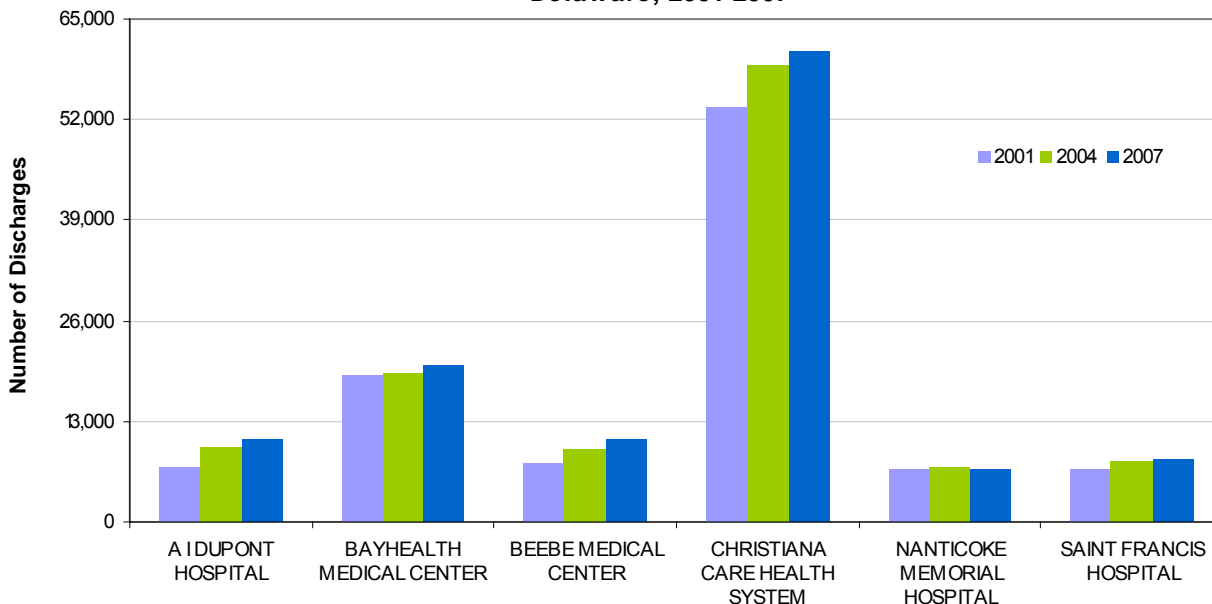
**Percent of Total Discharges by Residency and Hospital System
Delaware, 2007**



Source: Delaware Health Statistics Center

While Christiana Care had the greatest number of discharges, Al DuPont experienced the largest proportional increase; the number of patients discharged from Al DuPont rose by 51 percent from 2001 to 2007. During the same time, discharges from Beebe increased by 39 percent. Nanticoke was the only hospital to have fewer discharges in 2007 than in 2001.

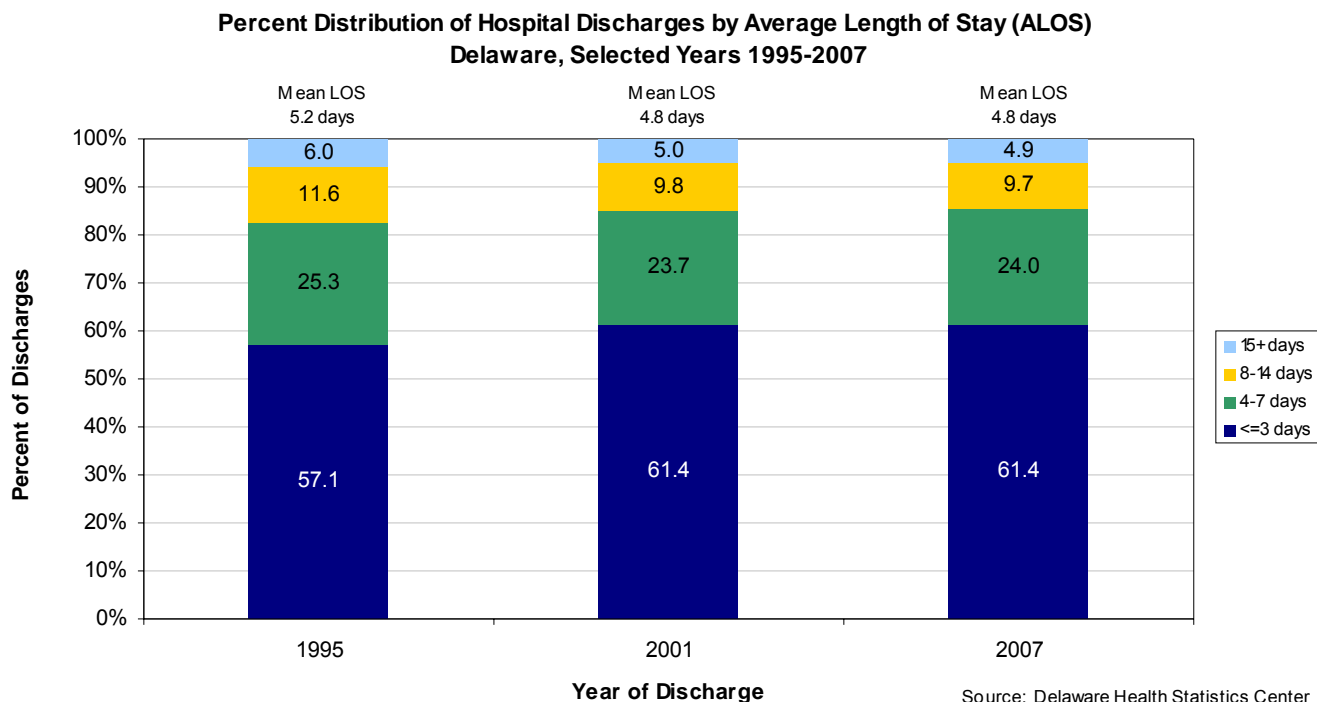
**Number of Discharges by Hospital System and Year of Discharge
Delaware, 2001-2007**



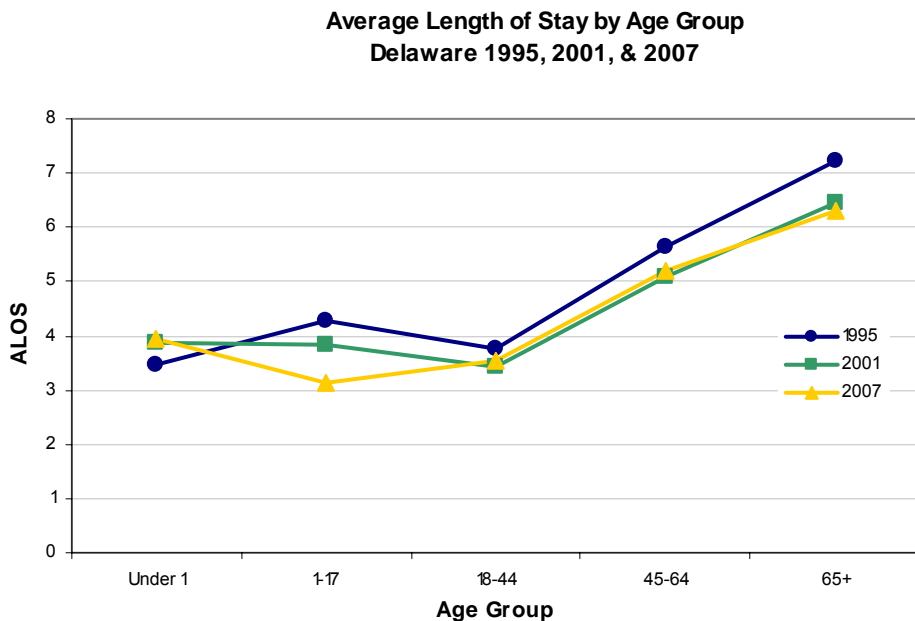
Source: Delaware Health Statistics

PATIENT CHARACTERISTICS

Between 1995 and 2007, distribution in ALOS shifted toward shorter hospital stays; as the ALOS decreased, the percent of patients staying three or fewer days increased. In 2007, 61.4 percent of hospitalizations were three days or less, 24 percent were 4-7 days, 9.7 percent were 8-14 days, and 5 percent were 15 days or more.



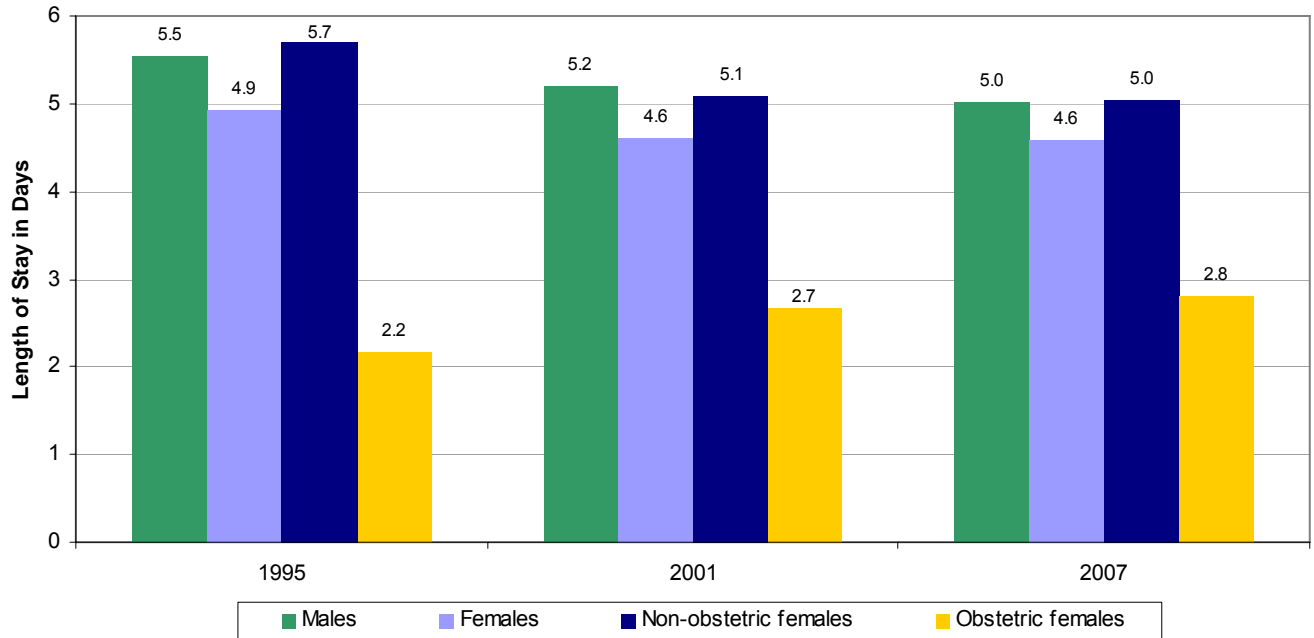
For those ages 1 and higher, the ALOS in 2007 increased linearly with each increase in age group, rising from 3.1 days for those ages 1-17, to 6.3 days for those 65 and older. Patients under 1 had an ALOS of 4 days. With the exception of the under 1 age group, ALOS decreased for all groups from 1995 to 2007.



PATIENT CHARACTERISTICS

Though male and female patients experienced similar decreases in ALOS from 1995 and 2007, there was little change from 2001 to 2007. When female obstetrical patients were excluded from the calculation of average length of stay, male and female patients had very similar ALOS figures in all time periods. Surprisingly, the only increase in ALOS from 1995 to 2007 was seen in female obstetrical patients.

**Mean Length of Stay by Patient Type
Delaware Hospitals, 1995-2007**



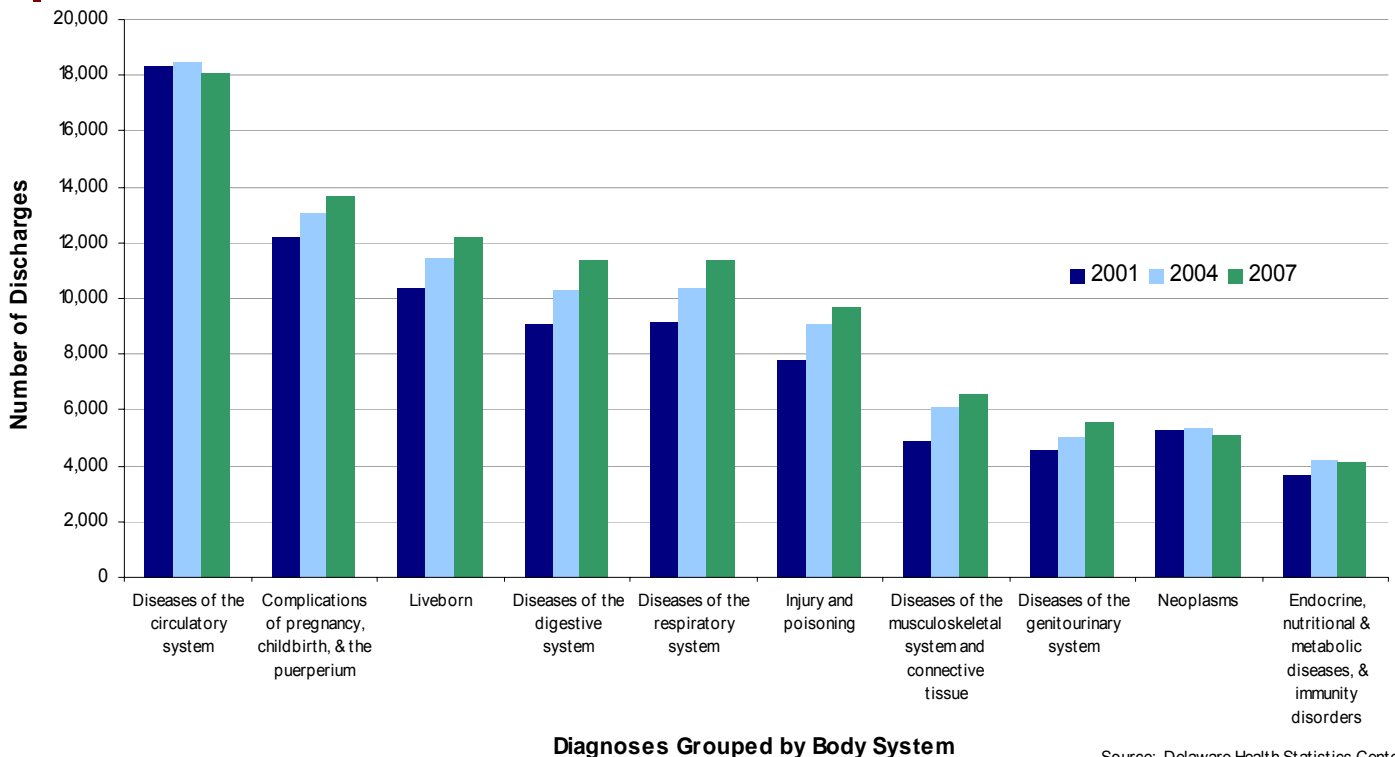
Source: Delaware Health Statistics Center

WHY PATIENTS WERE HOSPITALIZED

Most frequent reasons for hospitalization by primary diagnosis and body system²:

In 2007, diseases of the circulatory system accounted for 15 percent of the total discharges and represented the most common reasons for hospitalization; some of the most common diagnoses in that category were congestive heart failure, coronary atherosclerosis, irregular heart beat, nonspecific chest pain, heart attack, and stroke. Pregnancy and childbirth comprised 12 percent of the total discharges, and 10 percent of all discharges were related to diseases of the respiratory system, which included pneumonia, chronic obstructive pulmonary disease, and asthma. Together, these three categories accounted for 37 percent of all hospitalizations.

Number of Discharges by Body System and Discharge Year
Delaware Hospitals, 2001-2007



Source: Delaware Health Statistics Center

Although hospitalizations due to infections and parasitic diseases did not occur frequently enough for them to appear in the graph above, the largest percent increase (80.6) in hospitalizations from 2001 to 2007 occurred in that category. This increase was driven primarily by a rise in the number of septicemia hospitalizations, which made up 67 percent of all hospitalizations for infections and parasitic diseases in 2007. Diseases of the skin and subcutaneous tissue also demonstrated a large percentage increase (77.2) from 2001 to 2007, and at 61.3 percent, the third largest increase in hospitalizations was due to diseases of the nervous system and sense organs.

² See Appendix A for details about the primary diagnoses and body system classifications.

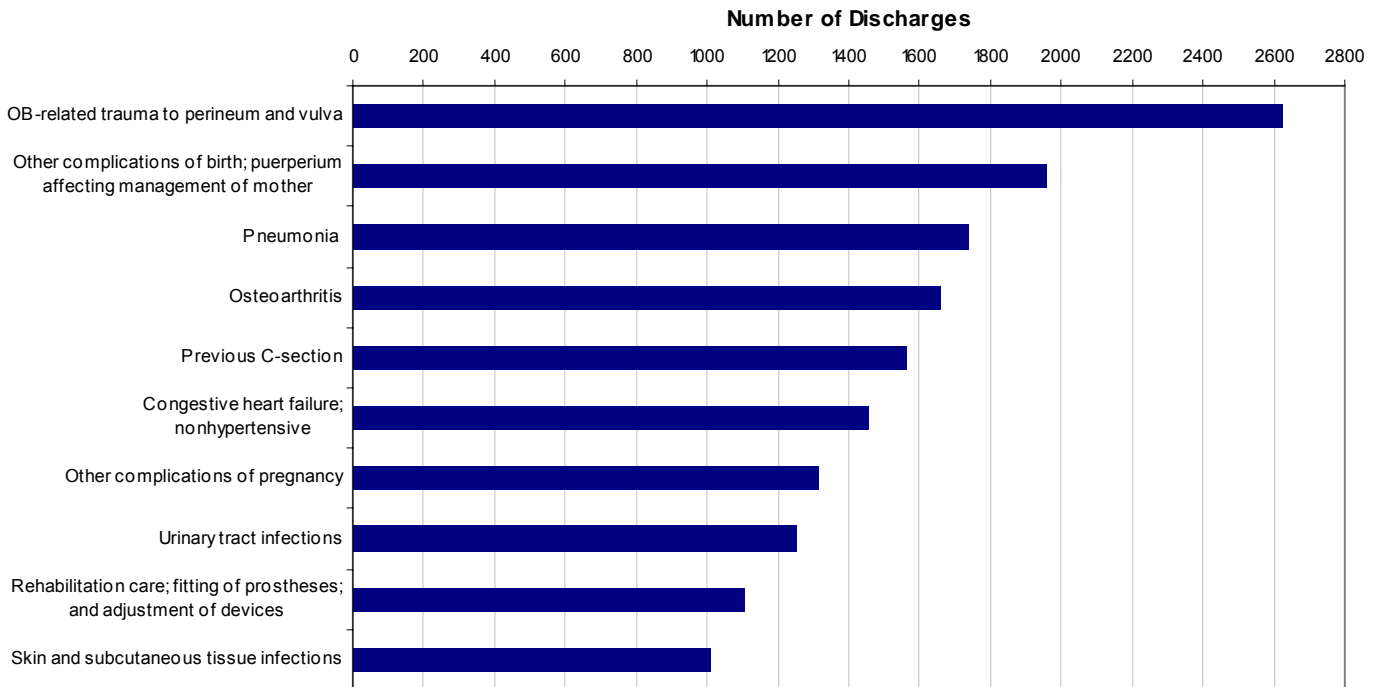
WHY PATIENTS WERE HOSPITALIZED

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

The three most frequent reasons for hospitalizations were very similar when looking at discharges by body system and gender. Both males and females had diseases of the circulatory system and diseases of the digestive system in their three most frequent reasons for hospitalization, however those two categories were ranked first and third for men while they were second and third, behind pregnancy and childbirth, for women.

Specific diagnoses varied by sex, though much of that was a result of the large number of women hospitalized due to pregnancy and delivery related conditions; 4 out the top 10 diagnoses for women were related to pregnancy and childbirth. Both men and women experienced high numbers of discharges due to pneumonia, congestive heart failure, osteoarthritis, and skin and subcutaneous tissue infections. The following two graphs show the 10 most frequent diagnoses for both men and women.

**Top 10 Principal Diagnoses (CCS Defined) for Female Hospitalizations
Delaware, 2007**

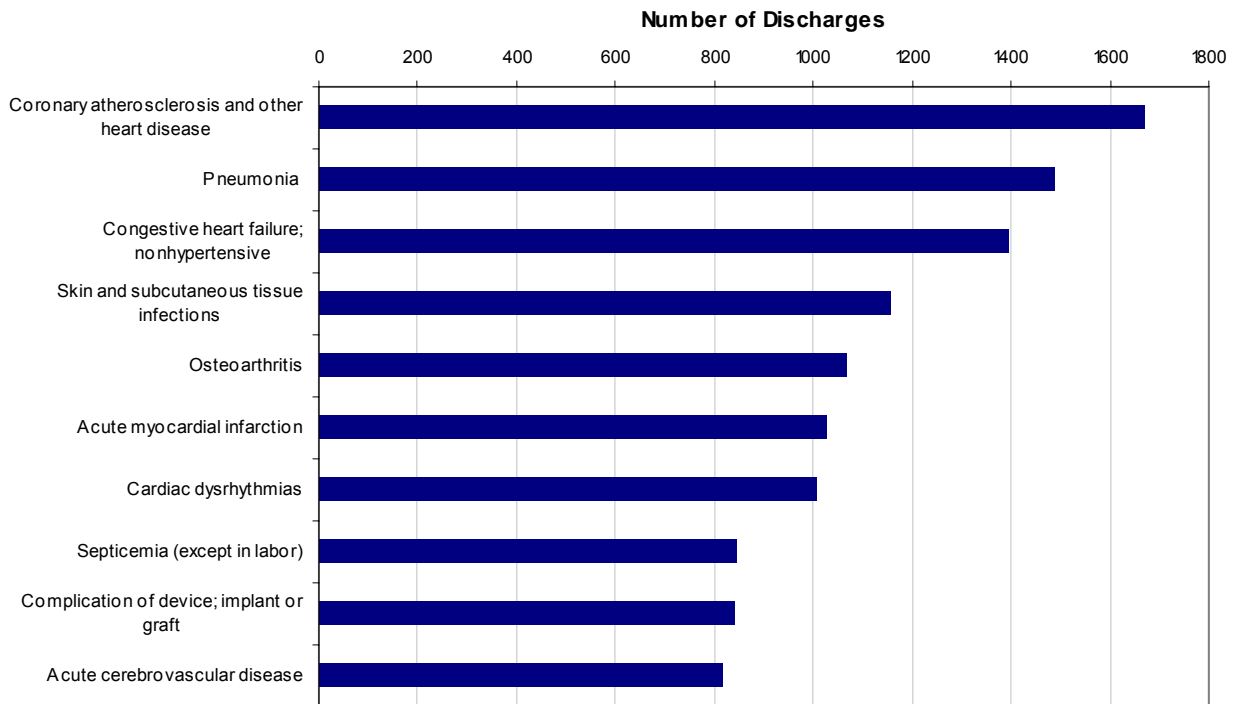


*Excluding liveborn infants.

Source: Delaware Health Statistics Center

WHY PATIENTS WERE HOSPITALIZED

**Top 10 Principal Diagnoses* (CCS defined) for Male Hospitalizations
Delaware, 2007**



*Excluding liveborn infants.

Source: Delaware Health Statistics Center

Most frequent reasons for hospitalization by age groups:

Though the most common reasons for hospitalization differed by age, pneumonia appeared in the 10 most frequent diagnoses for all five age groups, and skin and subcutaneous tissue infections were present in three of the five age groups (when pregnancy and childbirth were excluded from the 18-44 age group).

- Excluding liveborn infants, patients under 1 were hospitalized most often for bronchitis, other perinatal conditions (including respiratory conditions, infections, and conditions involving temperature regulation), and hemolytic and perinatal jaundice.
- For those ages 1 to 17, asthma, pneumonia, and skin and subcutaneous tissue infections made up the top three diagnoses.
- For those ages 18 to 44, 9 of the top 10 diagnoses were associated with pregnancy and childbirth. If pregnancy and childbirth were excluded, mood disorders, skin and subcutaneous tissue infections, and diabetes became the three most common reasons for hospitalization.
- For those ages 45 to 64, coronary atherosclerosis and other heart disease, osteoarthritis, and nonspecific chest pain comprised the top three diagnoses.
- For those over 65, congestive heart failure, pneumonia, and osteoarthritis were the top three diagnoses.

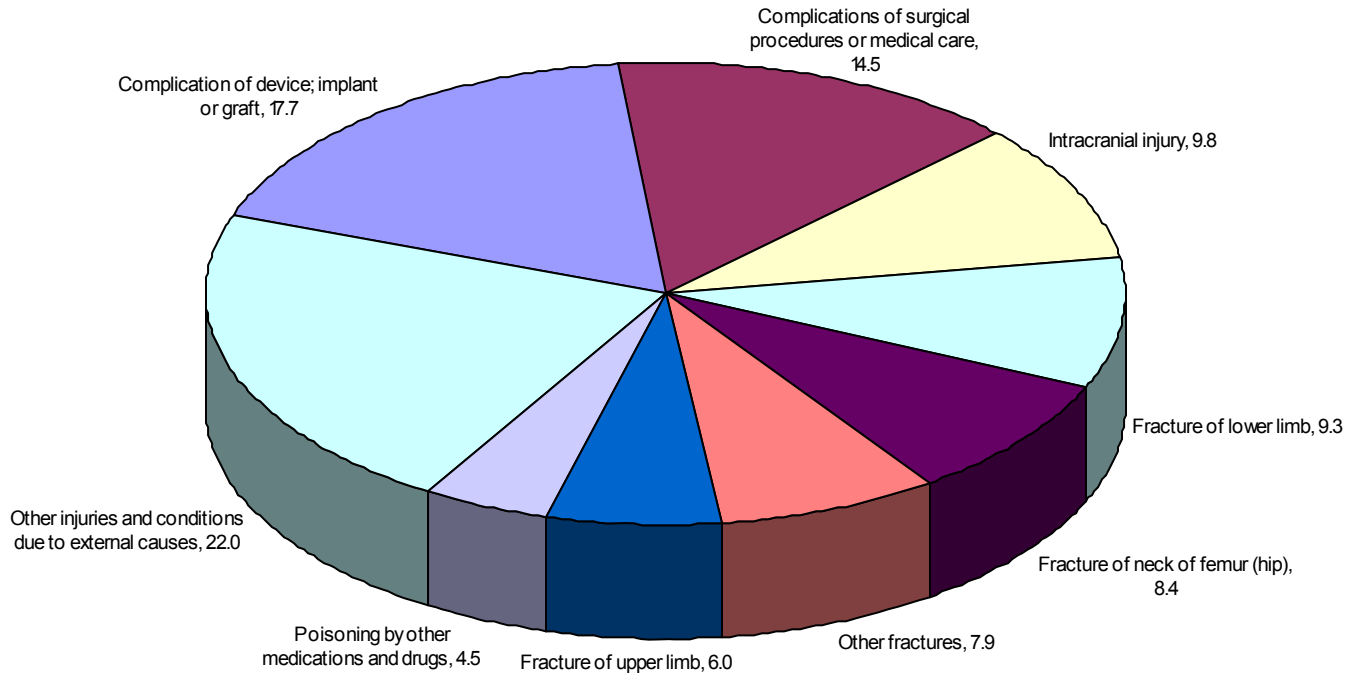
WHY PATIENTS WERE HOSPITALIZED—INJURIES

Injury hospitalizations:

Injury hospitalizations accounted for 8.3 percent of the total number of discharges and \$226 million in aggregate charges in 2007. The majority of patients were admitted through the emergency department (ED) and the average charge for an injury stay ranged from \$11,032 for sprains and strains to \$65,596 for spinal cord injuries, with an overall average charge of \$23,342 (see Appendix A).

The most common primary diagnosis for an injury hospitalization in 2007 was complication of device, implant, or graft, which accounted for 18 percent of injury hospitalizations. Complications of surgical procedures or medical care were responsible for another 14.5 percent of injury hospitalizations, followed by intracranial injury, lower limb fractures, and hip fractures.

**Most Frequent Injury Diagnoses
Delaware Hospitals, 2007**



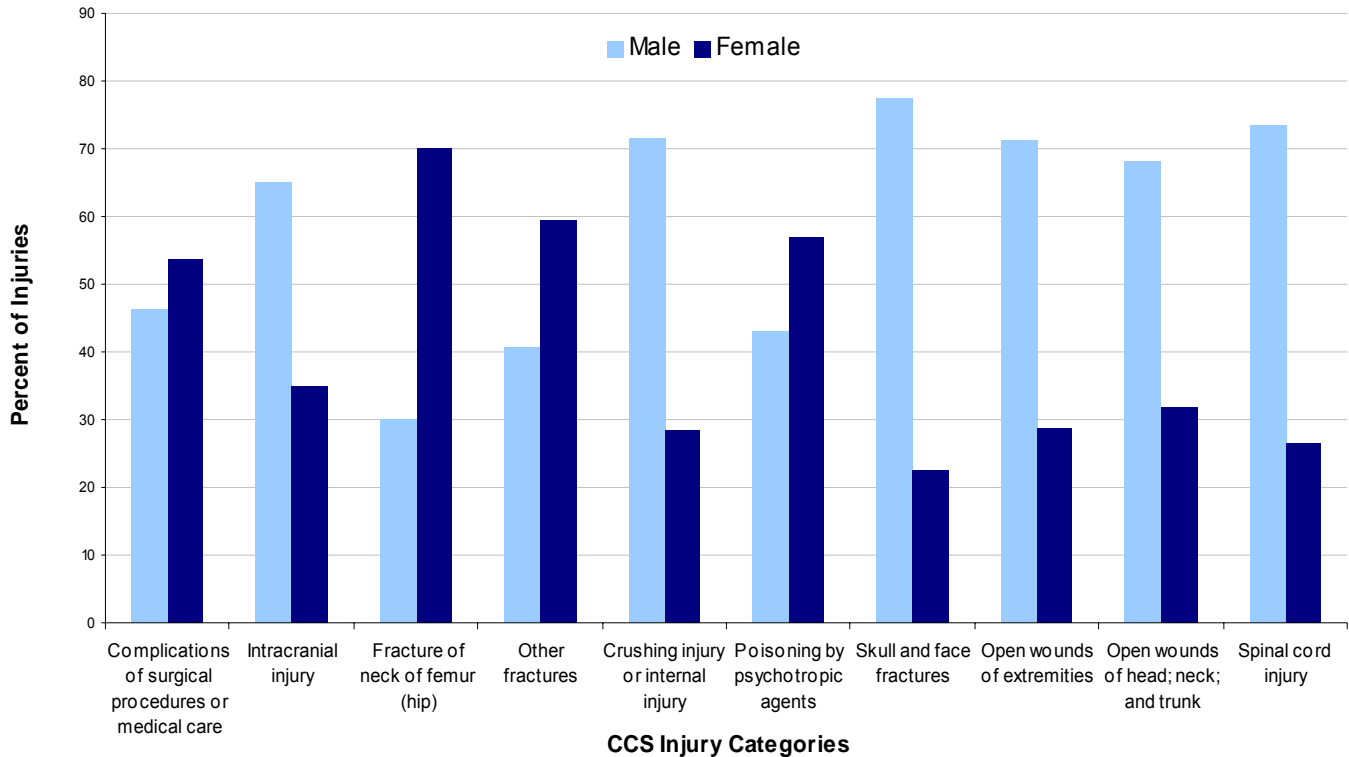
Source: Delaware Health Statistics Center

Falls were most often specified as the external cause of injury (as defined by the Ecode listed on the discharge record); they accounted for 90 percent of hip fractures, 53 percent of lower limb fractures, 46 percent of intracranial injuries, and 43 percent of spinal cord injuries. Motor vehicle accidents were responsible for 30 percent of intracranial injuries and 37 percent of spinal cord injuries. One in 10 intracranial injuries were due to being struck.

WHY PATIENTS WERE HOSPITALIZED—INJURIES

The number of injury hospitalizations was split almost equally between males and females, though the distribution was not the same for all injuries. Women were more likely to have been hospitalized for hip fractures, complications of surgical procedures or medical care, and poisoning by psychotropic agents (these include drugs used to treat depression, anxiety, and attention deficit disorder). Men were more likely to have been hospitalized for spinal cord, intracranial, crushing or internal injuries, skull fractures, and open wounds.

**Selected Primary Diagnoses for Injury Hospitalizations by Gender
Delaware Hospitals, 2007**



Source: Delaware Health Statistics Center

WHY PATIENTS WERE HOSPITALIZED -PROCEDURES

Most frequent reasons for hospitalization by procedure:

In 2007, 75 percent of discharges had at least one associated procedure. Of the 87,234 hospital stays with an accompanying procedure, 32 percent had only a principal procedure performed; the remaining 68 percent had 2 or more procedures.

According to the CCS procedure classification system, procedures can be grouped into four broad classes: minor therapeutic, minor diagnostic, major therapeutic, and major diagnostic⁴. Major therapeutic and major diagnostic procedures are considered valid operating room procedures. Fewer than one-half of all principal procedures (42 percent) were valid operating room procedures; 58 percent were minor diagnostic and therapeutic procedures, such as CT scans, ultrasounds, and injections.

The three most frequently performed principal procedures were related to pregnancy and childbirth; together, other procedures to assist delivery, circumcisions, and cesarean sections accounted for 16 percent of all principal procedures.

Most Frequently Performed Principal Procedures by Selected Characteristics, 2007

CCS Procedure	ALOS	Average Charges	Average Age	% of Discharges		Number Discharges
				Male	Female	
Other procedures to assist delivery	2.3	\$ 5,330	27	0.0	100.0	5676
Circumcision	3.0	\$ 4,353	0	100.0	0.0	4648
Cesarean section	3.6	\$ 10,303	29	0.0	100.0	3910
Computerized axial tomography (CT) scan head	4.1	\$ 10,818	62	46.6	53.4	2648
Respiratory intubation and mechanical ventilation	10.4	\$ 43,767	47	48.9	51.1	2611
Upper gastrointestinal endoscopy; biopsy	5.5	\$ 17,715	58	41.7	58.3	2187
Arthroplasty knee	3.2	\$ 29,064	65	37.7	62.3	2138
Percutaneous transluminal coronary angioplasty (PTCA)	2.9	\$ 40,234	64	64.1	35.9	2029
Prophylactic vaccinations and inoculations	2.3	\$ 2,166	0	24.4	75.6	2020
Diagnostic ultrasound of heart (echocardiogram)	4.8	\$ 15,303	67	43.9	56.1	1915
Diagnostic cardiac catheterization; coronary arteriography	3.9	\$ 23,737	60	51.1	48.9	1707
CT scan abdomen	3.8	\$ 9,825	54	40.0	60.0	1571
Repair of current obstetric laceration	2.3	\$ 5,634	26	0.0	100.0	1554
Other vascular catheterization; not heart	8.7	\$ 30,855	56	40.9	59.1	1434
Blood transfusion	5.8	\$ 21,933	59	46.4	53.6	1342

Note: Principal procedure refers to the first-listed procedure performed as a specific treatment for the hospitalization, or the one most closely related to the principal diagnosis; excludes unspecified minor diagnostic and therapeutic procedures.

Source: Delaware Health Statistics Center

Though many of the most frequently performed principal procedures remained the same from 2005 to 2007, including the top three, there were notable changes; ultrasounds and CT scans became some of the most frequently performed procedures and caused procedures such as appendectomies, cholecystectomies (surgical removal of gallbladder), and hip replacements to drop from the list. A 12 percent decrease in the number of hysterectomies performed prevented its being listed in the 15 most common procedures.

As women accounted for 58 percent of all hospitalizations in 2007, it is not surprising that 3 of the 15 most commonly performed procedures were performed exclusively on women, all 3 were obstetric procedures.

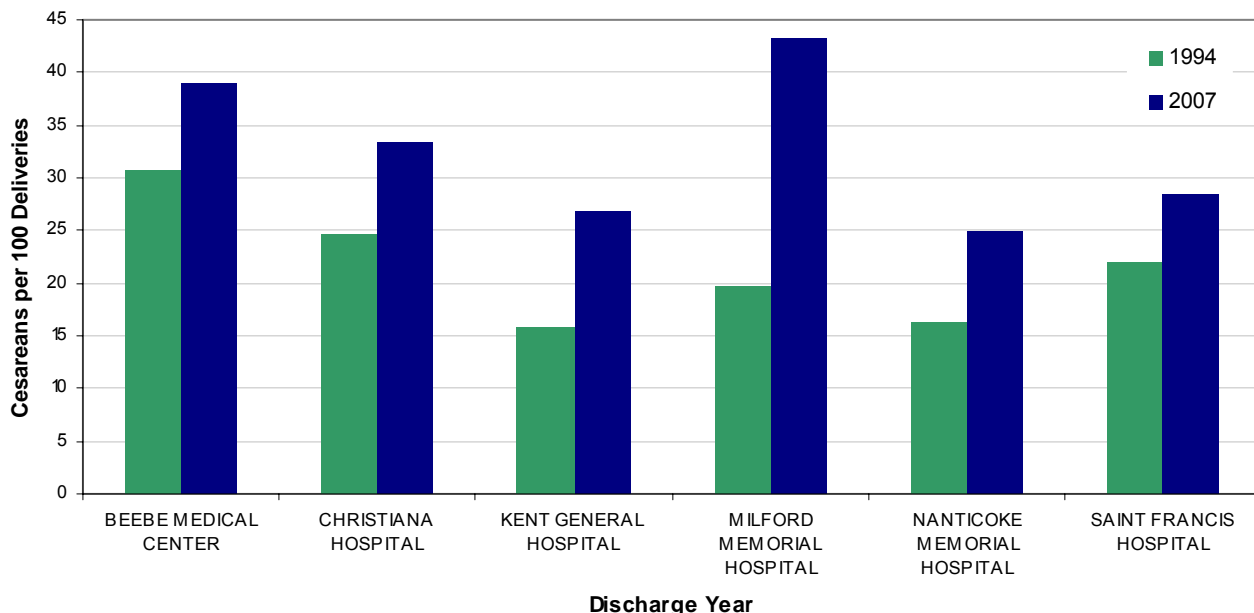
Patients undergoing obstetric procedures had a shorter than average length of stay (2.7 days), were younger (27 years of age), and had lower average charges associated with their stays than the average patient.

⁴ See the definition of Procedure Classes in the Definitions section of the Technical Notes.

WHY PATIENTS WERE HOSPITALIZED—PROCEDURES

A major component of obstetrical procedures are related to cesarean delivery of newborn infants. Since 1994, annual cesarean delivery rates increased for every hospital in Delaware; by 2007, 32 of every 100 deliveries were cesarean. Milford, Kent, and Nanticoke hospitals showed the greatest increases, at 118, 69, and 53 percent respectively. In 2007 Milford and Beebe had the highest rates, at 43.3 and 38.9 cesareans per 100 deliveries.

**Annual Cesarean Delivery Rates by Hospital
Delaware Hospitals, 1994 and 2007**



Source: Delaware Health Statistics Center

Gender

In 2007, obstetrical procedures accounted for nearly one in four principal procedures performed on females, and included other procedures to assist delivery, cesarean sections, repair of current obstetrical laceration, and forceps; vacuum; and breech delivery.

Operations on the cardiovascular system accounted for 16 percent of the principal procedures performed on males, and included percutaneous transluminal coronary angioplasty (PTCA), diagnostic cardiac catheterization, and insertion, replacement, or removal of cardiac pacemaker. Circumcision was the procedure most frequently performed on males.

The following procedures were present in the 10 most commonly performed procedures for both males and females:

- respiratory intubation and mechanical ventilation,
- CT scan,
- upper gastrointestinal endoscopy; biopsy,
- arthroplasty knee, and
- echocardiogram.

WHY PATIENTS WERE HOSPITALIZED—PROCEDURES

Age

- Circumcision was the most commonly performed procedure for patients under 1, followed by prophylactic vaccinations and inoculations, and respiratory intubation and mechanical ventilation.
- For patients ages 1 to 17, appendectomy, tonsillectomy and/or adenoidectomy, and cancer chemotherapy were the most frequent principal procedures.
- Obstetric procedures, specifically other procedures to assist delivery, cesarean section, and repair of current laceration, were the most common procedures for those ages 18-44.
- PTCA, knee arthroplasty, and diagnostic cardiac catheterization were the most frequently performed procedures for those 45-64.
- The most commonly performed principal procedures on patients 65 and older were CT scans, echocardiograms, and knee arthroplasties.

Average Length of Stay

The principal procedures associated with the longest hospital stays were tracheostomy (49 days), other organ transplantation (40 days), and extracorporeal circulation auxiliary to open heart procedures (30 days). Because length of stay is closely related to the total charges incurred for a hospital stay, it is not surprising that these same procedures were also associated with the highest average charges, though other organ transplantation and extracorporeal circulation had average total charges more than one and a half times that of tracheostomy (\$492,826 and \$432,707 versus \$255,248).

In-hospital Mortality

Patients who underwent the following principal procedures during their hospital stay had the highest proportions of in-hospital mortality⁵:

- Extracorporeal circulation auxiliary to open heart procedures - 56 percent expired
- Other organ transplantation - 25 percent expired
- Swan-Ganz catheterization for monitoring - 25 percent expired
- Exploratory laparotomy - 25 percent expired

By itself, having one of the above procedures does not indicate a higher risk of mortality, but its presence on the discharge may be an indicator of severely ill patients and/or the employment of end-of-life care, both of which have a higher risk of mortality.

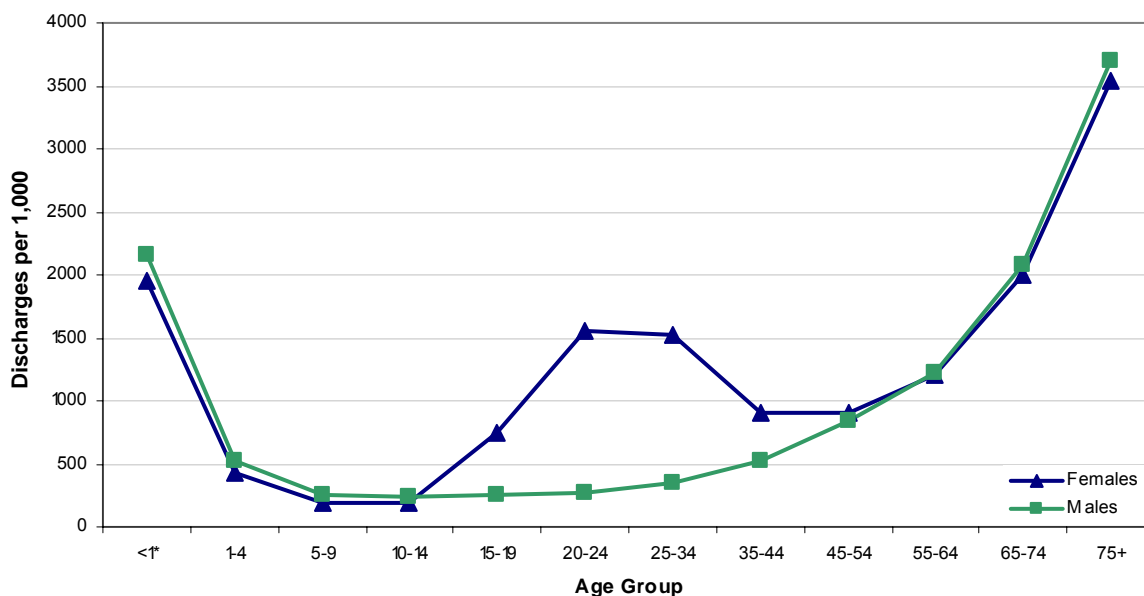
⁵Principal procedures with fewer than 5 occurrences were excluded from the calculations, as a result, intraoperative cholangiogram was not included in the list.

HOSPITALIZATIONS OF DELAWARE RESIDENTS

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 75 and older. Discharge rates decreased with each increase in age group between those patients under 1 and those ages 10-14; the trend reversed at the 15-19 age group and other than a slight dip in the rates for those 35-54, 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 1.8 to 5.8 times that of males.

**Resident Discharge Rates* by Sex and Age
Delaware Hospitals, 2007**

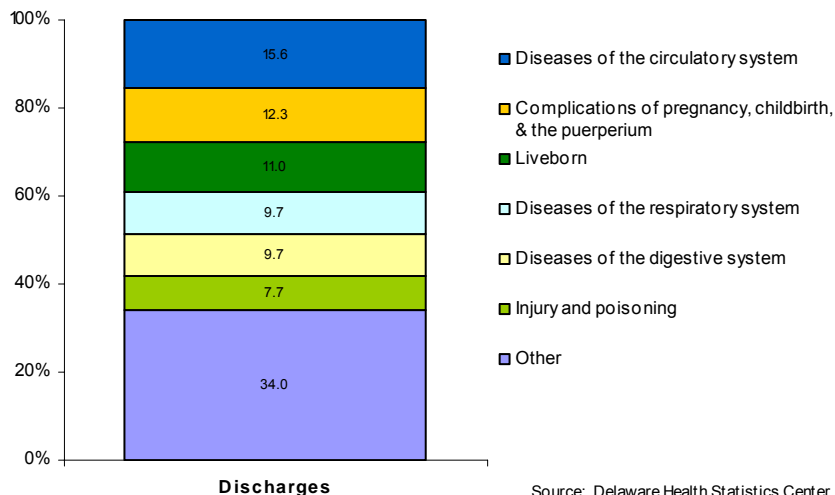


*This rate excludes all infants <1 who were admitted by virtue of being born in the hospital.

Source: Delaware Health Statistics Center

In 2007, Delawareans were discharged most frequently for diseases of the circulatory system, which accounted for 15.6 percent of all resident hospital stays. The most common diagnoses for diseases of the circulatory system included heart failure, coronary artery disease, and irregular heart beat. 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, which included pneumonia, COPD (chronic obstructive pulmonary disease), and asthma, and diseases of the digestive systems, which included biliary tract disease, diverticulosis, and intestinal obstruction.

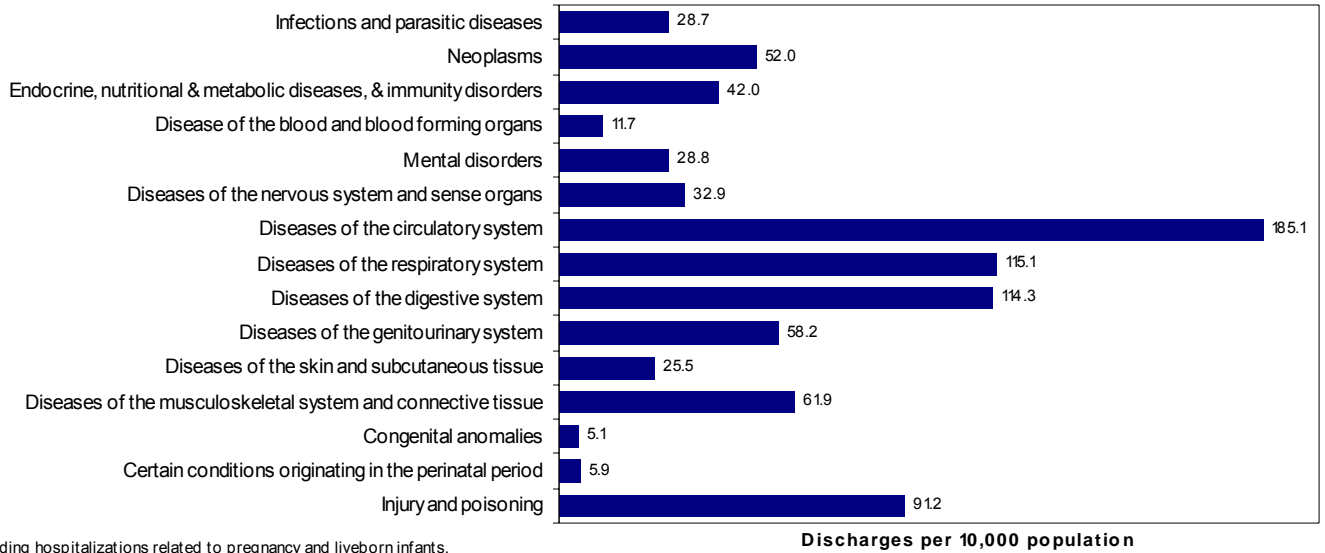
**Percent Distribution of Resident Discharges for Hospitalizations by
Body System
Delaware Hospitals, 2007**



Source: Delaware Health Statistics Center

HOSPITALIZATIONS OF DELAWARE RESIDENTS

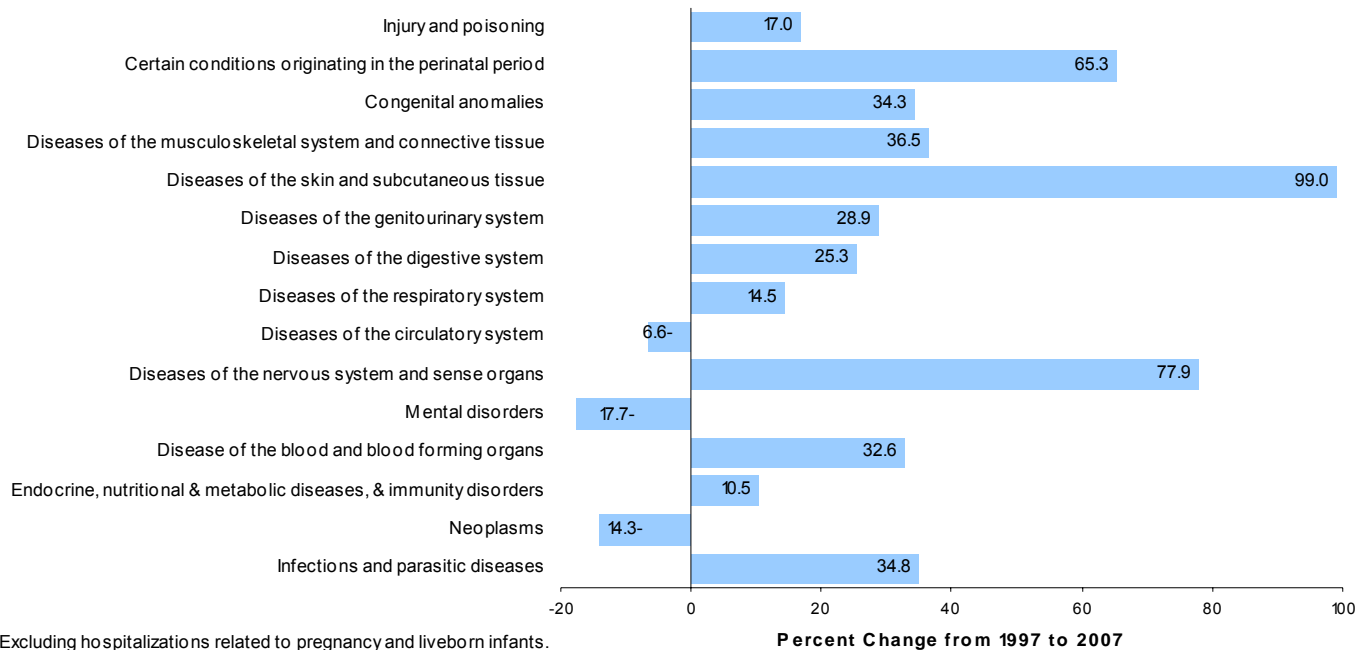
**Hospitalization Rates by Body System*
Delaware Residents, 2007**



*Excluding hospitalizations related to pregnancy and liveborn infants.
Source: Delaware Health Statistics Center

The types of discharges by body system with the highest hospitalization rates in 2007 were not the same as those that showed the greatest increase from 1997 to 2007. From 1997 to 2007, the discharge rate for diseases of the skin and subcutaneous tissue showed the largest percent growth, doubling from an annual discharge rate of 12.8 in 1997 to 25.5 in 2007. Hospitalization rates due to diseases of the nervous system and sense organs (which include ear infections, headaches, and migraines) rose by 78 percent, and perinatal conditions rose by 65 percent.

**Percent Change in Hospitalization Rates by Body System*
Delaware Residents, 1997 versus 2007**



*Excluding hospitalizations related to pregnancy and liveborn infants.
Source: Delaware Health Statistics Center

HOSPITALIZATIONS OF DELAWARE RESIDENTS

When the specific diagnoses that comprise each body system were examined, the following twenty principal diagnoses had the highest discharge rates of Delaware residents in 2007.

Top 20 CCS Diagnoses with the Highest Hospital Discharge Rates* for Delaware Residents

CCS Diagnosis	1997		2002		2007		% Difference from 1997 to 2007
	Number	Rate	Number	Rate	Number	Rate	
Pneumonia (except that caused by tuberculosis or STD)	2705	36.0	2831	35.1	2869	33.2	-7.7
Congestive heart failure; nonhypertensive	2415	32.1	2748	34.1	2650	30.7	-4.5
Osteoarthritis	977	13.0	1507	18.7	2406	27.9	114.2
Coronary atherosclerosis and other heart disease	2483	33.0	1944	24.1	2240	25.9	-21.5
Skin and subcutaneous tissue infections	778	10.4	1123	13.9	1895	21.9	111.9
Rehabilitation care; fitting of prostheses; and adjustment of devices	1717	22.8	2094	26.0	1755	20.3	-11.1
Septicemia (except in labor)	974	13.0	836	10.4	1726	20.0	54.1
Cardiac dysrhythmias	1427	19.0	1645	20.4	1726	20.0	5.2
Chronic obstructive pulmonary disease and bronchiectasis	1339	17.8	1478	18.3	1660	19.2	7.8
Nonspecific chest pain	1822	24.2	1697	21.1	1601	18.5	-23.6
Urinary tract infections	817	10.9	1192	14.8	1559	18.0	66.0
Acute cerebrovascular disease	1419	18.9	1500	18.6	1516	17.5	-7.1
Asthma	1221	16.2	1218	15.1	1449	16.8	3.2
Acute myocardial infarction	1672	22.2	1777	22.1	1448	16.8	-24.7
Spondylosis; intervertebral disc disorders; other back problems	1389	18.5	1520	18.9	1438	16.6	-9.9
Diabetes mellitus with complications	1198	15.9	1224	15.2	1433	16.6	4.1
Complication of device; implant or graft	991	13.2	1230	15.3	1418	16.4	24.5
Respiratory failure; insufficiency; arrest (adult)	450	6.0	796	9.9	1405	16.3	171.6
Acute and unspecified renal failure	189	2.5	530	6.6	1318	15.3	506.6
Fluid and electrolyte disorders	1354	18.0	1525	18.9	1281	14.8	-17.7

*Hospitalization rate per 10,000, ranked by 2007 figures. Excluding pregnancy-related discharges and liveborn infants.

Source: Delaware Health Statistics Center

Diseases of the circulatory system accounted for 6 of the 20 conditions with the highest hospitalization rates; these included:

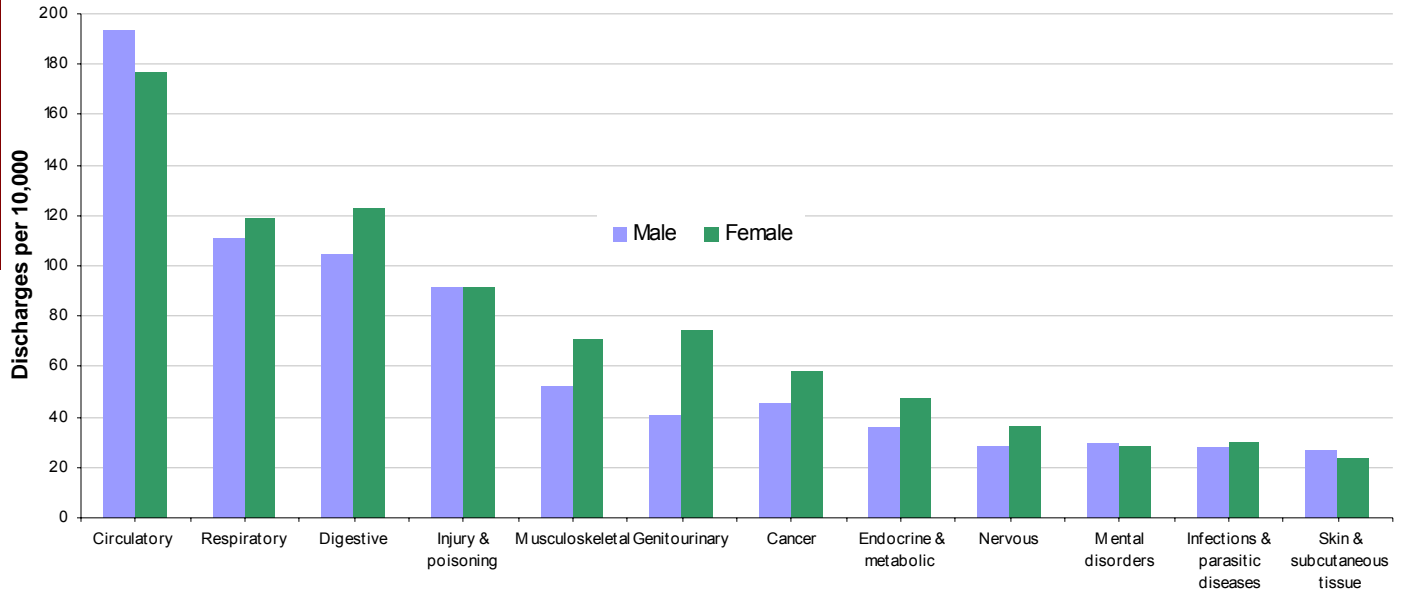
- congestive heart failure,
- coronary atherosclerosis and other heart disease (coronary artery disease),
- cardiac dysrhythmias (irregular heartbeat),
- nonspecific chest pain,
- acute cerebrovascular disease (stroke), and
- acute myocardial infarction (heart attack).

Three of the circulatory conditions listed above showed significant decreases in their rates since 1997, acute myocardial infarction (heart attack), nonspecific chest pain, and coronary atherosclerosis (coronary artery disease).

Hospitalization rates for renal failure, respiratory failure, and osteoarthritis demonstrated the greatest increase between 1997 and 2007.

HOSPITALIZATIONS OF DELAWARE RESIDENTS

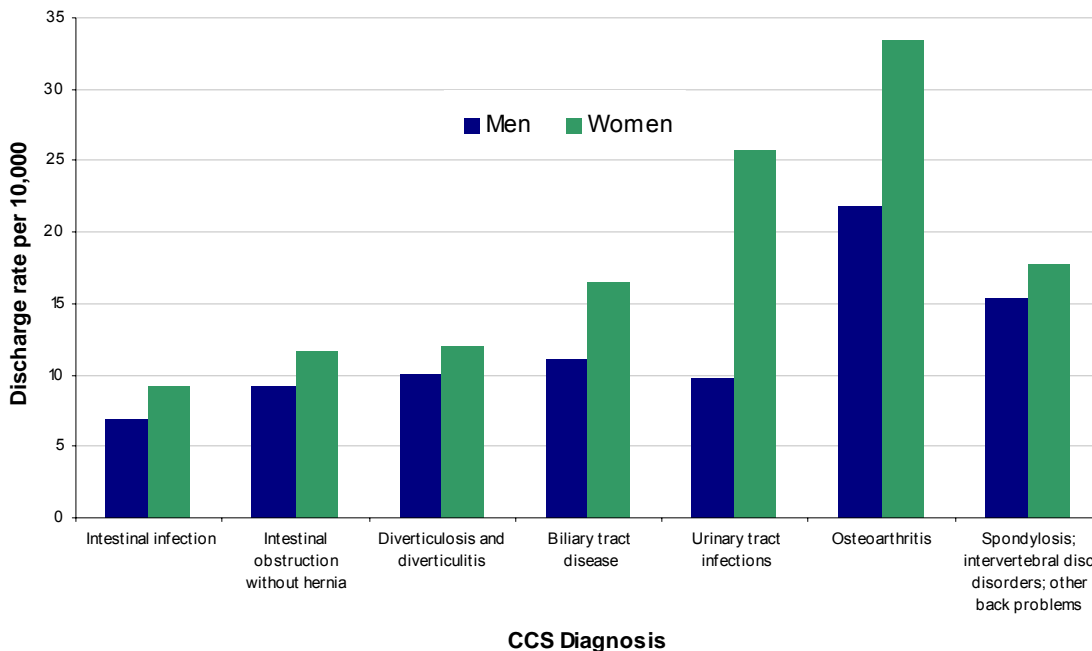
**DE Resident Discharge Rates by Body System and Gender
Delaware Hospitals, 2007**



Source: 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. Likewise, osteoarthritis and pathological fractures contributed to the female to male disparity in hospitalization 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.

**DE Resident Discharge Rates of CCS Diagnoses by Gender
Delaware Hospitals, 2007**

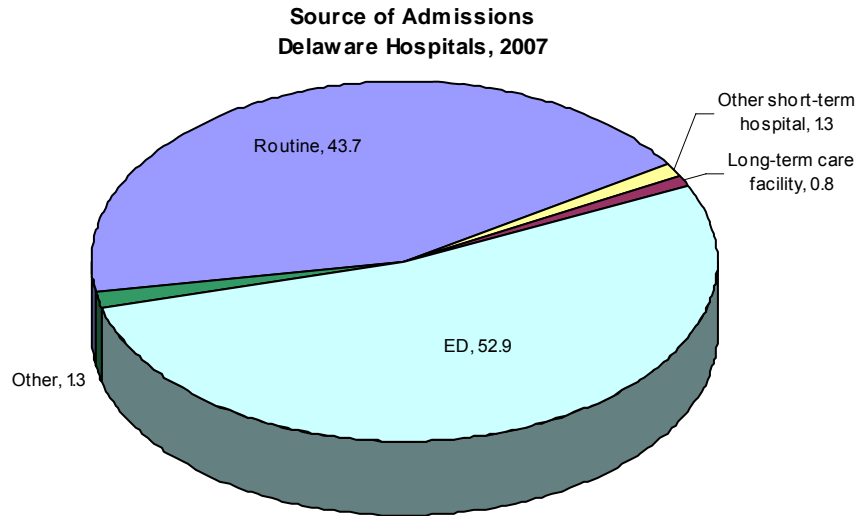


Source: Delaware Health Statistics Center

HOW PATIENTS WERE ADMITTED

Source of admissions:

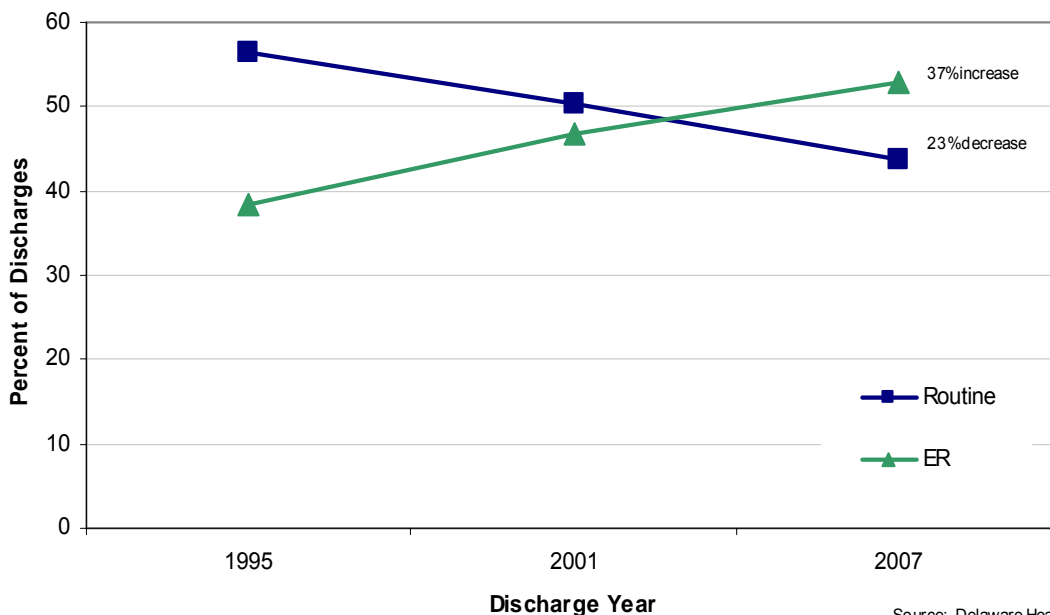
Routine admissions and admissions from the ED accounted for 97 percent of all hospital discharges in 2007. The remaining hospital admissions came from other short-term hospitals, long-term care facilities, and other sources.



Source: Delaware Health Statistics Center

Between 1995 and 2007, the distribution of admission source shifted from the majority of patients being routinely admitted to the majority coming from the ED. In 1995, routine and ED admissions accounted for 57 and 39 percent of all admissions. By 2007, the proportion of routine admissions had decreased 23 percent and the proportion of ED admissions had risen by 37 percent.

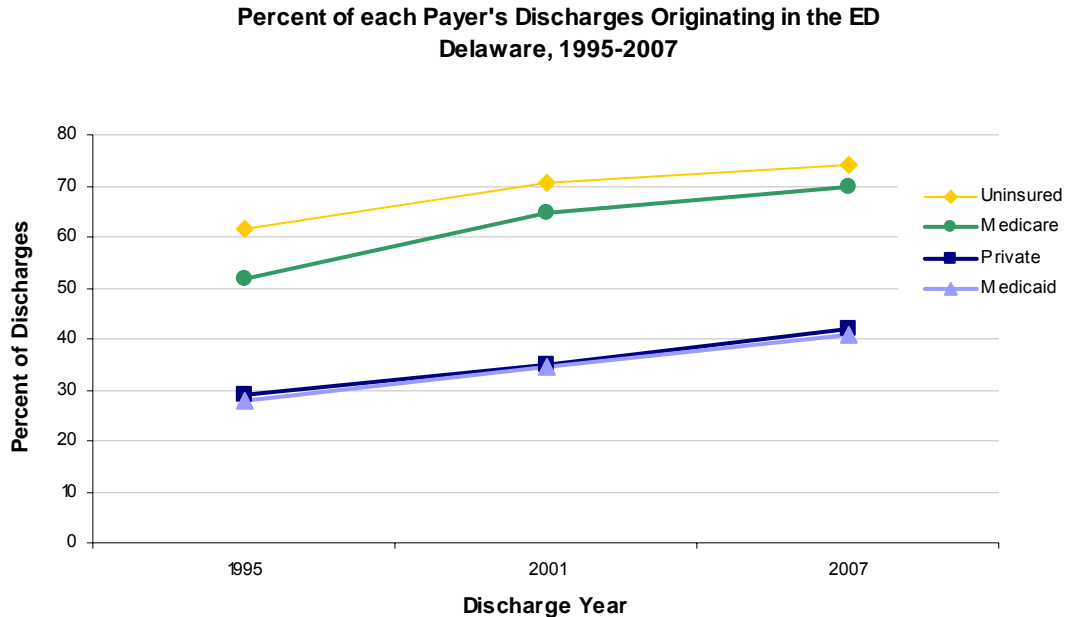
**Proportion of Hospital Discharges by Source of Admissions, Routine vs. ED
Delaware Hospitals, 1995-2007**



Source: Delaware Health Statistics Center

HOW PATIENTS WERE ADMITTED

Though all primary payers experienced an increase in the percent of discharges coming from the ED, uninsured patients had the largest proportion of their stays originating in the ED. By 2007, 74 percent of uninsured admissions, 70 percent of Medicare admissions, 42 percent of private admissions, and 41 of Medicaid admissions were admitted through the ED.



The most common diagnoses of patients admitted through the emergency department were pneumonia, congestive heart failure, and skin and subcutaneous tissues infections.

2007 ED Admissions - Most Common Diagnoses	Frequency	Percent¹
Pneumonia (except that caused by tuberculosis or STD)	2777	4.5
Congestive heart failure; nonhypertensive	2439	3.9
Skin and subcutaneous tissue infections	1721	2.8
Nonspecific chest pain	1630	2.6
Chronic obstructive pulmonary disease and bronchiectasis	1593	2.6
Septicemia (except in labor)	1584	2.6
Acute cerebrovascular disease	1581	2.6
Urinary tract infections	1540	2.5
Cardiac dysrhythmias	1434	2.3
Asthma	1428	2.3

1. Refers to the percent of discharges that originated in the ED.

- Between 2005 and 2007, heart attack and fluid and electrolyte disorders dropped from the 10 most common diagnoses for ED admissions; at the same time septicemia and asthma moved into the top 10, as the 6th and 10th ranked diagnoses.
- Four of the 10 most common ED diagnoses were related to circulatory conditions: heart failure, chest pain, stroke, and irregular heart beat.
- Another four of the most common ED diagnoses were infections: pneumonia, skin infections, septicemia, and urinary tract infections.
- With the inclusion of asthma, three of the 10 most common were respiratory problems.

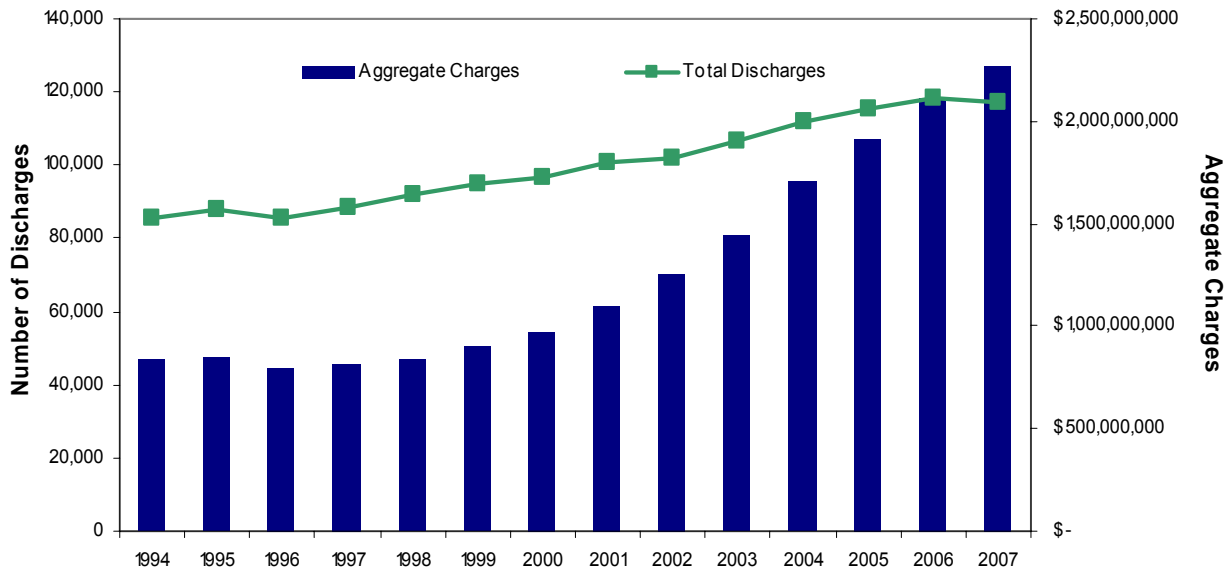
HOSPITAL CHARGES AND BILLING

Inpatient charges:

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

In 2007, total aggregate charges for all hospitalizations in Delaware equaled \$2.27 billion, more than double the charges in 2001. During the same time period the number of discharges rose from 100,681 to 117,034, a 16 percent increase.

**Number of Discharges and Total Aggregate Charges by Year
Delaware Hospitals, 1994-2007**



Source: Delaware Health Statistics Center

The average charge for a hospital stay in 2007 was \$19,375; the median charge was \$10,793.

The diagnostic groups with the highest average charges per hospital stay were congenital anomalies, perinatal conditions, and infections and parasitic diseases, with average charges ranging from \$33,412 to \$75,068. These three diagnostic groups also had the longest average stays, at approximately 9 days each.

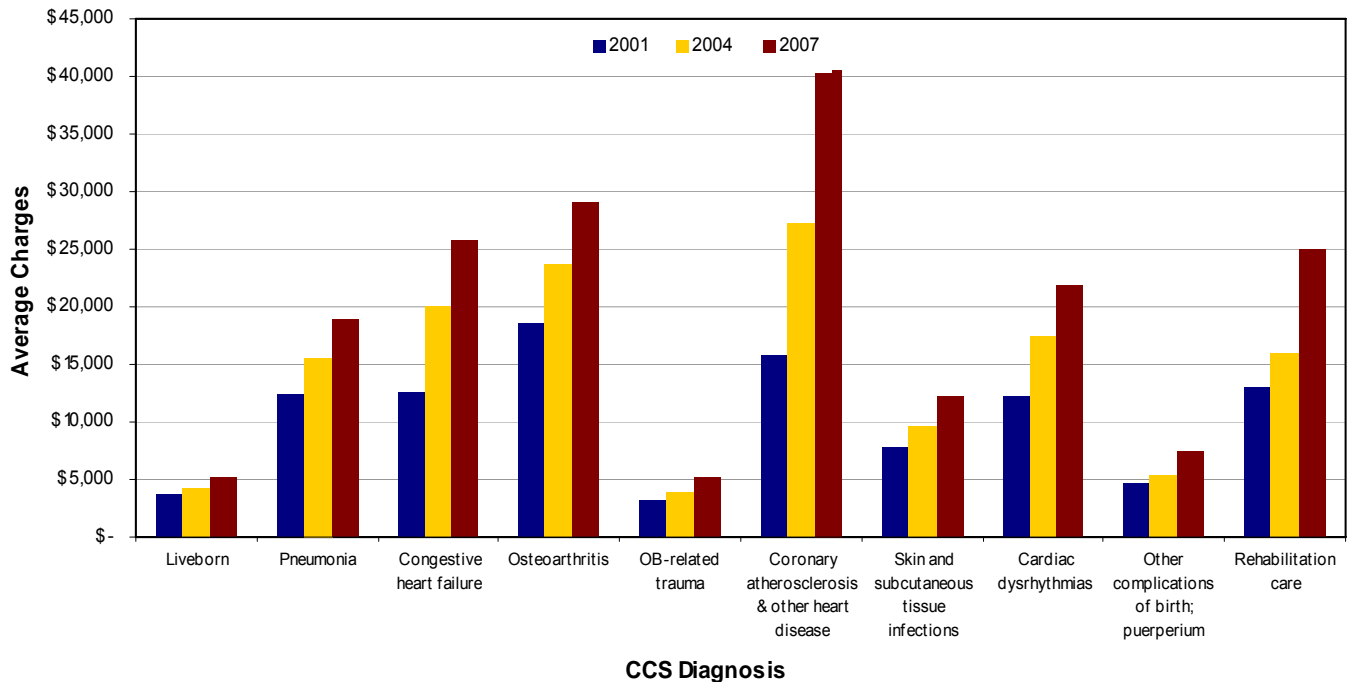
Looking at specific diagnoses within groups showed that the most expensive diagnoses were leukemias, cardiac and circulatory birth defects, tuberculosis, and heart valve disorders. However, the 10 most expensive diagnoses occurred relatively rarely and accounted for just one percent of all discharges in 2007. In comparison, the 10 diagnoses that occurred most frequently accounted for 29 percent of the total discharges in 2007 (see Appendix E for more information).

HOSPITAL CHARGES AND BILLING

From 2001 to 2007, the average charges rose for each of the 10 highest volume diagnoses. The highest volume diagnoses whose average charges increased the most were:

- coronary atherosclerosis and other heart disease (157%),
- congestive heart failure (105%), and
- Rehabilitation care; fitting of prostheses; and adjustment of devices (94%).

**Average Hospital Charges for Highest Volume CCS Diagnoses
Delaware Hospitals, 2001-2007**



Source: Delaware Health Statistics Center

Though the average charges of the high volume diagnoses increased over time, the proportion of total aggregate charges represented by them remained stable at 23 percent.

- In 2001, the aggregate charges for the 10 highest volume diagnoses totaled \$256.8 million and accounted for 23.4 percent of the total aggregate charges for all diagnoses.
- By 2007, the aggregate charges for those same diagnoses had more than doubled, to \$527.5 million, which accounted for 23.2 percent of the total aggregate charges.

In 2007, the 10 conditions with the highest total billed charges accounted for 31 percent of the total aggregate charges. Coronary atherosclerosis incurred the largest aggregate charges of any diagnosis, resulting in a total hospital bill of \$105.5 million. Although hospital stays for newborns had relatively low average charges, their high frequency resulted in liveborn infants having the 7th highest aggregate charges (see Appendix E for more information).

HOSPITAL CHARGES AND BILLING

Insurance status:

The following payer sources are listed in this report:

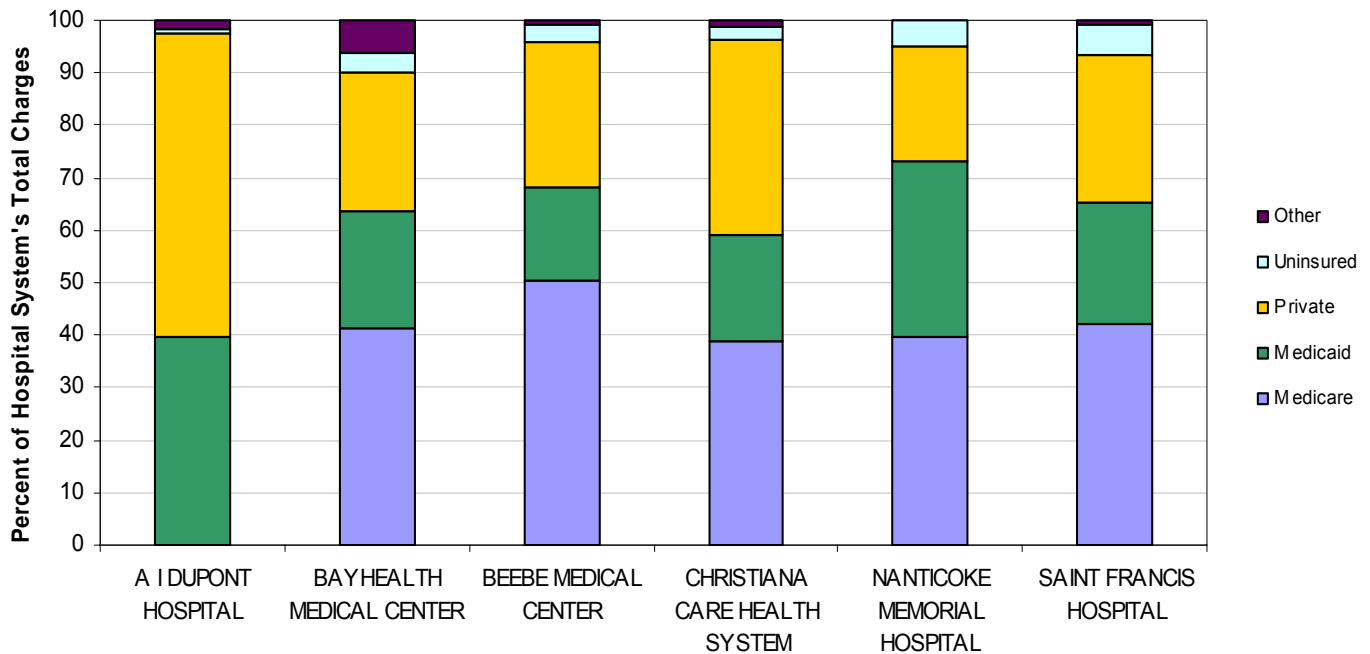
- Medicare
- Medicaid
- Private insurance carriers, such as:
 - Blue Cross Blue Shield
 - HMOs
 - Commercial Insurance
- Uninsured
 - Patients who have no insurance and self pay
- Other types of insurance, such as:
 - Workman's compensation
 - CHAMPUS (Civilian Health and Medical Program of the Uniformed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

In 2007, 60 percent of hospitalizations were billed to Medicare (37) and Medicaid (23), 35 percent were billed to private insurance, and the remaining 5 percent were billed to other types of coverage or to the patient.

Patients whose care was primarily billed to Medicare had both the highest average charges and the greatest aggregate charges.

In 2007 Beebe had the highest proportion of patients whose primary payer was Medicare. A.I. DuPont had the highest proportion of both privately insured and Medicaid covered patients, and St. Francis had the highest percent of uninsured patients.

**Distribution of Total Charges by Primary Payer Type and Hospital System
Delaware, 2007**



Source: Delaware Health Statistics Center

HOSPITAL CHARGES AND BILLING

Medicare:

From 1995 to 2007, the percent of hospital stays whose primary payer was Medicare increased from 34 to 37.1 percent. Over the same time period, the proportion of aggregate charges billed to Medicare remained at 46 percent.

Four of the top 10 most frequent diagnoses for Medicare patients were related to diseases of the circulatory system; together they accounted for 14.7 percent of Medicare hospitalizations. The three most frequent diagnoses for Medicare patients in 2007 were⁷:

- congestive heart failure; nonhypertensive,
- pneumonia (except that caused by TB or STD), and
- osteoarthritis.

Medicaid:

From 1995 to 2007, Medicaid covered hospitalizations increased from 16.4 to 23.1 percent. Over the same time period, the proportion of aggregate charges billed to Medicaid rose from 13.8 to 17.1 percent.

Six of the 10 most frequent diagnoses for Medicaid patients were related to pregnancy and childbirth, and accounted for 35.3 percent of Medicaid stays. The three most frequent diagnoses for Medicaid patients in 2007 were⁷:

- liveborn infants,
- OB-related trauma to perineum and vulva, and
- other complications of birth; puerperium affecting management of mother.

Private Insurers:

From 1995 to 2007, privately insured stays decreased from 42.3 to 34.8 percent. Over the same time period, the proportion of aggregate charges billed to private insurance decreased from 34.1 to 32.1 percent.

Five of the 10 most frequent diagnoses for patients whose primary payer was private insurance were related to pregnancy and childbirth, and accounted for 24.4 percent of all stays covered by private insurers. The three most frequent diagnoses for privately insured patients in 2007 were⁷:

- liveborn infants,
- OB-related trauma to perineum and vulva, and
- other complications of birth; puerperium affecting management of mother.

Uninsured:

From 1995 to 2007, uninsured hospitalizations decreased from 5.7 to 2.9 percent. Over the same time period, the proportion of aggregate charges billed to uninsured patients decreased from 4.2 to 2.5 percent.

Unlike the other payer types, one of the 3 most frequent diagnoses for uninsured patients was mental health related, and accounted for 4.4 percent of uninsured stays. The three most frequent diagnoses for uninsured patients in 2007 were⁷:

- liveborn infants,
- skin and subcutaneous tissue infections, and
- mood disorders.

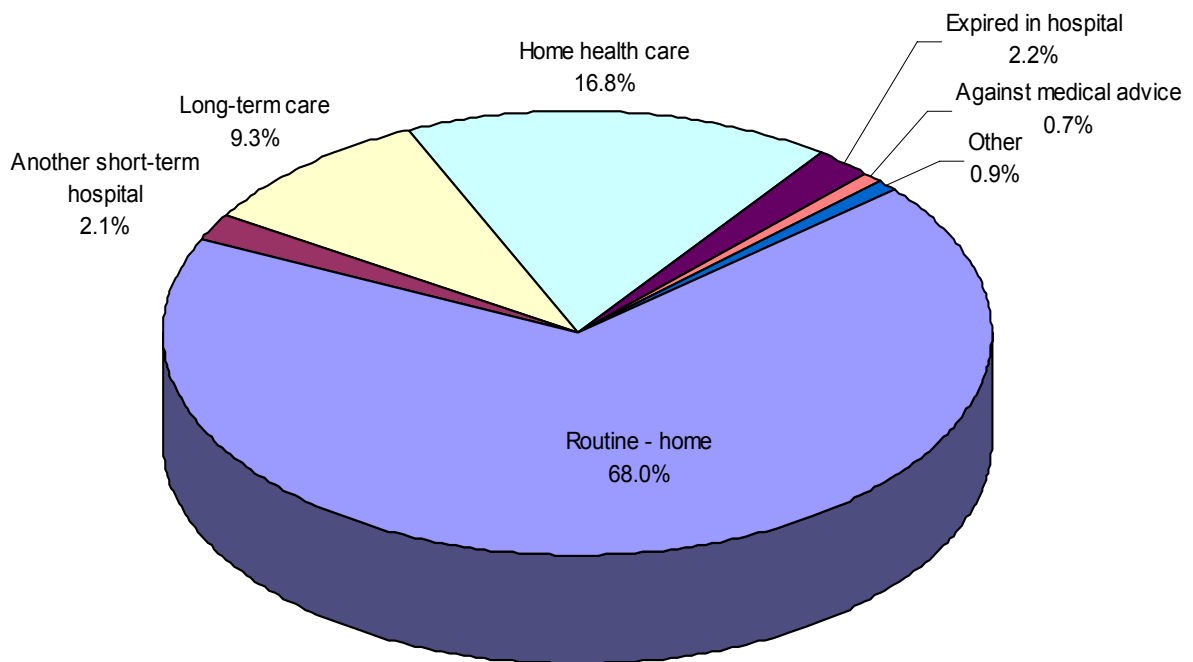
⁷ See Appendix F for the top 10 principal diagnoses by payer type.

HOW PATIENTS WERE DISCHARGED

Patient 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. The majority of patients (68 percent) in 2007 were discharged to their homes, less than 3 percent of patients died in the hospital, and fewer than 1 percent left against medical advice.

**Percent of Discharges by Discharge Status
Delaware Hospitals, 2007**



Source: Delaware Health Statistics Center

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.

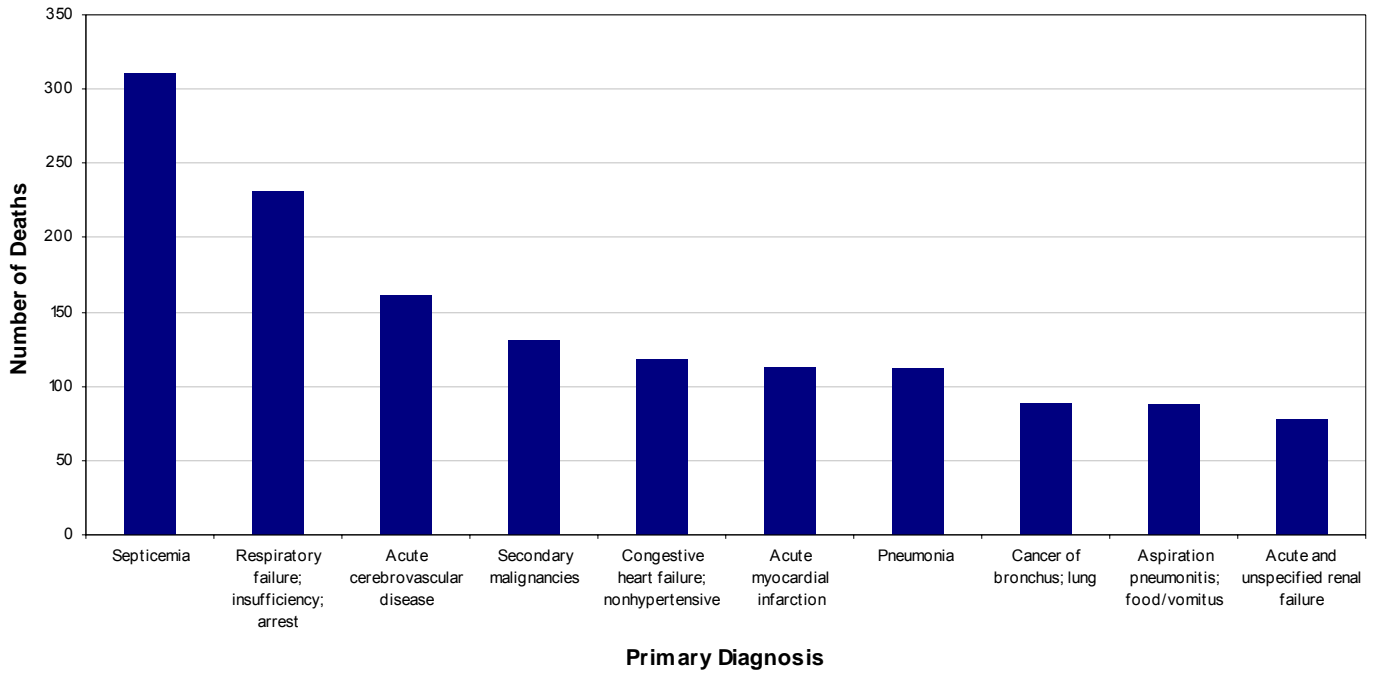
Frequencies

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

- septicemia,
- respiratory failure, and
- acute cerebrovascular disease.

HOW PATIENTS WERE DISCHARGED

**Diagnoses with the Greatest Numbers of In-Hospital Deaths
Delaware Hospitals, 2007**



Source: Delaware Health Statistics Center

Age affected which diagnoses contributed to the largest numbers of deaths. Low birthweight and prematurity accounted for the largest number of deaths to those under one, while injuries caused the highest number of deaths to those ages 1-17 and 18-44. For patients 45 and older, septicemia accounted for the greatest number of deaths.

Patients ages 65 and older accounted for 68 percent of all in-hospital mortality (for more information see Appendices G and H).

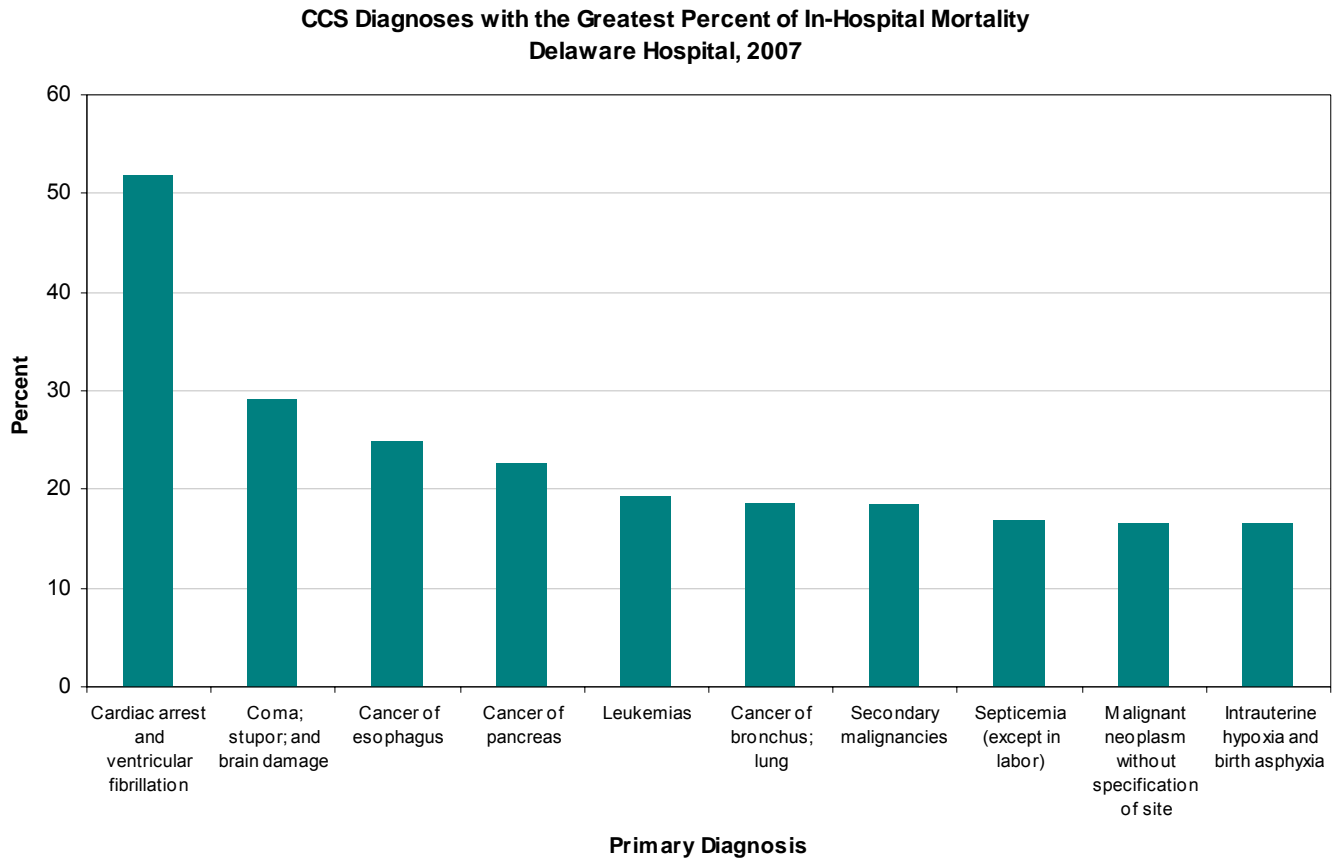
Percentages

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

- cardiac arrest and ventricular fibrillation,
- coma; stupor; and brain damage, and
- cancer of esophagus.

HOW PATIENTS WERE DISCHARGED

Six of the ten diagnoses with the greatest percentages of in-hospital mortality were cancer-related, and included cancer of esophagus, cancer of pancreas, leukemias, cancer of bronchus and lung, secondary malignancies, and cancer without specification of site.



Source: Delaware Health Statistics Center

Patients who left against medical advice:

Less than one percent of patients left the hospital against medical advice. Patients who left the hospital against medical advice were more likely to be:

- in the 18 to 44 age group (48 percent),
- male (59 percent), and
- covered by Medicaid (42 percent).

The three most frequent diagnoses of patients who left the hospital against medical advice were nonspecific chest pain, alcohol-related disorders, and pneumonia.

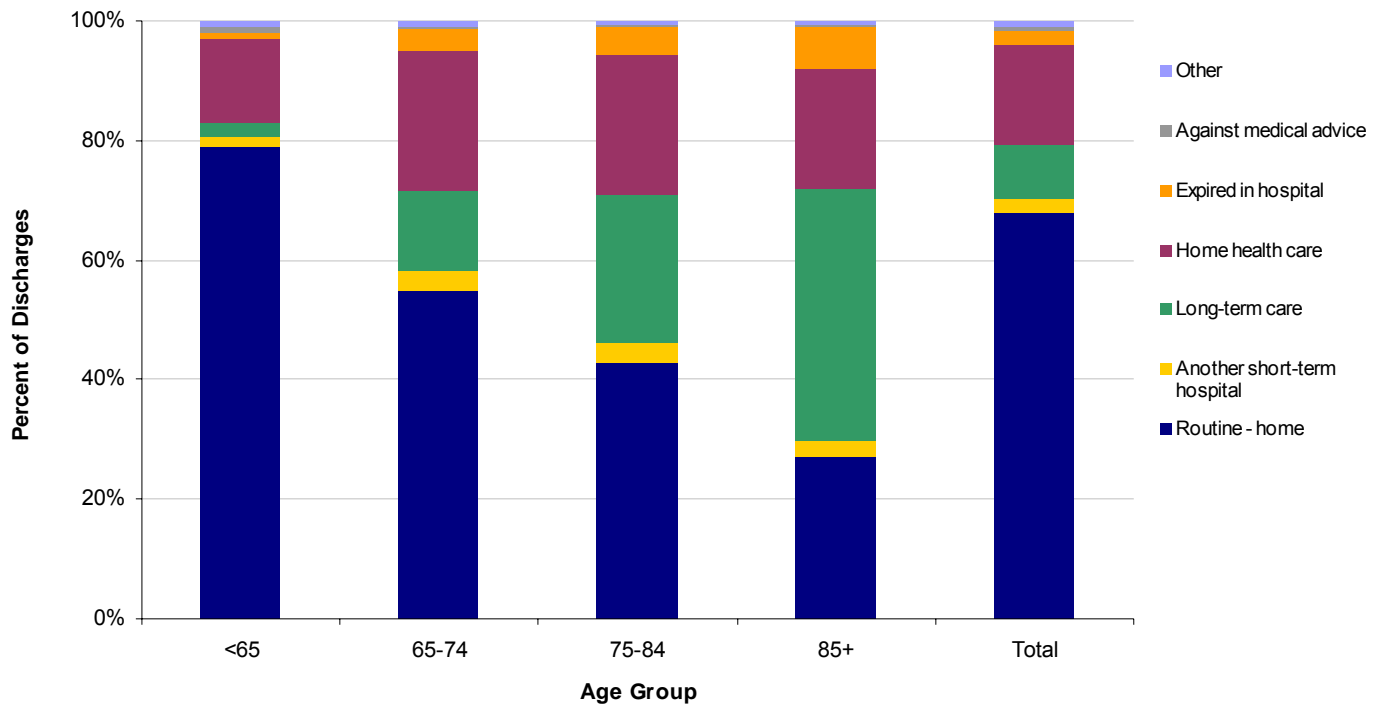
- For women, other complications of pregnancy, chronic obstructive pulmonary disease, and early or threatened labor made up the top three.
- For men, alcohol-related disorders, nonspecific chest pain, and pancreatic disorders made up the top three.

HOW PATIENTS WERE DISCHARGED

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 nearly doubled the percent of those transferred to LTC facilities. In 2007, less than 3 percent of those under 65 were discharged to long-term care facilities, compared to 13.6 percent of those 65-74, 25.2 percent of those 75-84, and 42.7 percent of those 85 and older.

**Distribution of Discharge Status by Age Group
Delaware Hospitals, 2007**



Source: Delaware Health Statistics Center

In 2007, the most common diagnoses for patients discharged to LTC facilities were congestive heart failure, septicemia, and pneumonia.

- For patients under 65 (excluding liveborn infants), septicemia, osteoarthritis, and diabetes were the three most common diagnoses.
- For patients 65-74, osteoarthritis, septicemia, and stroke were the three most common diagnoses.
- For patients 75-84, congestive heart failure, stroke, and septicemia were the three most common diagnoses.
- For patients 85 and older, congestive heart failure, hip fracture, and pneumonia were the three most common diagnoses.

HOSPITAL SPECIFIC DATA

A.I. duPont Hospital for Children

2007 Discharge Distribution

Zip / State	Number	%
19805	631	6.0
19720	553	5.2
19702	419	4.0
19802	338	3.2
19801	258	2.4
19701	254	2.4
19713	251	2.4
19808	234	2.2
19709	219	2.1
19711	196	1.9
19901	169	1.6
19804	167	1.6
19703	145	1.4
19803	139	1.3
19809	138	1.3
19707	138	1.3
19904	130	1.2
19810	122	1.2
19973	106	1.0
19977	102	1.0
19963	81	0.8
19966	69	0.7
19947	65	0.6
19956	62	0.6
19934	61	0.6
19938	56	0.5
19943	53	0.5
19734	53	0.5
19933	50	0.5
19807	37	0.4
19806	36	0.3
19958	31	0.3
19952	28	0.3
19940	28	0.3
19962	25	0.2
19960	25	0.2
19950	25	0.2
19968	24	0.2
19945	24	0.2
19939	20	0.2
19971	19	0.2
19953	19	0.2
19706	16	0.2
19975	15	0.1
19970	12	0.1
19946	10	0.1
19951	8	0.1
19899	8	0.1
19936	6	0.1
19964	5	0.0
19941	5	0.0
DE Other	24	0.2
DE Unk	1	0.0
MD	637	6.0
NJ	1,243	11.8
PA	2,815	26.7
Other Non-DE	128	1.2
Invalid	5	0.0
Total	10,538	100

Utilization Characteristics

	2005	2006	2007
Aggregate charges	\$275,884,812	\$299,491,378	\$311,156,093
Average charges	\$24,803	\$27,333	\$29,527
Average charge per day	\$6,409	\$7,113	\$7,648
Number of Discharges	11,123	10,957	10,538
Total All-listed Procedures¹	22,744	24,773	22,725
<i>Non-operating room procedures⁴</i>	14,550	16,220	14,530
<i>Valid operating room procedures²</i>	8,194	8,553	8,195
Average Length of Stay	4.0	4.0	4.2
Primary Payer Distribution			
<i>Medicare</i>	0.2	0.2	0.1
<i>Medicaid</i>	37.4	38.6	39.5
<i>Private Insurance</i>	60.4	59.1	58.0
<i>Uninsured</i>	0.5	0.7	0.8
<i>Other</i>	1.5	1.5	1.6
Admission Source Distribution			
<i>Routine</i>	41.7	37.3	31.8
<i>Other short-term hospital</i>	10.3	8.7	6.7
<i>Long-term care facility</i>	0.9	1.9	4.2
<i>ER</i>	45.9	50.1	56.2
<i>Other</i>	1.1	2.0	1.1
Discharge Status Distribution			
<i>Routine</i>	93.0	92.8	93.4
<i>Another short-term hospital</i>	0.5	0.6	0.7
<i>Long-term care</i>	0.9	0.7	0.7
<i>Home health care</i>	5.2	5.1	4.3
<i>Expired</i>	0.4	0.3	0.3
<i>Against medical advice</i>	0.1	0.0	0.0
<i>Other/Unknown</i>	0.0	0.3	0.5
Sex			
<i>Male</i>	54.7	54.1	54.9
<i>Female</i>	45.3	45.9	45.1
Age			
<1	22.8	23.5	24.2
1-4	28.9	29.4	27.0
5-9	18.8	18.2	17.5
10-14	17.2	16.9	18.3
15-19	11.6	11.4	12.5
20-24	0.6	0.7	0.4
25-34	0.0	0.0	0.0
35-44	0.0	0.0	0.0
45-54	0.0	0.0	0.0
55-64	0.0	0.0	0.0
65-74	0.0	0.0	0.0
75+	0.0	0.0	0.0

Notes:

1. Total all-listed procedures represents the total number of procedures performed; up to 6 procedures may be recorded per discharge, as a result the total number of all-listed procedures can exceed the total number of discharges.

2. 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>.

3. Percentages may not sum to 100 due to rounding.

HOSPITAL SPECIFIC DATA

BayHealth Medical Center

2007 Discharge Distribution

Zip / State	Number	%
19901	3,832	18.9
19904	3,112	15.4
19963	1,918	9.5
19977	1,611	8.0
19934	1,161	5.7
19943	1,062	5.2
19952	1,010	5.0
19962	782	3.9
19960	571	2.8
19938	502	2.5
19953	429	2.1
19946	424	2.1
19950	422	2.1
19947	373	1.8
19966	231	1.1
19968	222	1.1
19933	174	0.9
19941	171	0.8
19954	168	0.8
19973	160	0.8
19958	150	0.7
19709	144	0.7
19964	119	0.6
19734	112	0.6
19971	104	0.5
19936	71	0.4
19979	68	0.3
19903	65	0.3
19956	55	0.3
19955	43	0.2
19970	36	0.2
19945	33	0.2
19939	32	0.2
19980	26	0.1
19951	25	0.1
19701	24	0.1
19902	23	0.1
19702	20	0.1
19975	18	0.1
19720	14	0.1
19961	12	0.1
19930	10	0.0
19711	7	0.0
19801	7	0.0
19940	7	0.0
19713	6	0.0
19805	6	0.0
19802	5	0.0
19803	5	0.0
19931	5	0.0
DE Other	30	0.1
DE Unk	0	0.0
MD	369	1.8
NJ	27	0.1
PA	62	0.3
Other Non-DE	160	0.8
Invalid	7	0.0
Total	20,242	100

Utilization Characteristics

	2005	2006	2007
Aggregate charges	\$301,554,921	\$333,556,518	\$355,152,301
Average charges	\$14,829	\$15,836	\$17,545
Average charge per day	\$3,671	\$3,978	\$4,424
Number of Discharges	20,336	21,063	20,242
Total All-listed Procedures¹	22,744	24,773	22,725
<i>Non-operating room procedures²</i>	14,550	16,220	14,530
<i>Valid operating room procedures²</i>	8,194	8,553	8,195
Average Length of Stay	5.1	5.0	5.1
Primary Payer Distribution³			
<i>Medicare</i>	41.5	39.5	41.3
<i>Medicaid</i>	21.9	22.6	22.3
<i>Private Insurance</i>	25.9	27.9	26.4
<i>Uninsured</i>	3.7	3.8	3.9
<i>Other</i>	7.1	6.1	6.1
Admission Source Distribution			
<i>Routine</i>	52.1	53.0	53.8
<i>Other short-term hospital</i>	0.8	1.2	0.7
<i>Long-term care facility</i>	0.3	0.0	0.1
<i>ER</i>	46.3	44.9	45.1
<i>Other</i>	0.5	0.9	0.3
Discharge Status Distribution			
<i>Routine</i>	67.9	69.3	66.9
<i>Another short-term hospital</i>	3.1	2.5	2.4
<i>Long-term care</i>	7.9	7.3	8.5
<i>Home health care</i>	14.9	14.5	16.0
<i>Expired</i>	2.3	2.3	2.3
<i>Against medical advice</i>	0.8	0.9	0.8
<i>Other/Unknown</i>	3.1	3.1	3.1
Sex			
<i>Male</i>	39.9	40.6	40.0
<i>Female</i>	60.1	59.4	60.0
Age			
<i><1</i>	10.7	12.3	13.1
<i>1-4</i>	1.5	1.5	1.4
<i>5-9</i>	0.8	0.7	0.7
<i>10-14</i>	0.7	0.5	0.5
<i>15-19</i>	3.2	2.7	2.6
<i>20-24</i>	5.9	5.9	5.5
<i>25-34</i>	9.6	9.6	9.1
<i>35-44</i>	8.9	9.2	8.0
<i>45-54</i>	10.5	10.6	10.6
<i>55-64</i>	11.5	12.7	12.7
<i>65-74</i>	14.4	13.8	13.9
<i>75+</i>	22.3	20.6	21.8

Notes:

1. Total all-listed procedures represents the total number of procedures performed; up to 6 procedures may be recorded per discharge, as a result the total number of all-listed procedures can exceed the total number of discharges.

2. 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>.

3. Percentages may not sum to 100 due to rounding.

HOSPITAL SPECIFIC DATA

Beebe Medical Center

2007 Discharge Distribution

Zip / State	Number	%
19966	2,209	21.0
19958	2,021	19.3
19971	1,106	10.5
19947	914	8.7
19968	721	6.9
19970	469	4.5
19945	398	3.8
19939	357	3.4
19975	257	2.4
19963	238	2.3
19973	152	1.4
19930	149	1.4
19956	143	1.4
19951	129	1.2
19960	128	1.2
19941	89	0.8
19933	76	0.7
19952	59	0.6
19950	47	0.4
19943	32	0.3
19904	31	0.3
19969	28	0.3
19901	25	0.2
19967	24	0.2
19934	19	0.2
19944	19	0.2
19977	15	0.1
19946	14	0.1
19808	13	0.1
19954	13	0.1
19940	10	0.1
19962	10	0.1
19938	9	0.1
19702	8	0.1
19804	8	0.1
19711	7	0.1
19701	6	0.1
19720	6	0.1
19703	5	0.0
DE Other	44	0.4
DE Unk	3	0.0
MD	187	1.8
NJ	25	0.2
PA	134	1.3
Other Non-DE	126	1.2
Invalid	12	0.1
Total	10,495	100

Utilization Characteristics

	2005	2006	2007
Aggregate charges	\$166,332,043	\$180,755,162	\$228,428,793
Average charges	\$16,978	\$18,030	\$21,765
Average charge per day	\$5,152	\$5,522	\$6,603
Number of Discharges	9,797	10,025	10,495
Total All-listed Procedures¹	11,589	11,596	13,855
<i>Non-operating room procedures²</i>	6,568	6,709	8,313
<i>Valid operating room procedures²</i>	5,021	4,887	5,542
Average Length of Stay	3.8	3.7	3.7
Primary Payer Distribution			
<i>Medicare</i>	48.6	49.1	50.3
<i>Medicaid</i>	17.9	18.1	18.0
<i>Private Insurance</i>	29.5	28.4	27.7
<i>Uninsured</i>	2.8	3.4	2.9
<i>Other</i>	1.1	1.1	1.0
Admission Source Distribution			
<i>Routine</i>	47.1	44.5	40.3
<i>Other short-term hospital</i>	0.0	0.1	0.1
<i>Long-term care facility</i>	0.0	0.1	2.3
<i>ER</i>	52.9	55.3	57.2
<i>Other</i>	0.0	0.0	0.1
Discharge Status Distribution			
<i>Routine</i>	55.9	57.6	61.8
<i>Another short-term hospital</i>	4.6	4.2	2.6
<i>Long-term care</i>	10.9	10.7	10.1
<i>Home health care</i>	23.0	21.7	19.8
<i>Expired</i>	2.1	2.2	2.0
<i>Against medical advice</i>	0.4	0.5	0.7
<i>Other/Unknown</i>	3.2	3.0	3.0
Sex			
<i>Male</i>	43.7	43.3	44.0
<i>Female</i>	56.3	56.7	56.0
Age			
<i><1</i>	10.7	10.6	10.0
<i>1-4</i>	0.9	0.7	0.6
<i>5-9</i>	0.2	0.2	0.2
<i>10-14</i>	0.3	0.3	0.2
<i>15-19</i>	1.8	1.8	1.9
<i>20-24</i>	4.1	4.2	4.2
<i>25-34</i>	6.9	7.7	7.0
<i>35-44</i>	7.5	7.3	6.3
<i>45-54</i>	8.8	9.6	9.4
<i>55-64</i>	13.1	12.5	13.4
<i>65-74</i>	19.4	18.8	19.8
<i>75+</i>	26.2	26.4	27.0

Notes:

1. Total all-listed procedures represents the total number of procedures performed; up to 6 procedures may be recorded per discharge, as a result the total number of all-listed procedures can exceed the total number of discharges.

2. 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>.

3. Percentages may not sum to 100 due to rounding.

HOSPITAL SPECIFIC DATA

Christiana Care Health System

2007 Discharge Distribution

Zip / State	Number	%
19720	6,737	11.1
19702	4,650	7.6
19808	4,064	6.7
19805	4,000	6.6
19713	3,626	6.0
19711	3,608	5.9
19701	3,272	5.4
19802	3,122	5.1
19709	2,437	4.0
19804	2,107	3.5
19801	1,972	3.2
19810	1,731	2.8
19803	1,718	2.8
19707	1,345	2.2
19809	1,186	1.9
19703	1,088	1.8
19806	956	1.6
19734	645	1.1
19807	603	1.0
19977	589	1.0
19901	350	0.6
19904	340	0.6
19938	280	0.5
19706	276	0.5
19966	180	0.3
19973	146	0.2
19958	139	0.2
19963	136	0.2
19934	115	0.2
19943	102	0.2
19947	97	0.2
19971	91	0.1
19952	88	0.1
19899	87	0.1
19962	83	0.1
19956	76	0.1
19968	69	0.1
19953	67	0.1
19960	67	0.1
19730	65	0.1
19933	57	0.1
19731	41	0.1
19975	40	0.1
19946	38	0.1
19950	37	0.1
19733	34	0.1
19945	33	0.1
19714	32	0.1
19970	28	0.0
19939	25	0.0
19710	23	0.0
19712	21	0.0
19736	21	0.0
19941	21	0.0
19954	19	0.0
19964	19	0.0
19955	17	0.0
19951	16	0.0
19850	15	0.0
19940	13	0.0
19708	11	0.0
19930	11	0.0
DE Other	53	0.1
DE Unk	12	0.0
MD	3,255	5.3
NJ	1,743	2.9
PA	2,521	4.1
Other Non-DE	413	0.7
Invalid	25	0.0
Total	60,904	100

Utilization Characteristics

	2005	2006	2007
Aggregate charges	\$913,151,785	\$1,028,426,663	\$1,094,875,751
Average charges	\$15,369	\$16,747	\$17,977
Average charge per day	\$3,788	\$4,140	\$4,382
Number of Discharges	59,416	61,411	60,904
Total All-listed Procedures¹	86,640	160,063	165,861
<i>Non-operating room procedures²</i>	56,119	129,210	134,969
<i>Valid operating room procedures²</i>	30,521	30,853	30,892
Average Length of Stay	5.0	5.0	5.1
Primary Payer Distribution			
<i>Medicare</i>	38.2	38.5	38.9
<i>Medicaid</i>	18.3	19.7	20.4
<i>Private Insurance</i>	39.6	38.2	37.1
<i>Uninsured</i>	3.0	2.4	2.4
<i>Other</i>	0.9	1.2	1.3
Admission Source Distribution			
<i>Routine</i>	47.3	44.1	43.3
<i>Other short-term hospital</i>	1.6	1.0	0.8
<i>Long-term care facility</i>	0.2	0.2	0.2
<i>ER</i>	51.0	53.5	53.5
<i>Other</i>	0.0	1.2	2.2
Discharge Status Distribution			
<i>Routine</i>	65.0	65.9	65.3
<i>Another short-term hospital</i>	2.4	2.2	2.3
<i>Long-term care</i>	7.9	8.2	8.6
<i>Home health care</i>	20.3	19.3	19.4
<i>Expired</i>	2.7	2.6	2.7
<i>Against medical advice</i>	0.6	0.8	0.7
<i>Other/Unknown</i>	1.1	0.9	1.1
Sex			
<i>Male</i>	40.1	39.9	40.2
<i>Female</i>	59.9	60.1	59.8
Age			
<i><1</i>	12.8	12.3	12.1
<i>1-4</i>	0.3	0.4	0.3
<i>5-9</i>	0.2	0.2	0.2
<i>10-14</i>	0.3	0.3	0.3
<i>15-19</i>	2.3	2.3	2.3
<i>20-24</i>	4.8	5.0	4.9
<i>25-34</i>	12.2	11.8	11.9
<i>35-44</i>	10.9	11.0	10.5
<i>45-54</i>	12.2	12.4	12.5
<i>55-64</i>	12.2	12.3	12.7
<i>65-74</i>	12.5	12.4	12.3
<i>75+</i>	19.3	19.7	20.0

Notes:

1. Total all-listed procedures represents the total number of procedures performed; up to 6 procedures may be recorded per discharge, as a result the total number of all-listed procedures can exceed the total number of discharges.

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

3. Percentages may not sum to 100 due to rounding.

HOSPITAL SPECIFIC DATA

Nanticoke Memorial Hospital

2007 Discharge Distribution

Zip / State	Number	%
19973	2,628	39.1
19956	1,193	17.7
19947	706	10.5
19933	671	10.0
19966	324	4.8
19940	238	3.5
19950	193	2.9
19975	77	1.1
19945	64	1.0
19952	44	0.7
19963	43	0.6
19939	36	0.5
19931	32	0.5
19968	30	0.4
19941	27	0.4
19960	18	0.3
19971	15	0.2
19970	10	0.1
19958	8	0.1
19901	5	0.1
DE Other	40	0.6
DE Unk	1	0.0
MD	280	4.2
NJ	6	0.1
PA	6	0.1
Other Non-DE	31	0.5
Invalid	2	0.0
Total	6,728	100

Utilization Characteristics

	2005	2006	2007
Aggregate charges	\$89,303,960	\$96,694,606	\$95,103,262
Average charges	\$12,982	\$13,798	\$14,135
Average charge per day	\$3,079	\$3,390	\$3,626
Number of Discharges	6,879	7,008	6,728
Total All-listed Procedures¹	13,307	14,817	13,936
<i>Non-operating room procedures²</i>	10,891	12,543	11,850
<i>Valid operating room procedures²</i>	2,416	2,274	2,086
Average Length of Stay	4.5	4.3	4.1
Primary Payer Distribution			
<i>Medicare</i>	42.1	40.6	39.6
<i>Medicaid</i>	26.6	30.1	33.4
<i>Private Insurance</i>	24.6	23.1	21.9
<i>Uninsured</i>	6.6	6.2	5.1
<i>Other</i>	0.0	0.0	0.0
Admission Source Distribution			
<i>Routine</i>	36.0	37.0	42.9
<i>Other short-term hospital</i>	0.1	0.1	0.0
<i>Long-term care facility</i>	0.1	0.1	0.0
<i>ER</i>	63.9	62.8	57.0
<i>Other</i>	0.0	0.0	0.0
Discharge Status Distribution			
<i>Routine</i>	71.9	71.3	71.8
<i>Another short-term hospital</i>	3.2	2.8	2.8
<i>Long-term care</i>	11.5	12.0	11.7
<i>Home health care</i>	8.6	10.0	10.0
<i>Expired</i>	2.0	1.7	1.7
<i>Against medical advice</i>	0.8	0.6	0.5
<i>Other/Unknown</i>	2.1	1.6	1.5
Sex			
<i>Male</i>	39.7	39.8	38.8
<i>Female</i>	60.3	60.2	61.2
Age			
<1	11.9	13.5	15.3
1-4	0.6	0.6	0.4
5-9	0.4	0.2	0.3
10-14	0.5	0.4	0.3
15-19	3.5	2.9	3.2
20-24	5.7	6.1	7.4
25-34	8.6	9.6	9.3
35-44	9.8	9.0	7.8
45-54	10.7	11.0	10.6
55-64	12.6	12.9	12.0
65-74	12.7	12.4	12.0
75+	23.0	21.4	21.4

Notes:

1. Total all-listed procedures represents the total number of procedures performed; up to 6 procedures may be recorded per discharge, as a result the total number of all-listed procedures can exceed the total number of discharges.
2. 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.jsf>.
3. Percentages may not sum to 100 due to rounding.

HOSPITAL SPECIFIC DATA

St. Francis Hospital

2007 Discharge Distribution

Zip / State	Number	%
19805	1,925	23.7
19802	834	10.3
19720	657	8.1
19801	577	7.1
19806	441	5.4
19810	379	4.7
19803	375	4.6
19703	299	3.7
19809	285	3.5
19804	277	3.4
19808	271	3.3
19702	236	2.9
19711	206	2.5
19701	148	1.8
19713	145	1.8
19707	139	1.7
19807	88	1.1
19709	86	1.1
19899	34	0.4
19977	26	0.3
19734	24	0.3
19904	19	0.2
19901	15	0.2
19947	13	0.2
19938	12	0.1
19706	10	0.1
19963	10	0.1
19934	9	0.1
19943	8	0.1
19952	8	0.1
19966	8	0.1
19956	7	0.1
19962	7	0.1
19973	7	0.1
19968	6	0.1
19958	5	0.1
19971	5	0.1
DE Other	44	0.5
DE Unk	0	0.0
MD	119	1.5
NJ	86	1.1
PA	195	2.4
Other Non-DE	81	1.0
Invalid	1	0.0
Total	8,127	100

Utilization Characteristics

	2005	2006	2007
Aggregate charges	\$169,398,271	\$175,418,879	\$182,792,252
Average charges	\$20,999	\$22,655	\$22,492
Average charge per day	\$6,805	\$7,835	\$7,150
Number of Discharges	8,067	7,743	8,127
Total All-listed Procedures¹	9,712	9,108	9,535
<i>Non-operating room procedures²</i>	6,262	5,717	5,976
<i>Valid operating room procedures²</i>	3,450	3,391	3,559
Average Length of Stay	4.4	4.4	4.3
Primary Payer Distribution			
<i>Medicare</i>	47.7	43.9	42.2
<i>Medicaid</i>	21.5	23.4	22.9
<i>Private Insurance</i>	27.1	28.2	28.3
<i>Uninsured</i>	2.4	3.4	5.5
<i>Other</i>	1.2	1.0	1.0
Admission Source Distribution			
<i>Routine</i>	40.1	42.5	41.9
<i>Other short-term hospital</i>	2.0	2.2	2.5
<i>Long-term care facility</i>	1.0	0.7	0.7
<i>ER</i>	56.3	54.2	54.5
<i>Other</i>	0.6	0.4	0.3
Discharge Status Distribution			
<i>Routine</i>	59.2	62.7	63.2
<i>Another short-term hospital</i>	1.0	1.1	1.4
<i>Long-term care</i>	14.7	15.3	14.7
<i>Home health care</i>	19.0	17.5	17.5
<i>Expired</i>	2.2	2.1	1.8
<i>Against medical advice</i>	0.9	1.1	1.3
<i>Other/Unknown</i>	3.0	0.2	0.1
Sex			
<i>Male</i>	36.3	36.7	37.3
<i>Female</i>	63.7	63.3	62.7
Age			
<1	8.5	8.9	11.6
1-4	0.0	0.0	0.0
5-9	0.0	0.0	0.0
10-14	0.0	0.1	0.0
15-19	2.3	1.9	2.2
20-24	4.1	4.4	4.6
25-34	9.8	10.2	10.5
35-44	9.2	9.9	9.6
45-54	10.9	13.6	12.3
55-64	12.2	12.3	12.4
65-74	14.2	13.3	12.5
75+	28.7	25.5	24.3

Notes:

1. Total all-listed procedures represents the total number of procedures performed; up to 6 procedures may be recorded per discharge, as a result the total number of all-listed procedures can exceed the total number of discharges.
2. 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>.
3. 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.

Number and Percent of Discharges, Mean Length of Stay, Mean Charges, Percent Expired, and Percent Admitted from the ED by Principal Diagnosis Delaware Hospitals, 2007

<i>Clinical Classifications Software Categories and Chapter Headings</i>	Number of Discharges	Percent of Discharges	Mean LOS	Mean Total Charges	Percent Expired	Percent Admitted from ED
Infections and parasitic diseases	2736	2.3	8.6	\$33,412	12.4	84.1
Tuberculosis	14	0.5	24.5	\$ 107,232	0.0	35.7
Septicemia (except in labor)	1840	67.3	9.8	\$ 38,754	16.9	86.1
Bacterial infection; unspecified site	40	1.5	6.2	\$ 28,937	0.0	77.5
Mycoses	72	2.6	8.4	\$ 27,657	2.8	77.8
HIV infection	215	7.9	11.2	\$ 41,101	10.2	89.8
Hepatitis	70	2.6	4.6	\$ 16,469	2.9	82.9
Viral infection	361	13.2	2.9	\$ 10,452	0.0	81.7
Other infections; including parasitic	102	3.7	4.0	\$ 13,481	0.0	64.7
Sexually transmitted infections (not HIV or hepatitis)	19	0.7	4.3	\$ 15,217	5.3	63.2
Immunizations and screening for infectious disease	3	0.1	4.0	\$ 11,005	0.0	0.0
Neoplasms	5144	4.4	6.4	\$29,048	7.6	27.3
Cancer of head and neck	75	1.5	7.9	\$ 32,721	5.3	34.7
Cancer of esophagus	36	0.7	9.4	\$ 36,085	25.0	38.9
Cancer of stomach	66	1.3	11.2	\$ 41,595	15.2	48.5
Cancer of colon	333	6.5	9.2	\$ 38,686	5.1	28.8
Cancer of rectum and anus	117	2.3	8.1	\$ 33,414	5.1	24.8
Cancer of liver and intrahepatic bile duct	48	0.9	9.3	\$ 38,844	14.6	50.0
Cancer of pancreas	88	1.7	6.8	\$ 23,659	22.7	40.9
Cancer of other GI organs; peritoneum	53	1.0	9.7	\$ 40,692	5.7	26.4
Cancer of bronchus; lung	476	9.3	7.6	\$ 32,023	18.7	47.7
Cancer; other respiratory and intrathoracic	5	0.1	8.4	\$ 27,759	0.0	40.0
Cancer of bone and connective tissue	40	0.8	7.9	\$ 40,681	7.5	25.0
Melanomas of skin	13	0.3	6.5	\$ 51,865	7.7	0.0
Other non-epithelial cancer of skin	28	0.5	5.1	\$ 21,216	3.6	17.9
Cancer of breast	167	3.2	3.2	\$ 17,786	4.2	9.6
Cancer of uterus	144	2.8	4.1	\$ 18,676	1.4	6.3
Cancer of cervix	58	1.1	3.7	\$ 16,430	3.4	6.9
Cancer of ovary	71	1.4	6.7	\$ 29,931	5.6	15.5
Cancer of other female genital organs	19	0.4	4.8	\$ 19,158	0.0	15.8
Cancer of prostate	214	4.2	2.8	\$ 20,660	1.9	6.1
Cancer of testis	5	0.1	9.0	\$ 50,528	0.0	60.0
Cancer of bladder	89	1.7	6.9	\$ 38,320	4.5	30.3
Cancer of kidney and renal pelvis	111	2.2	5.5	\$ 24,646	2.7	18.0
Cancer of other urinary organs	5	0.1	11.2	\$ 31,493	0.0	0.0
Cancer of brain and nervous system	106	2.1	9.8	\$ 50,533	5.7	46.2
Cancer of thyroid	18	0.3	1.8	\$ 14,742	0.0	0.0
Hodgkin's disease	12	0.2	11.8	\$ 74,483	0.0	58.3

APPENDIX A

<i>Clinical Classifications Software Categories and Chapter Headings</i>	Number of Discharges	Percent of Discharges	Mean LOS	Mean Total Charges	Percent Expired	Percent Admitted from ED
Non-Hodgkin's lymphoma	117	2.3	9.7	\$ 38,975	15.4	52.1
Leukemias	104	2.0	20.3	\$ 122,112	19.2	44.2
Multiple myeloma	52	1.0	11.9	\$ 49,036	9.6	42.3
Cancer; other and unspecified primary	26	0.5	7.4	\$ 39,225	0.0	26.9
Secondary malignancies	707	13.7	7.2	\$ 25,974	18.4	56.9
Malignant neoplasm without specification of site	12	0.2	4.2	\$ 20,093	16.7	50.0
Neoplasms of unspecified nature or uncertain behavior	135	2.6	5.6	\$ 26,942	3.7	40.7
Maintenance chemotherapy; radiotherapy	504	9.8	5.0	\$ 24,511	1.0	1.4
Benign neoplasm of uterus	542	10.5	2.4	\$ 13,330	0.0	3.3
Other and unspecified benign neoplasm	548	10.7	4.7	\$ 22,822	0.4	18.8
Endocrine, nutritional & metabolic diseases, & immunity disorders	4125	3.5	4.5	\$16,603	1.6	66.8
Thyroid disorders	92	2.2	3.8	\$ 16,016	0.0	54.3
Diabetes mellitus without complication	70	1.7	2.7	\$ 8,462	0.0	78.6
Diabetes mellitus with complications	1582	38.4	5.5	\$ 17,634	1.4	81.2
Other endocrine disorders	130	3.2	5.3	\$ 19,068	1.5	70.8
Nutritional deficiencies	27	0.7	6.9	\$ 22,291	11.1	51.9
Disorders of lipid metabolism	4	0.1	3.5	\$ 10,715	0.0	50.0
Gout and other crystal arthropathies	77	1.9	5.1	\$ 13,215	0.0	85.7
Fluid and electrolyte disorders	1442	35.0	4.0	\$ 11,742	2.4	74.6
Cystic fibrosis	39	0.9	8.1	\$ 51,513	2.6	12.8
Other nutritional; endocrine; and metabolic disorders	662	16.0	3.1	\$ 23,328	0.9	16.8
Disease of the blood and blood forming organs	1190	1.0	4.9	\$19,288	1.8	64.7
Deficiency and other anemia	479	40.3	3.9	\$ 15,341	1.9	67.8
Acute posthemorrhagic anemia	26	2.2	2.8	\$ 14,021	0.0	80.8
Sickle cell anemia	298	25.0	5.5	\$ 14,672	0.3	79.2
Coagulation and hemorrhagic disorders	172	14.5	4.4	\$ 23,414	2.9	55.2
Diseases of white blood cells	200	16.8	7.0	\$ 30,936	2.5	40.5
Other hematologic conditions	15	1.3	6.7	\$ 43,570	6.7	80.0
Mental health and substance abuse disorders	2664	2.3	5.7	\$11,444	1.3	71.0
Adjustment disorders	10	0.4	3.6	\$ 6,534	0.0	70.0
Anxiety disorders	64	2.4	3.7	\$ 9,931	1.6	82.8
Attention-deficit	1	0.0	1.0	\$ 3,990	0.0	0.0
Delirium	233	8.7	6.3	\$ 12,396	1.7	88.8
Developmental disorders	8	0.3	6.4	\$ 12,240	0.0	62.5
Disorders usually diagnosed in infancy	3	0.1	1.3	\$ 4,481	0.0	33.3
Mood disorders	1131	42.5	5.7	\$ 7,816	0.0	53.3
Personality disorders	5	0.2	2.6	\$ 8,526	0.0	80.0
Schizophrenia and other psychotic disorders	308	11.6	7.9	\$ 9,958	0.0	72.4
Alcohol-related disorders	332	12.5	4.7	\$ 13,349	0.9	96.7
Substance-related disorders	262	9.8	3.7	\$ 12,435	1.5	85.5
Suicide and intentional self-inflicted injury	2	0.1	2.0	\$ 7,944	0.0	100.0
Screening and history of mental health and substance abuse codes	185	6.9	7.7	\$ 27,053	11.4	93.0
Miscellaneous disorders	120	4.5	5.1	\$ 17,688	0.8	57.5
Diseases of the nervous system and sense organs	3588	3.1	4.2	\$16,665	1.7	76.1
Meningitis (except that caused by tuberculosis or STD)	223	6.2	3.9	\$ 16,206	1.8	91.0
Encephalitis (except that caused by tuberculosis or STD)	16	0.4	9.9	\$ 43,357	6.3	56.3
Other CNS infection and poliomyelitis	31	0.9	14.4	\$ 56,949	6.5	61.3
Parkinson's disease	31	0.9	5.0	\$ 11,353	0.0	93.5
Multiple sclerosis	95	2.6	4.7	\$ 12,728	1.1	69.5
Other hereditary and degenerative nervous system conditions	169	4.7	6.1	\$ 27,000	2.4	62.1
Paralysis	54	1.5	3.9	\$ 32,355	0.0	33.3
Epilepsy; convulsions	1001	27.9	4.1	\$ 16,128	1.5	80.3
Headache; including migraine	318	8.9	2.8	\$ 10,147	0.0	84.3
Coma; stupor; and brain damage	48	1.3	7.0	\$ 33,207	29.2	66.7

APPENDIX A

<i>Clinical Classifications Software Categories and Chapter Headings</i>	Number of Discharges	Percent of Discharges	Mean LOS	Mean Total Charges	Percent Expired	Percent Admitted from ED
Retinal detachments; defects; vascular occlusion; and retinopathy	9	0.3	6.6	\$ 19,316	0.0	77.8
Glaucoma	3	0.1	2.3	\$ 8,658	0.0	100.0
Blindness and vision defects	16	0.4	2.6	\$ 11,075	0.0	81.3
Inflammation; infection of eye (except that caused by tuberculosis or sexually transmitted disease)	86	2.4	3.4	\$ 10,450	0.0	69.8
Other eye disorders	33	0.9	2.5	\$ 15,133	0.0	54.5
Otitis media and related conditions	170	4.7	1.7	\$ 11,496	0.0	28.2
Conditions associated with dizziness or vertigo	253	7.1	2.6	\$ 10,376	0.0	94.5
Other ear and sense organ disorders	80	2.2	1.9	\$ 16,208	0.0	52.5
Other nervous system disorders	952	26.5	5.0	\$ 18,103	2.1	78.5
Diseases of the circulatory system	18072	15.4	4.8	\$28,357	3.4	73.1
Heart valve disorders	337	1.9	10.1	\$ 82,714	4.7	26.1
Peri-; endo-; and myocarditis; cardiomyopathy (except that caused by tuberculosis or STD)	285	1.6	8.8	\$ 54,593	3.5	65.3
Essential hypertension	144	0.8	2.5	\$ 9,453	0.0	86.1
Hypertension with complications and secondary hypertension	605	3.3	5.6	\$ 21,012	2.0	80.2
Acute myocardial infarction	1730	9.6	5.3	\$ 42,897	6.5	81.6
Coronary atherosclerosis and other heart disease	2605	14.4	3.7	\$ 40,527	0.9	47.4
Nonspecific chest pain	1764	9.8	2.1	\$ 11,111	0.1	92.4
Pulmonary heart disease	482	2.7	6.3	\$ 22,545	5.0	85.9
Other and ill-defined heart disease	21	0.1	4.4	\$ 42,926	0.0	52.4
Conduction disorders	223	1.2	3.7	\$ 40,896	1.8	61.4
Cardiac dysrhythmias	1975	10.9	3.8	\$ 21,830	1.5	72.6
Cardiac arrest and ventricular fibrillation	54	0.3	5.7	\$ 49,229	51.9	87.0
Congestive heart failure; nonhypertensive	2851	15.8	6.0	\$ 25,787	4.2	85.5
Acute cerebrovascular disease	1713	9.5	6.5	\$ 23,468	9.5	92.3
Occlusion or stenosis of precerebral arteries	444	2.5	2.6	\$ 19,156	0.0	22.5
Other and ill-defined cerebrovascular disease	37	0.2	3.2	\$ 17,145	0.0	78.4
Transient cerebral ischemia	627	3.5	2.7	\$ 11,924	0.2	94.9
Late effects of cerebrovascular disease	60	0.3	5.2	\$ 12,539	1.7	88.3
Peripheral and visceral atherosclerosis	576	3.2	6.3	\$ 34,019	4.5	39.4
Aortic; peripheral; and visceral artery aneurysms	231	1.3	6.4	\$ 52,758	6.9	30.3
Aortic and peripheral arterial embolism or thrombosis	106	0.6	8.1	\$ 43,969	7.5	47.2
Other circulatory disease	465	2.6	5.0	\$ 20,664	2.6	78.5
Phlebitis; thrombophlebitis and thromboembolism	547	3.0	5.0	\$ 15,922	0.9	66.2
Varicose veins of lower extremity	17	0.1	7.1	\$ 15,726	0.0	52.9
Hemorrhoids	104	0.6	4.5	\$ 14,643	1.9	76.0
Other diseases of veins and lymphatics	69	0.4	6.8	\$ 18,590	1.4	62.3
Diseases of the respiratory system	11345	9.7	5.4	\$20,004	4.5	83.4
Pneumonia (except that caused by tuberculosis or STD)	3227	28.4	5.7	\$ 18,876	3.5	86.1
Influenza	75	0.7	2.9	\$ 11,963	0.0	72.0
Acute and chronic tonsillitis	335	3.0	1.6	\$ 9,455	0.0	29.9
Acute bronchitis	809	7.1	3.1	\$ 12,585	0.1	82.1
Other upper respiratory infections	378	3.3	2.1	\$ 8,618	0.0	82.8
Chronic obstructive pulmonary disease and bronchiectasis	1767	15.6	4.9	\$ 14,322	3.0	90.2
Asthma	1681	14.8	3.0	\$ 10,770	0.2	84.9
Aspiration pneumonitis; food/vomitus	555	4.9	8.7	\$ 29,114	15.7	91.9
Pleurisy; pneumothorax; pulmonary collapse	362	3.2	7.8	\$ 26,446	3.6	76.0
Respiratory failure; insufficiency; arrest (adult)	1488	13.1	9.8	\$ 43,609	15.5	85.8
Lung disease due to external agents	29	0.3	4.7	\$ 15,928	0.0	82.8
Other lower respiratory disease	462	4.1	4.2	\$ 18,473	2.2	68.2
Other upper respiratory disease	177	1.6	5.5	\$ 31,081	0.6	74.6

APPENDIX A

<i>Clinical Classifications Software Categories and Chapter Headings</i>	Number of Discharges	Percent of Discharges	Mean LOS	Mean Total Charges	Percent Expired	Percent Admitted from ED
Diseases of the digestive system	11386	9.7	4.9	\$19,668	1.3	76.7
Intestinal infection	835	7.3	4.8	\$ 14,837	1.1	90.3
Disorders of teeth and jaw	77	0.7	2.5	\$ 12,569	0.0	45.5
Diseases of mouth; excluding dental	67	0.6	4.5	\$ 15,409	1.5	68.7
Esophageal disorders	584	5.1	3.6	\$ 16,555	0.5	62.8
Gastroduodenal ulcer (except hemorrhage)	146	1.3	5.9	\$ 23,148	1.4	77.4
Gastritis and duodenitis	393	3.5	3.8	\$ 12,714	0.3	86.3
Other disorders of stomach and duodenum	288	2.5	5.9	\$ 18,909	1.4	77.8
Appendicitis and other appendiceal conditions	976	8.6	2.6	\$ 16,516	0.1	91.6
Abdominal hernia	820	7.2	4.2	\$ 22,734	0.7	35.0
Regional enteritis and ulcerative colitis	281	2.5	6.0	\$ 19,715	1.4	66.5
Intestinal obstruction without hernia	1026	9.0	7.2	\$ 25,734	3.8	88.8
Diverticulosis and diverticulitis	1071	9.4	5.5	\$ 20,182	0.7	71.3
Anal and rectal conditions	151	1.3	5.1	\$ 18,195	1.3	66.9
Peritonitis and intestinal abscess	81	0.7	7.1	\$ 24,782	3.7	76.5
Biliary tract disease	1324	11.6	4.5	\$ 20,829	0.5	73.4
Other liver diseases	329	2.9	6.2	\$ 25,827	6.4	83.6
Pancreatic disorders (not diabetes)	763	6.7	5.7	\$ 20,361	0.1	91.0
Gastrointestinal hemorrhage	906	8.0	5.0	\$ 19,781	3.1	90.3
Noninfectious gastroenteritis	474	4.2	2.8	\$ 9,729	0.0	90.7
Other gastrointestinal disorders	794	7.0	5.8	\$ 23,726	1.5	57.9
Diseases of the genitourinary system	5607	4.8	4.5	\$15,549	1.8	67.1
Nephritis; nephrosis; renal sclerosis	41	0.7	4.0	\$ 16,154	0.0	58.5
Acute and unspecified renal failure	1401	25.0	7.1	\$ 21,729	5.6	85.5
Chronic renal failure	78	1.4	5.5	\$ 25,217	3.8	59.0
Urinary tract infections	1712	30.5	4.6	\$ 12,210	1.1	90.0
Calculus of urinary tract	530	9.5	2.8	\$ 12,494	0.0	74.5
Other diseases of kidney and ureters	164	2.9	4.9	\$ 20,702	0.6	42.1
Other diseases of bladder and urethra	78	1.4	4.9	\$ 22,840	1.3	44.9
Genitourinary symptoms and ill-defined conditions	95	1.7	3.3	\$ 11,208	0.0	68.4
Hyperplasia of prostate	123	2.2	2.8	\$ 12,569	0.0	17.1
Inflammatory conditions of male genital organs	77	1.4	3.9	\$ 11,974	0.0	75.3
Other male genital disorders	50	0.9	2.8	\$ 14,124	0.0	56.0
Nonmalignant breast conditions	89	1.6	2.8	\$ 11,813	0.0	46.1
Inflammatory diseases of female pelvic organs	133	2.4	3.7	\$ 12,732	0.0	59.4
Endometriosis	127	2.3	2.6	\$ 14,222	0.0	7.9
Prolapse of female genital organs	276	4.9	1.9	\$ 15,070	0.0	0.0
Menstrual disorders	235	4.2	2.2	\$ 13,341	0.0	7.7
Ovarian cyst	196	3.5	2.5	\$ 12,149	0.5	44.4
Menopausal disorders	31	0.6	2.6	\$ 14,430	0.0	16.1
Other female genital disorders	171	3.0	2.9	\$ 14,593	0.0	24.0
Complications of pregnancy, childbirth, & the puerperium	13670	11.7	2.8	\$6,957	0.0	9.1
Contraceptive and procreative management	3	0.0	1.0	\$ 7,672	0.0	0.0
Spontaneous abortion	37	0.3	2.3	\$ 6,738	0.0	45.9
Induced abortion	22	0.2	1.4	\$ 5,347	0.0	40.9
Postabortion complications	6	0.0	1.7	\$ 5,740	0.0	100.0
Ectopic pregnancy	98	0.7	1.9	\$ 11,363	0.0	82.7
Other complications of pregnancy	1317	9.6	2.6	\$ 6,398	0.0	26.1
Hemorrhage during pregnancy; abruptio placenta; placenta previa	156	1.1	4.6	\$ 9,963	0.6	27.6
Hypertension complicating pregnancy; childbirth and the puerperium	677	5.0	3.6	\$ 8,550	0.0	16.1
Early or threatened labor	733	5.4	4.1	\$ 7,138	0.0	28.9
Prolonged pregnancy	791	5.8	2.7	\$ 6,367	0.0	0.5
Diabetes or abnormal glucose tolerance complicating pregnancy; childbirth; or the puerperium	339	2.5	2.6	\$ 6,612	0.0	4.4

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<i>Clinical Classifications Software Categories and Chapter Headings</i>	Number of Discharges	Percent of Discharges	Mean LOS	Mean Total Charges	Percent Expired	Percent Admitted from ED
Malposition; malpresentation	529	3.9	3.3	\$ 9,340	0.0	3.0
Fetopelvic disproportion; obstruction	163	1.2	2.5	\$ 7,033	0.0	3.1
Previous C-section	1561	11.4	2.8	\$ 8,864	0.0	1.9
Fetal distress and abnormal forces of labor	650	4.8	2.8	\$ 7,552	0.0	3.1
Polyhydramnios and other problems of amniotic cavity	581	4.3	3.9	\$ 8,043	0.0	9.1
Umbilical cord complication	544	4.0	2.2	\$ 5,272	0.0	3.5
OB-related trauma to perineum and vulva	2626	19.2	2.2	\$ 5,247	0.0	2.9
Forceps delivery	84	0.6	2.2	\$ 5,351	0.0	4.8
Other complications of birth; puerperium affecting management of mother	1961	14.3	2.9	\$ 7,360	0.0	8.3
Normal pregnancy and/or delivery	792	5.8	2.0	\$ 5,363	0.0	2.5
Diseases of the skin and subcutaneous tissue	2511	2.1	5.1	\$13,607	0.6	75.1
Skin and subcutaneous tissue infections	2164	86.2	4.6	\$ 12,217	0.4	79.5
Other inflammatory condition of skin	39	1.6	5.9	\$ 20,350	0.0	66.7
Chronic ulcer of skin	254	10.1	9.6	\$ 24,664	2.4	45.3
Other skin disorders	54	2.2	3.6	\$ 12,430	0.0	46.3
Diseases of the musculoskeletal system and connective tissue	6557	5.6	3.8	\$29,983	0.2	21.5
Infective arthritis and osteomyelitis (except that caused by tuberculosis or STD)	301	4.6	7.7	\$ 26,611	0.7	60.5
Rheumatoid arthritis and related disease	58	0.9	3.7	\$ 14,817	1.7	65.5
Osteoarthritis	2724	41.5	3.2	\$ 29,005	0.0	1.6
Other non-traumatic joint disorders	176	2.7	3.6	\$ 20,314	0.0	54.0
Spondylosis; intervertebral disc disorders; other back problems	1704	26.0	3.3	\$ 28,843	0.2	28.5
Osteoporosis	8	0.1	3.5	\$ 21,051	0.0	0.0
Pathological fracture	240	3.7	6.4	\$ 26,341	2.5	62.9
Acquired foot deformities	61	0.9	2.6	\$ 25,012	0.0	1.6
Other acquired deformities	286	4.4	5.2	\$ 64,123	0.0	4.9
Systemic lupus erythematosus and connective tissue disorders	118	1.8	4.0	\$ 18,157	0.8	45.8
Other connective tissue disease	512	7.8	4.3	\$ 18,508	0.4	57.0
Other bone disease and musculoskeletal deformities	369	5.6	4.1	\$ 48,835	0.0	15.7
Congenital anomalies	875	0.7	8.5	\$75,068	1.4	12.1
Cardiac and circulatory congenital anomalies	317	36.2	10.5	\$ 116,316	3.2	3.5
Digestive congenital anomalies	129	14.7	8.4	\$ 52,044	0.0	45.7
Genitourinary congenital anomalies	77	8.8	3.3	\$ 21,916	1.3	20.8
Nervous system congenital anomalies	41	4.7	9.6	\$ 69,870	0.0	2.4
Other congenital anomalies	311	35.5	7.7	\$ 56,418	0.3	6.1
Certain conditions originating in the perinatal period	648	0.6	9.4	\$38,972	1.5	36.9
Short gestation; low birth weight; and fetal growth retardation	78	12.0	21.8	\$ 54,214	3.8	1.3
Intrauterine hypoxia and birth asphyxia	6	0.9	12.7	\$ 34,922	16.7	0.0
Respiratory distress syndrome	36	5.6	17.9	\$ 73,936	8.3	0.0
Hemolytic jaundice and perinatal jaundice	175	27.0	1.9	\$ 4,023	0.0	37.1
Birth trauma	8	1.2	2.1	\$ 1,847	0.0	0.0
Other perinatal conditions	345	53.2	9.6	\$ 50,536	0.9	50.1
Injury and poisoning	9701	8.3	5.2	\$23,342	1.9	77.6
Joint disorders and dislocations; trauma-related	116	1.2	2.6	\$ 18,888	1.7	49.1
Fracture of neck of femur (hip)	814	8.4	6.5	\$ 28,971	2.8	94.3
Spinal cord injury	49	0.5	13.4	\$ 65,596	6.1	89.8
Skull and face fractures	213	2.2	2.9	\$ 15,397	1.4	89.2
Fracture of upper limb	586	6.0	3.3	\$ 17,435	0.5	81.4
Fracture of lower limb	898	9.3	4.4	\$ 21,987	0.8	87.5
Other fractures	764	7.9	5.7	\$ 21,719	1.0	86.1
Sprains and strains	141	1.5	2.7	\$ 11,032	0.7	69.5
Intracranial injury	953	9.8	6.1	\$ 27,538	5.9	97.1

APPENDIX A

<i>Clinical Classifications Software Categories and Chapter Headings</i>	Number of Discharges	Percent of Discharges	Mean LOS	Mean Total Charges	Percent Expired	Percent Admitted from ED
Crushing injury or internal injury	385	4.0	6.5	\$ 31,892	4.7	97.4
Open wounds of head; neck; and trunk	145	1.5	2.0	\$ 12,289	0.0	98.6
Open wounds of extremities	156	1.6	3.3	\$ 12,947	0.0	88.5
Complication of device; implant or graft	1714	17.7	6.1	\$ 32,568	1.5	43.9
Complications of surgical procedures or medical care	1405	14.5	6.2	\$ 21,303	1.1	63.5
Superficial injury; contusion	175	1.8	4.1	\$ 11,707	1.1	92.0
Burns	31	0.3	3.7	\$ 11,098	0.0	80.6
Poisoning by psychotropic agents	264	2.7	3.3	\$ 11,813	0.4	91.7
Poisoning by other medications and drugs	434	4.5	2.9	\$ 11,473	0.9	91.7
Poisoning by nonmedicinal substances	50	0.5	3.2	\$ 13,183	2.0	86.0
Other injuries and conditions due to external causes	408	4.2	4.1	\$ 16,760	2.9	87.5
Liveborn	12213	10.4	3.3	\$5,144	0.4	0.1
Other conditions	4897	4.2	7.5	\$17,680	0.5	49.7
Syncope	892	18.2	3.0	\$ 13,032	0.6	94.4
Fever of unknown origin	397	8.1	3.0	\$ 10,763	0.8	70.5
Lymphadenitis	91	1.9	3.0	\$ 11,947	1.1	69.2
Gangrene	127	2.6	12.5	\$ 44,550	3.1	36.2
Shock	6	0.1	11.5	\$ 64,146	16.7	100.0
Nausea and vomiting	128	2.6	2.8	\$ 9,151	0.8	78.9
Abdominal pain	830	16.9	2.9	\$ 10,385	0.0	89.2
Malaise and fatigue	50	1.0	3.7	\$ 10,920	2.0	92.0
Allergic reactions	112	2.3	2.5	\$ 8,307	0.0	86.6
Rehabilitation care; fitting of prostheses; and adjustment of devices	1913	39.1	14.0	\$ 25,054	0.3	0.4
Administrative/social admission	1	0.0	1.0	\$ 764	0.0	0.0
Medical examination/evaluation	19	0.4	2.3	\$ 5,889	0.0	5.3
Other aftercare	28	0.6	2.1	\$ 11,266	0.0	10.7
Other screening for suspected conditions (not mental disorders or infectious disease)	10	0.2	2.3	\$ 7,790	0.0	50.0
Residual codes; unclassified	293	6.0	3.3	\$ 13,137	0.7	66.9
Other/Unknown	105	0.1	4.5	\$16,861	1.0	31.4
Total	117034	100	4.8	\$ 19,375	2.2	52.9

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.

Number and Percent of Discharges, Mean Length of Stay, Mean Charges, Percent Expired, and Percent Admitted from the ED by Ecode Delaware Hospitals, 2007

<i>Clinical Classifications Software Categories for Ecodes</i>	Number of Discharges	Percent of Discharges	Mean LOS	Mean Total Charges	Percent Expired	Percent Admitted from ED
E Codes: Cut/pierce	151	1.5	2.9	\$ 12,567	0.7	90.7
E Codes: Drowning/submersion	12	0.1	7.0	\$ 43,412	0.0	91.7
E Codes: Fall	4083	40.9	6.0	\$ 22,753	3.5	89.5
E Codes: Fire/burn	58	0.6	4.8	\$ 16,031	0.0	81.0
E Codes: Firearm	107	1.1	5.9	\$ 31,367	5.6	97.2
E Codes: Machinery	36	0.4	3.7	\$ 18,114	0.0	97.2
E Codes: Motor vehicle traffic (MVT)	1257	12.6	6.3	\$ 31,691	2.6	95.6
E Codes: Pedal cyclist; not MVT	87	0.9	2.9	\$ 15,117	0.0	89.7
E Codes: Pedestrian; not MVT	13	0.1	3.5	\$ 17,721	0.0	92.3
E Codes: Transport; not MVT	165	1.7	3.1	\$ 17,809	0.6	92.7
E Codes: Natural/environment	195	2.0	3.4	\$ 11,341	0.0	90.8
E Codes: Overexertion	135	1.4	3.6	\$ 14,933	0.7	80.7
E Codes: Poisoning	261	2.6	3.4	\$ 12,783	1.1	82.8
E Codes: Struck by; against	423	4.2	3.3	\$ 14,791	0.9	91.3
E Codes: Suffocation	28	0.3	4.7	\$ 23,999	17.9	82.1
E Codes: Adverse effects of medical care	762	7.6	12.6	\$ 89,007	2.4	38.2
E Codes: Adverse effects of medical drugs	1123	11.3	6.2	\$ 27,987	1.9	75.2
E Codes: Other specified and classifiable	410	4.1	7.2	\$ 28,386	1.7	62.0
E Codes: Other specified; NEC	135	1.4	6.7	\$ 20,019	0.7	63.7
E Codes: Unspecified	528	5.3	6.0	\$ 24,104	3.4	67.8
E Codes: Place of occurrence	11	0.1	4.1	\$ 17,801	0.0	81.8
Total	9980	100.0	6.2	\$ 28,616	2.6	82.1

APPENDIX C

Number of Patients who had a Principal Procedure during the Inpatient Stay by Principal Procedure and Sex of Patient Delaware Hospitals, 2007

<i>Single level CCS Procedure Categories and Chapter Headings</i>	Male	Female	Total
Operations on the nervous system	1143	1135	2278
Incision and excision of CNS	175	149	324
Insertion; replacement; or removal of extracranial ventricular shunt	48	49	97
Laminectomy; excision intervertebral disc	261	238	499
Diagnostic spinal tap	441	495	936
Insertion of catheter or spinal stimulator and injection into spinal canal	35	53	88
Decompression peripheral nerve	3	6	9
Other diagnostic nervous system procedures	26	13	39
Other non-OR or closed therapeutic nervous system procedures	12	16	28
Other OR therapeutic nervous system procedures	142	116	258
Operations on the endocrine system	52	103	155
Thyroidectomy; partial or complete	16	59	75
Diagnostic endocrine procedures	7	10	17
Other therapeutic endocrine procedures	29	34	63
Operations on the eye	56	30	86
Glaucoma procedures	1	1	2
Lens and cataract procedures	4	1	5
Destruction of lesion of retina and choroid	1	0	1
Other therapeutic procedures on eyelids; conjunctiva; cornea	40	18	58
Other intraocular therapeutic procedures	2	3	5
Other extraocular muscle and orbit therapeutic procedures	8	7	15
Operations on the ear	133	82	215
Tympanoplasty	8	1	9
Myringotomy	88	62	150
Mastoidectomy	5	3	8
Diagnostic procedures on ear	1	0	1
Other therapeutic ear procedures	31	16	47
Operations on the nose, mouth, and pharynx	387	299	686
Control of epistaxis	32	30	62
Plastic procedures on nose	6	10	16
Dental procedures	31	31	62
Tonsillectomy and/or adenoidectomy	149	105	254
Diagnostic procedures on nose; mouth and pharynx	9	15	24
Other non-OR therapeutic procedures on nose; mouth and pharynx	39	26	65
Other OR therapeutic procedures on nose; mouth and pharynx	121	82	203
Operations on the respiratory system	1100	899	1999
Tracheostomy; temporary and permanent	161	109	270
Tracheoscopy and laryngoscopy with biopsy	48	41	89
Lobectomy or pneumonectomy	127	123	250
Diagnostic bronchoscopy and biopsy of bronchus	258	224	482
Other diagnostic procedures on lung and bronchus	21	19	40
Incision of pleura; thoracentesis; chest drainage	337	277	614
Other diagnostic procedures of respiratory tract and mediastinum	35	28	63
Other non-OR therapeutic procedures on respiratory system	23	22	45
Other OR Rx procedures on respiratory system and mediastinum	90	56	146
Operations on the cardiovascular system	5864	4777	10641
Heart valve procedures	215	144	359
Coronary artery bypass graft (CABG)	517	222	739
Percutaneous transluminal coronary angioplasty (PTCA)	1300	729	2029
Diagnostic cardiac catheterization; coronary arteriography	873	834	1707
Insertion; revision; replacement; removal of cardiac pacemaker or cardioverter/defibrillator	603	448	1051
Other OR heart procedures	244	188	432
Extracorporeal circulation auxiliary to open heart procedures	6	3	9

APPENDIX C

<i>Single level CCS Procedure Categories and Chapter Headings</i>	Male	Female	Total
Endarterectomy; vessel of head and neck	206	155	361
Aortic resection; replacement or anastomosis	121	48	169
Varicose vein stripping; lower limb	1	0	1
Other vascular catheterization; not heart	587	847	1434
Peripheral vascular bypass	144	83	227
Other vascular bypass and shunt; not heart	12	15	27
Creation; revision and removal of arteriovenous fistula or vessel-to-vessel cannula	66	70	136
Hemodialysis	303	362	665
Other OR procedures on vessels of head and neck	34	21	55
Embolectomy and endarterectomy of lower limbs	39	28	67
Other OR procedures on vessels other than head and neck	407	427	834
Other diagnostic cardiovascular procedures	58	50	108
Other non-OR therapeutic cardiovascular procedures	128	103	231
Operations on the hemic and lymphatic system	184	166	350
Bone marrow transplant	13	13	26
Bone marrow biopsy	52	42	94
Procedures on spleen	32	28	60
Other therapeutic procedures; hemic and lymphatic system	87	83	170
Operations on the digestive system	4640	5869	10509
Injection or ligation of esophageal varices	1	0	1
Esophageal dilatation	18	32	50
Upper gastrointestinal endoscopy; biopsy	913	1274	2187
Gastrostomy; temporary and permanent	94	112	206
Colostomy; temporary and permanent	17	20	37
Ileostomy and other enterostomy	15	10	25
Gastrectomy; partial and total	23	25	48
Small bowel resection	95	128	223
Colonoscopy and biopsy	285	374	659
Proctoscopy and anorectal biopsy	16	26	42
Colorectal resection	457	526	983
Local excision of large intestine lesion (not endoscopic)	1	2	3
Appendectomy	523	433	956
Hemorrhoid procedures	20	10	30
Endoscopic retrograde cannulation of pancreas (ERCP)	18	22	40
Biopsy of liver	62	57	119
Cholecystectomy and common duct exploration	446	733	1179
Inguinal and femoral hernia repair	139	34	173
Other hernia repair	166	315	481
Laparoscopy (GI only)	16	38	54
Abdominal paracentesis	193	184	377
Exploratory laparotomy	26	23	49
Excision; lysis peritoneal adhesions	100	195	295
Peritoneal dialysis	14	6	20
Other bowel diagnostic procedures	15	6	21
Other non-OR upper GI therapeutic procedures	173	127	300
Other OR upper GI therapeutic procedures	185	515	700
Other non-OR lower GI therapeutic procedures	129	125	254
Other OR lower GI therapeutic procedures	234	193	427
Other gastrointestinal diagnostic procedures	23	31	54
Other non-OR gastrointestinal therapeutic procedures	79	112	191
Other OR gastrointestinal therapeutic procedures	144	181	325
Operations on the urinary system	721	634	1355
Endoscopy and endoscopic biopsy of the urinary tract	68	33	101
Transurethral excision; drainage; or removal urinary obstruction	164	102	266
Ureteral catheterization	83	130	213
Nephrotomy and nephrostomy	55	53	108
Nephrectomy; partial or complete	96	84	180
Kidney transplant	8	10	18
Genitourinary incontinence procedures	3	41	44
Extracorporeal lithotripsy; urinary	4	5	9
Indwelling catheter	61	33	94
Procedures on the urethra	39	5	44
Other diagnostic procedures of urinary tract	28	22	50
Other non-OR therapeutic procedures of urinary tract	25	56	81
Other OR therapeutic procedures of urinary tract	87	60	147

APPENDIX C

<i>Single level CCS Procedure Categories and Chapter Headings</i>	Male	Female	Total
Operations on the male genital organs	5082	0	5082
Transurethral resection of prostate (TURP)	132	0	132
Open prostatectomy	194	0	194
Circumcision	4648	0	4648
Diagnostic procedures; male genital	4	0	4
Other non-OR therapeutic procedures; male genital	36	0	36
Other OR therapeutic procedures; male genital	68	0	68
Operations on the female genital organs	0	2099	2099
Oophorectomy; unilateral and bilateral	0	203	203
Other operations on ovary	0	66	66
Ligation or occlusion of fallopian tubes	0	71	71
Other operations on fallopian tubes	0	26	26
Hysterectomy; abdominal and vaginal	0	1297	1297
Other excision of cervix and uterus	0	91	91
Abortion (termination of pregnancy)	0	5	5
Dilatation and curettage (D&C); aspiration after delivery or abortion	0	59	59
Diagnostic dilatation and curettage (D&C)	0	25	25
Repair of cystocele and rectocele; obliteration of vaginal vault	0	83	83
Other diagnostic procedures; female organs	0	40	40
Other non-OR therapeutic procedures; female organs	0	9	9
Other OR therapeutic procedures; female organs	0	124	124
Obstetrical procedures	0	12424	12424
Removal of ectopic pregnancy	0	69	69
Episiotomy	0	195	195
Cesarean section	0	3910	3910
Forceps; vacuum; and breech delivery	0	625	625
Artificial rupture of membranes to assist delivery	0	81	81
Other procedures to assist delivery	0	5676	5676
Diagnostic amniocentesis	0	5	5
Fetal monitoring	0	289	289
Repair of current obstetric laceration	0	1554	1554
Other therapeutic obstetrical procedures	0	20	20
Operations on the musculoskeletal system	3986	4757	8743
Partial excision bone	108	76	184
Bunionectomy or repair of toe deformities	3	3	6
Treatment; facial fracture or dislocation	68	9	77
Treatment; fracture or dislocation of radius and ulna	108	78	186
Treatment; fracture or dislocation of hip and femur	353	507	860
Treatment; fracture or dislocation of lower extremity (other than hip or femur)	299	284	583
Other fracture and dislocation procedure	192	188	380
Arthroscopy	2	2	4
Division of joint capsule; ligament or cartilage	4	10	14
Excision of semilunar cartilage of knee	8	9	17
Arthroplasty knee	807	1331	2138
Hip replacement; total and partial	481	631	1112
Arthroplasty other than hip or knee	39	85	124
Arthrocentesis	59	48	107
Injections and aspirations of muscles; tendons; bursa; joints and soft tissue	12	12	24
Amputation of lower extremity	202	124	326
Spinal fusion	497	686	1183
Other diagnostic procedures on musculoskeletal system	95	133	228
Other therapeutic procedures on muscles and tendons	316	223	539
Other OR therapeutic procedures on bone	142	171	313
Other OR therapeutic procedures on joints	136	90	226
Other non-OR therapeutic procedures on musculoskeletal system	22	37	59
Other OR therapeutic procedures on musculoskeletal system	33	20	53
Operations on the integumentary system	1262	1369	2631
Breast biopsy and other diagnostic procedures on breast	0	14	14
Lumpectomy; quadrantectomy of breast	1	29	30
Mastectomy	3	106	109
Incision and drainage; skin and subcutaneous tissue	341	304	645
Debridement of wound; infection or burn	379	315	694
Excision of skin lesion	28	25	53

APPENDIX C

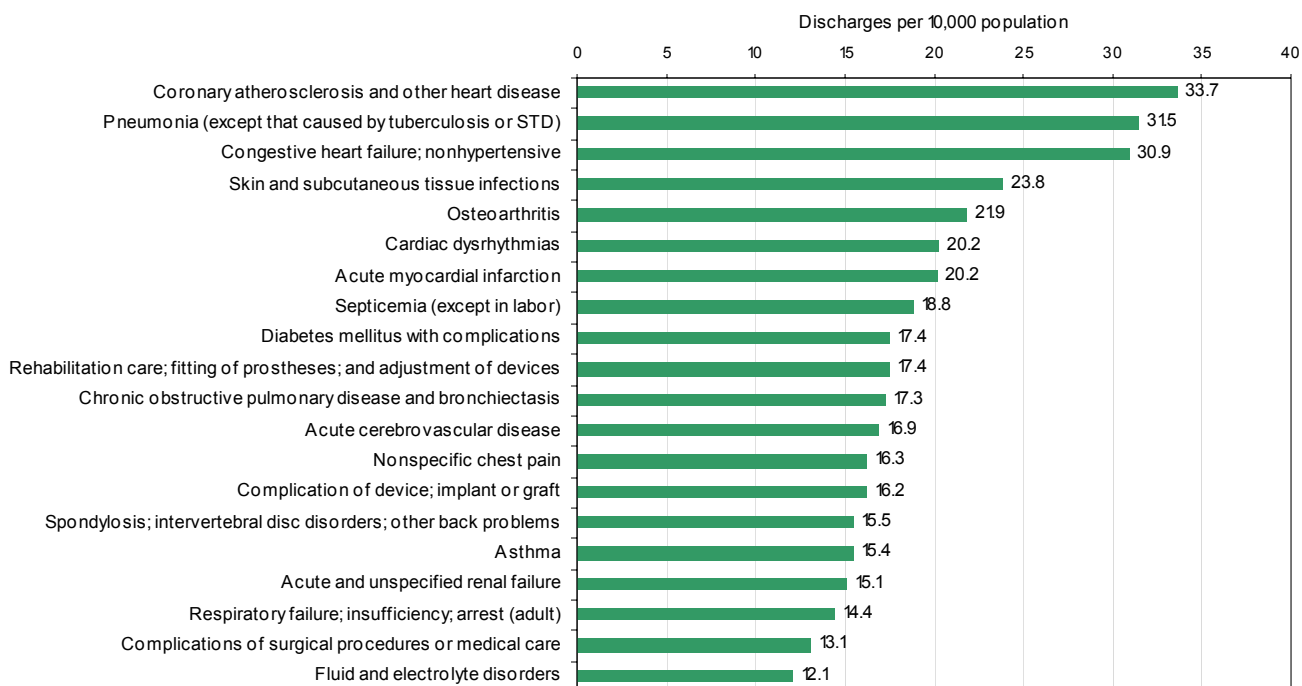
Single level CCS Procedure Categories and Chapter Headings	Male	Female	Total
Suture of skin and subcutaneous tissue	165	126	291
Skin graft	72	67	139
Other diagnostic procedures on skin and subcutaneous tissue	17	29	46
Other non-OR therapeutic procedures on skin and breast	216	249	465
Other OR therapeutic procedures on skin and breast	40	105	145
Miscellaneous diagnostic and therapeutic procedures	11866	16115	27981
Other organ transplantation	4	4	8
Computerized axial tomography (CT) scan head	1235	1413	2648
CT scan chest	387	469	856
CT scan abdomen	628	943	1571
Other CT scan	198	248	446
Myelogram	2	2	4
Routine chest X-ray	0	1	1
Intraoperative cholangiogram	1	1	2
Upper gastrointestinal X-ray	32	23	55
Lower gastrointestinal X-ray	8	14	22
Intravenous pyelogram	0	1	1
Cerebral arteriogram	79	106	185
Contrast aortogram	20	9	29
Contrast arteriogram of femoral and lower extremity arteries	9	7	16
Arterio- or venogram (not heart and head)	64	116	180
Diagnostic ultrasound of head and neck	82	129	211
Diagnostic ultrasound of heart (echocardiogram)	841	1074	1915
Diagnostic ultrasound of gastrointestinal tract	1	0	1
Diagnostic ultrasound of urinary tract	11	5	16
Diagnostic ultrasound of abdomen or retroperitoneum	354	448	802
Other diagnostic ultrasound	420	709	1129
Magnetic resonance imaging	461	654	1115
Electroencephalogram (EEG)	193	209	402
Nonoperative urinary system measurements	0	1	1
Cardiac stress tests	276	310	586
Electrocardiogram	4	8	12
Electrographic cardiac monitoring	2	1	3
Swan-Ganz catheterization for monitoring	4	4	8
Arterial blood gases	3	1	4
Microscopic examination (bacterial smear; culture; toxicology)	0	1	1
Radioisotope bone scan	14	27	41
Radioisotope pulmonary scan	57	81	138
Radioisotope scan and function studies	36	66	102
Other radioisotope scan	4	12	16
Therapeutic radiology for cancer treatment	19	30	49
Diagnostic physical therapy	13	12	25
Physical therapy exercises; manipulation; and other procedures	215	313	528
Traction; splints; and other wound care	43	78	121
Other physical therapy and rehabilitation	5	6	11
Respiratory intubation and mechanical ventilation	1276	1335	2611
Other respiratory therapy	0	2	2
Psychological and psychiatric evaluation and therapy	5	23	28
Alcohol and drug rehabilitation/detoxification	43	8	51
Ophthalmologic and otologic diagnosis and treatment	19	126	145
Nasogastric tube	20	20	40
Blood transfusion	623	719	1342

APPENDIX C

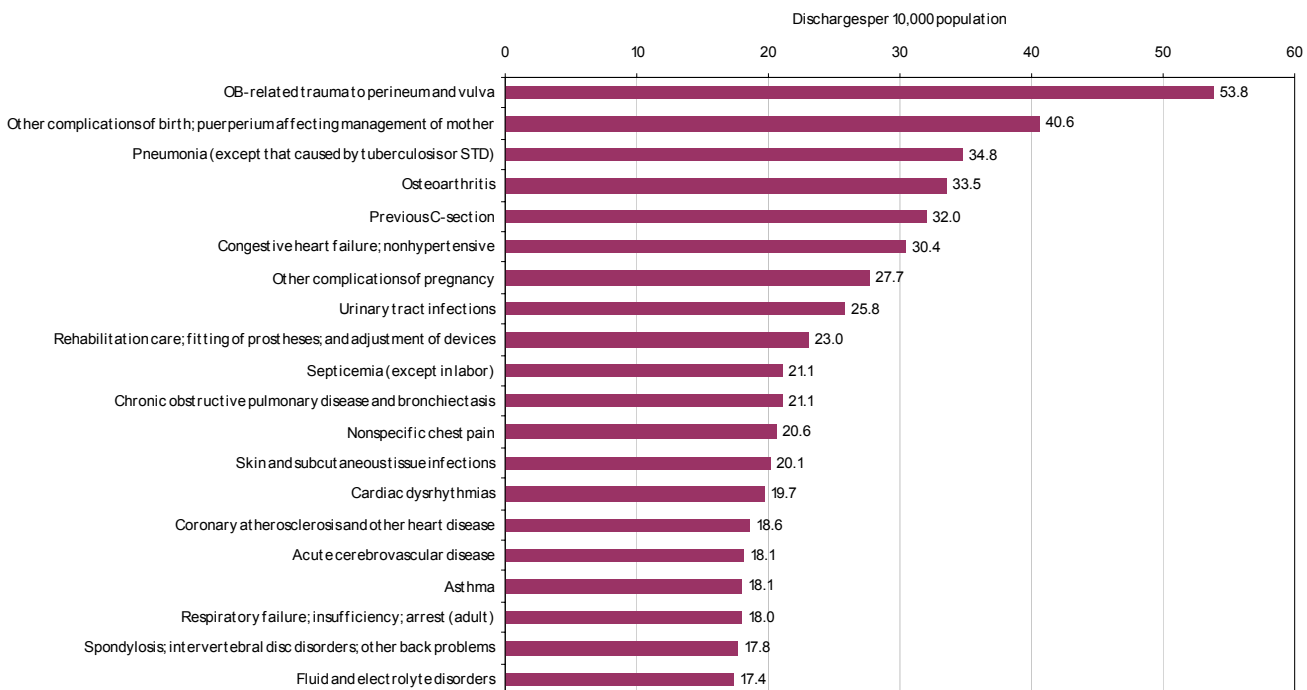
<i>Single level CCS Procedure Categories and Chapter Headings</i>	Male	Female	Total
Enteral and parenteral nutrition	71	145	216
Cancer chemotherapy	336	227	563
Conversion of cardiac rhythm	195	140	335
Other diagnostic radiology and related techniques	62	61	123
Other diagnostic procedures (interview; evaluation; consultation)	1069	1311	2380
Prophylactic vaccinations and inoculations	493	1527	2020
Nonoperative removal of foreign body	32	25	57
Other therapeutic procedures	1897	2910	4807
Total Principal Procedures	36476	50758	87234

APPENDIX D

Annual Hospitalization Rates for 20 Most Frequent Diagnoses* of Males Delaware Residents, 2007



Annual Hospitalization Rates for 20 Most Frequent Diagnoses* of Females Delaware Residents, 2007



*Excluding liveborn infants.

Source: Delaware Health Statistics Center

APPENDIX E

Number, Percent, and Mean Charges for the Highest Volume Discharges in 2007

CCS Principal Diagnoses	Number Discharges			Percent Discharges			Mean Charges		
	1995	2001	2007	1995	2001	2007	1995	2001	2007
All Discharges	87,824	100,681	118,207	100.0	101.0	100.0	\$ 9,669	\$ 10,918	\$ 19,375
Liveborn	9830	10406	12213	11.2	10.3	10.3	\$ 3,549	\$ 3,774	\$ 5,144
Pneumonia	2716	3001	3227	3.1	3.0	2.7	\$ 11,581	\$ 12,317	\$ 18,876
Congestive heart failure; nonhypertensive	2361	2820	2851	2.7	2.8	2.4	\$ 11,362	\$ 12,597	\$ 25,787
Osteoarthritis	921	1535	2724	1.0	1.5	2.3	\$ 21,957	\$ 18,548	\$ 29,005
OB-related trauma to perineum and vulva	2026	2192	2626	2.3	2.2	2.2	\$ 2,807	\$ 3,172	\$ 5,247
Coronary atherosclerosis & other heart disease	2891	2566	2605	3.3	2.5	2.2	\$ 13,658	\$ 15,759	\$ 40,527
Skin and subcutaneous tissue infections	796	1140	2164	0.9	1.1	1.8	\$ 8,029	\$ 7,748	\$ 12,217
Cardiac dysrhythmias	1429	1902	1975	1.6	1.9	1.7	\$ 9,060	\$ 12,193	\$ 21,830
Other complications of birth; puerperium	1063	1644	1961	1.2	1.6	1.7	\$ 3,837	\$ 4,638	\$ 7,360
Rehabilitation care	1827	2284	1913	2.1	2.3	1.6	\$ 15,527	\$ 12,940	\$ 25,054

Source: Delaware Health Statistics Center

Discharges with Highest Mean Charges in 2007

CCS Principal Diagnoses	Number Discharges			Percent Discharges			Mean Charges		
	1995	2001	2007	1995	2001	2007	1995	2001	2007
All Discharges	87,824	100,681	118,207	100.0	101.0	102.0	\$ 9,669	\$ 10,918	\$ 19,375
Leukemias	106	102	104	0.1	0.1	0.1	\$ 61,425	\$ 54,460	\$ 122,112
Cardiac and circulatory congenital anomalies	69	318	317	0.1	0.3	0.3	\$ 35,080	\$ 72,172	\$ 116,316
Tuberculosis	24	14	14	0.0	0.0	0.0	\$ 15,521	\$ 20,993	\$ 107,232
Heart valve disorders	130	231	337	0.1	0.2	0.3	\$ 39,445	\$ 44,343	\$ 82,714
Hodgkin's disease	18	26	12	0.0	0.0	0.0	\$ 73,935	\$ 28,958	\$ 74,483
Respiratory distress syndrome	31	39	36	0.0	0.0	0.0	\$ 28,927	\$ 36,311	\$ 73,936
Nervous system congenital anomalies	34	32	41	0.0	0.0	0.0	\$ 24,046	\$ 44,588	\$ 69,870
Spinal cord injury	22	33	49	0.0	0.0	0.0	\$ 43,786	\$ 34,654	\$ 65,596
Shock	29	20	6	0.0	0.0	0.0	\$ 15,823	\$ 20,333	\$ 64,146
Other acquired deformities	189	236	286	0.2	0.2	0.2	\$ 20,893	\$ 32,962	\$ 64,123

Source: Delaware Health Statistics Center

Conditions with the 10 Highest Total Charges 2007

Rank	CCS Principal Diagnoses	Total Billed Charges	% of Total Charges	Number of Discharges
1	Coronary atherosclerosis and other heart disease	\$ 105,573,916	4.7	2,605
2	Osteoarthritis	\$ 79,009,401	3.5	2,724
3	Acute myocardial infarction	\$ 74,212,141	3.3	1,730
4	Congestive heart failure; nonhypertensive	\$ 73,518,470	3.2	2,851
5	Septicemia (except in labor)	\$ 71,306,687	3.1	1,840
6	Respiratory failure; insufficiency; arrest (adult)	\$ 64,890,339	2.9	1,488
7	Liveborn	\$ 62,819,419	2.8	12,213
8	Pneumonia	\$ 60,912,383	2.7	3,227
9	Complication of device; implant or graft	\$ 55,821,747	2.5	1,714
10	Spondylosis; intervertebral disc disorders	\$ 49,147,622	2.2	1,704
Total for 10 most expensive conditions		\$ 697,212,125	30.7	32,096
Total aggregate charges for all discharges		\$ 2,267,508,451	100.0	117,034

Source: Delaware Health Statistics Center

APPENDIX F

2007 Delaware Hospitalizations

Top 10 Most Frequent Diagnoses for Medicare

<i>CCS Diagnosis</i>	<i>Number of Discharges</i>	<i>Percent of hospitalizations for this condition billed to Medicare</i>
Congestive heart failure; nonhypertensive	2295	80.5
Pneumonia (except that caused by tuberculosis or STD)	1831	56.7
Osteoarthritis	1667	61.2
Rehabilitation care; fitting of prostheses; and adjustment of devices	1509	78.9
Coronary atherosclerosis and other heart disease	1504	57.7
Septicemia (except in labor)	1361	74.0
Cardiac dysrhythmias	1339	67.8
Chronic obstructive pulmonary disease and bronchiectasis	1282	72.6
Acute cerebrovascular disease	1244	72.6
Respiratory failure; insufficiency; arrest (adult)	1100	73.9

Top 10 Most Frequent Diagnoses for Medicaid

<i>CCS Diagnosis</i>	<i>Number of Discharges</i>	<i>Percent of hospitalizations for this condition billed to Medicaid</i>
Liveborn	5714	46.8
OB-related trauma to perineum and vulva	1024	39.0
Other complications of birth; puerperium affecting management of mother	912	46.5
Other complications of pregnancy	763	57.9
Previous C-section	685	43.9
Asthma	627	37.3
Pneumonia (except that caused by tuberculosis or STD)	522	16.2
Skin and subcutaneous tissue infections	497	23.0
Mood disorders	480	42.4
Normal pregnancy and/or delivery	454	57.3

Top 10 Most Frequent Diagnoses for Privately Insured

<i>CCS Diagnosis</i>	<i>Number of Discharges</i>	<i>Percent of hospitalizations for this condition billed to Private Insurers</i>
Liveborn	5967	48.9
OB-related trauma to perineum and vulva	1450	55.2
Other complications of birth; puerperium affecting management of mother	984	50.2
Osteoarthritis	922	33.8
Coronary atherosclerosis and other heart disease	848	32.6
Previous C-section	818	52.4
Pneumonia (except that caused by tuberculosis or STD)	748	23.2
Skin and subcutaneous tissue infections	741	34.2
Spondylosis; intervertebral disc disorders; other back problems	727	42.7
Asthma	655	39.0

Top 10 Most Frequent Diagnoses for Uninsured

<i>CCS Diagnosis</i>	<i>Number of Discharges</i>	<i>Percent of hospitalizations for this condition billed to Uninsured Patients</i>
Liveborn	208	1.7
Skin and subcutaneous tissue infections	182	8.4
Mood disorders	152	13.4
Diabetes mellitus with complications	115	7.3
Nonspecific chest pain	110	6.2
Acute myocardial infarction	86	5.0
Pneumonia (except that caused by tuberculosis or STD)	85	2.6
Appendicitis and other appendiceal conditions	77	7.9
Asthma	75	4.5
Intracranial injury	68	7.1

Source: Delaware Health Statistics Center

APPENDIX G

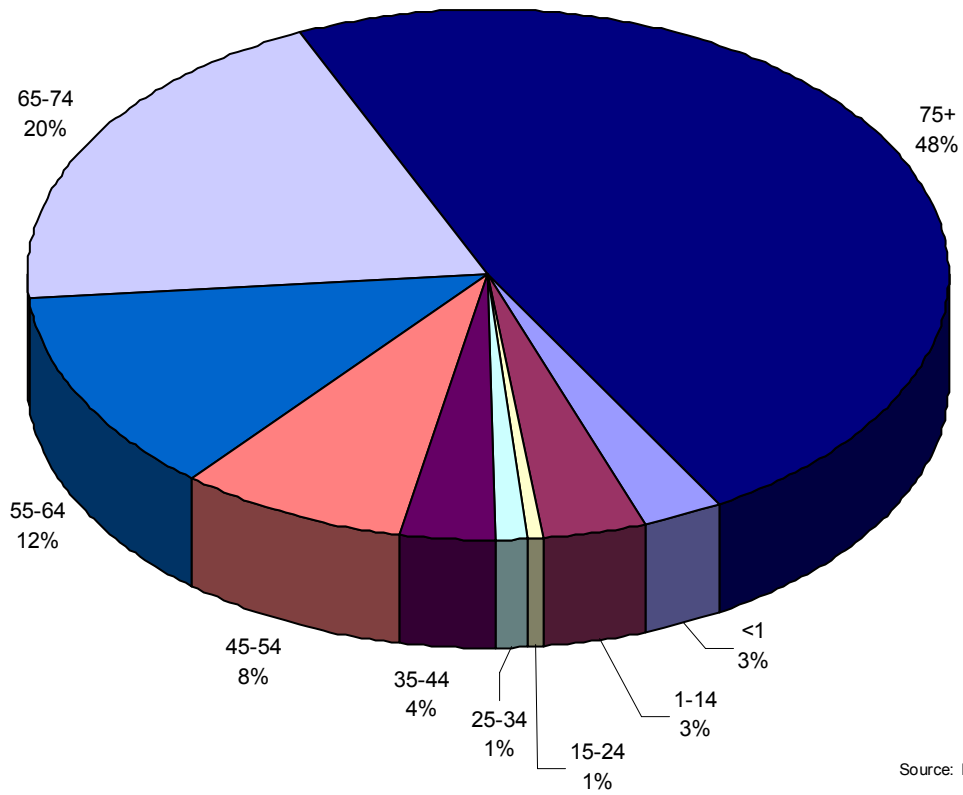
Conditions with the Highest Number of In-Hospital Deaths by Age Group
Delaware Hospitals, 2007

Primary Diagnosis	Age Group in Years					TOTAL ¹
	Under 1	1-17	18-44	45-64	65+	
<i>All Discharges</i>	15,614	9,810	28,514	26,023	37,069	117,034
Liveborn ²	50					50
Cardiac and circulatory congenital anomalies	9					9
Other perinatal conditions	3					3
Respiratory distress syndrome	3					3
Short gestation; low birth weight; and fetal growth retardation	3					3
Other liver diseases	2	1				3
Respiratory failure; insufficiency; arrest (adult)	2		6	46	177	231
Complication of device; implant or graft	1					1
Intrauterine hypoxia and birth asphyxia	1					1
Other congenital anomalies	1					1
Intracranial injury ³		4	13			17
Septicemia (except in labor)		3	11	72	224	310
Other nervous system disorders		3				3
Crushing injury or internal injury		2	4			6
Coma; stupor; and brain damage		1				1
Cystic fibrosis		1				1
Epilepsy; convulsions		1				1
Leukemias		1				1
HIV infection			12			12
Secondary malignancies			12	50	68	130
Acute cerebrovascular disease			9	34	119	162
Alcoholic liver disease			6	12		18
Cardiac arrest and ventricular fibrillation			3			3
Poisoning by other medications and drugs			3			3
Acute and unspecified renal failure					64	64
Acute myocardial infarction				17	95	112
Aspiration pneumonitis; food/vomitus				13	73	86
Cancer of bronchus; lung				30	58	88
Congestive heart failure; nonhypertensive					110	110
Fluid and electrolyte disorders				13		13
Pneumonia (except that caused by tuberculosis or STD)				22	89	111

Notes:

1. Total will not equal the age group sum due to 4 discharges of unknown age.
2. 82 percent of these infants were of low birth weight (<2500 grams) and 76 percent were very low birth weight (<1500 grams).
3. 60 percent of intracranial injuries were due to motor vehicle accidents.

Age Group Distribution of Patients who Died while Hospitalized
Delaware Hospitals, 2007



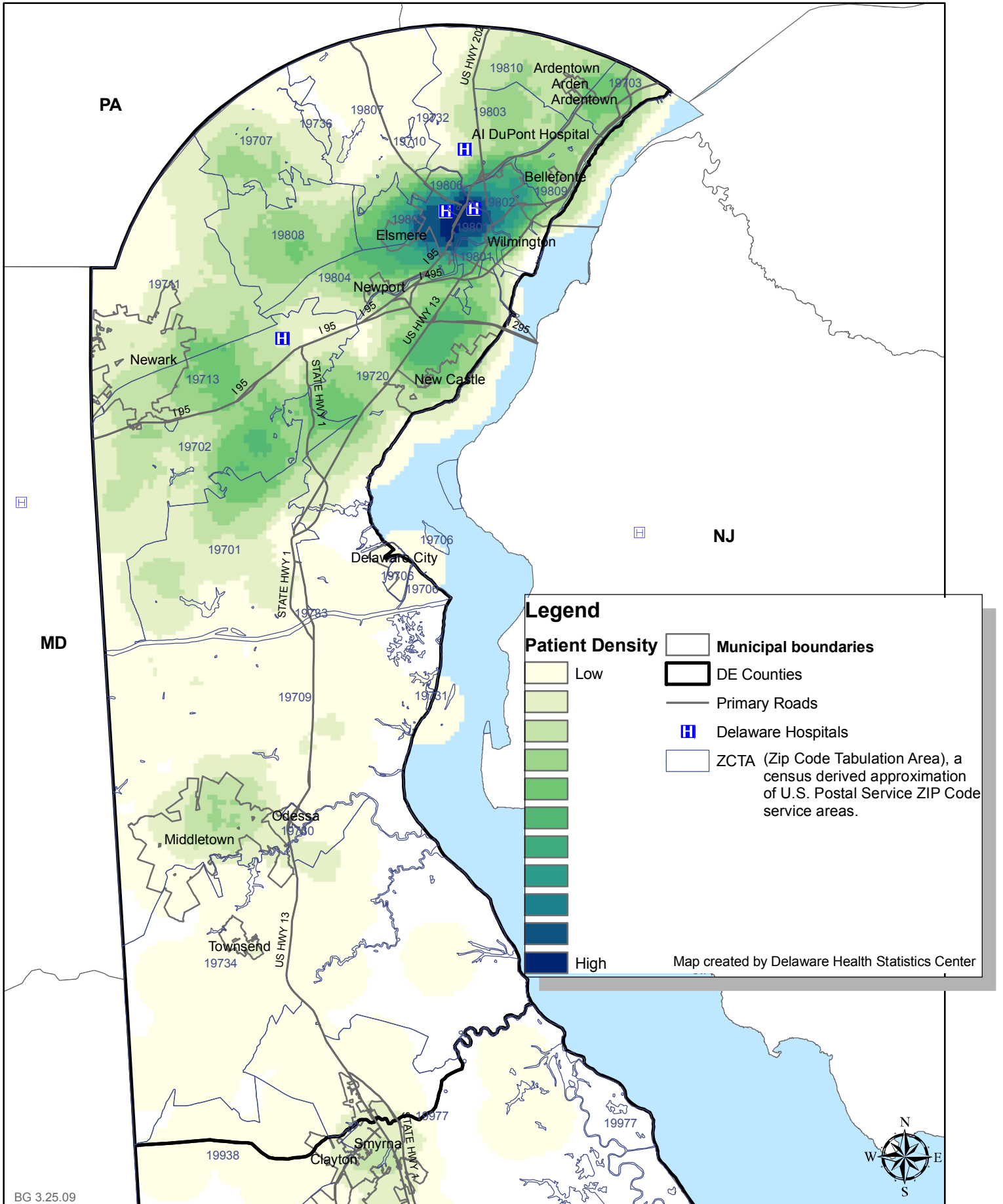
Source: Delaware Health Statistics Center

PATIENT DISTRIBUTION MAPS

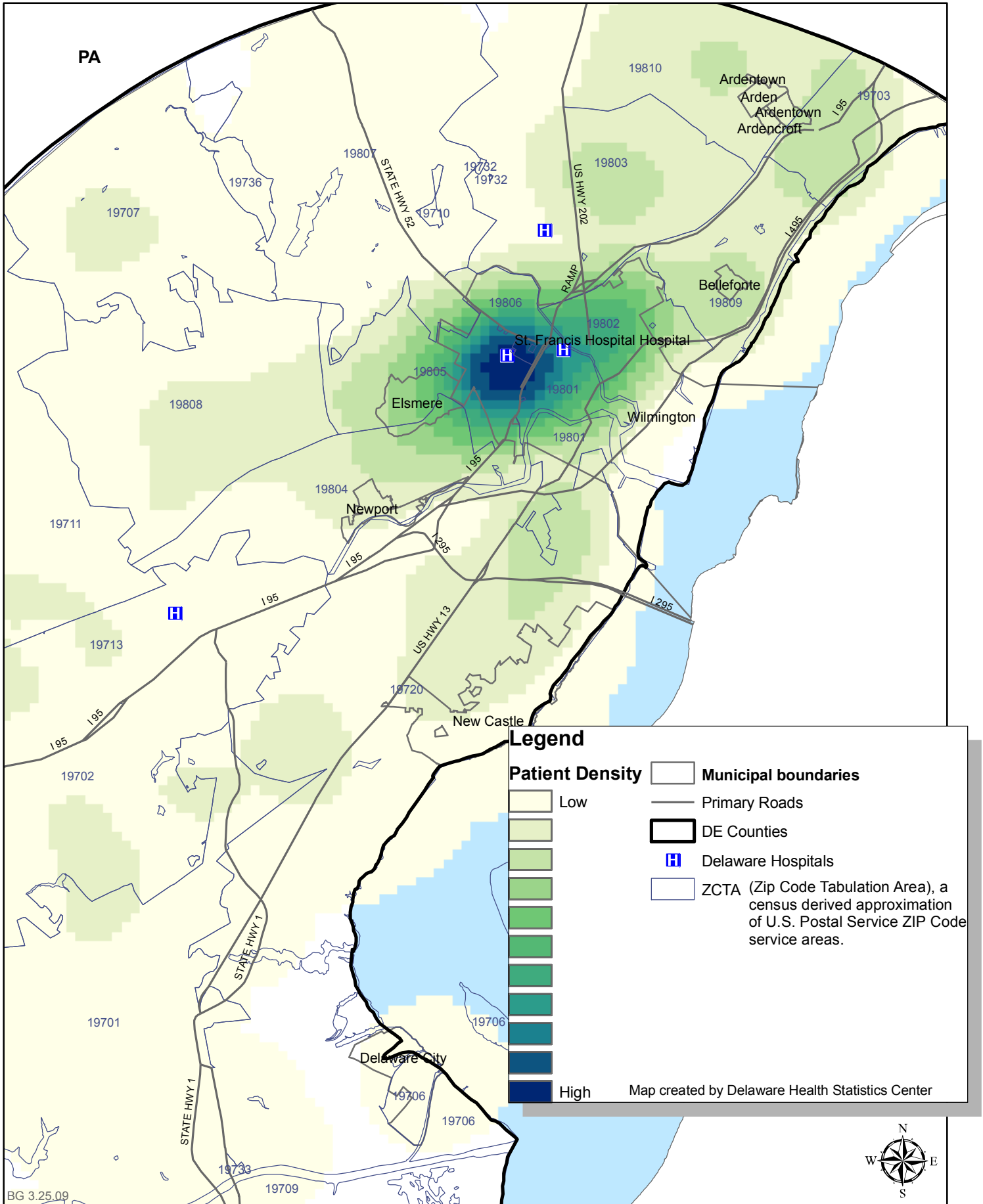
Patient density maps display the quantity and distribution of 2007 hospital discharges as a graphical display of areas of lowest concentration to areas of highest concentration for each hospital in Delaware.

Density layers were created using ESRI's Spatial Analyst and were based on point locations geocoded from the patient's address.

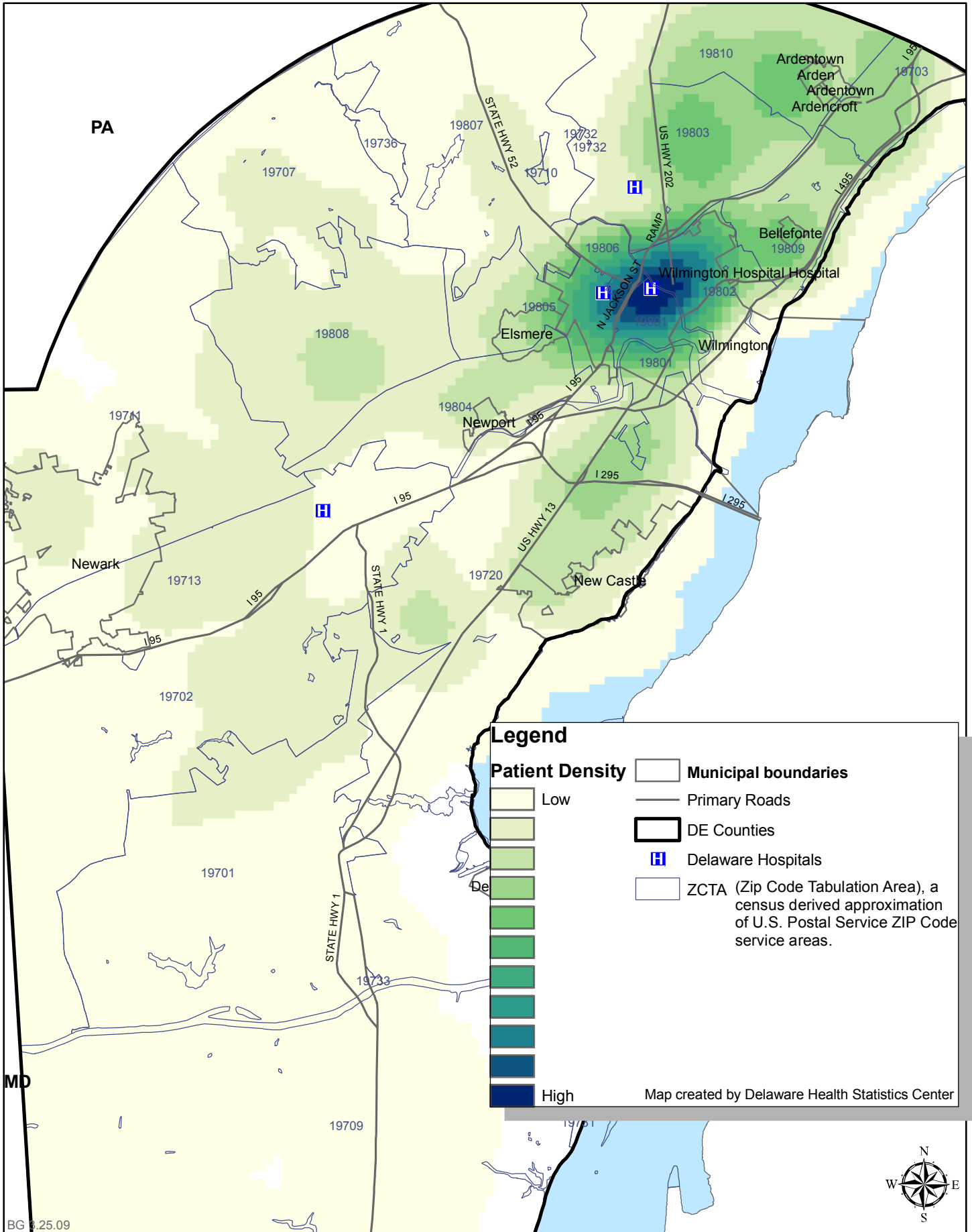
Discharge Density Alfred I. duPont Hospital, 2007



Discharge Density St. Francis Hospital, 2007



Discharge Density Wilmington Hospital, 2007



Discharge Density Christiana Care Hospital, 2007

