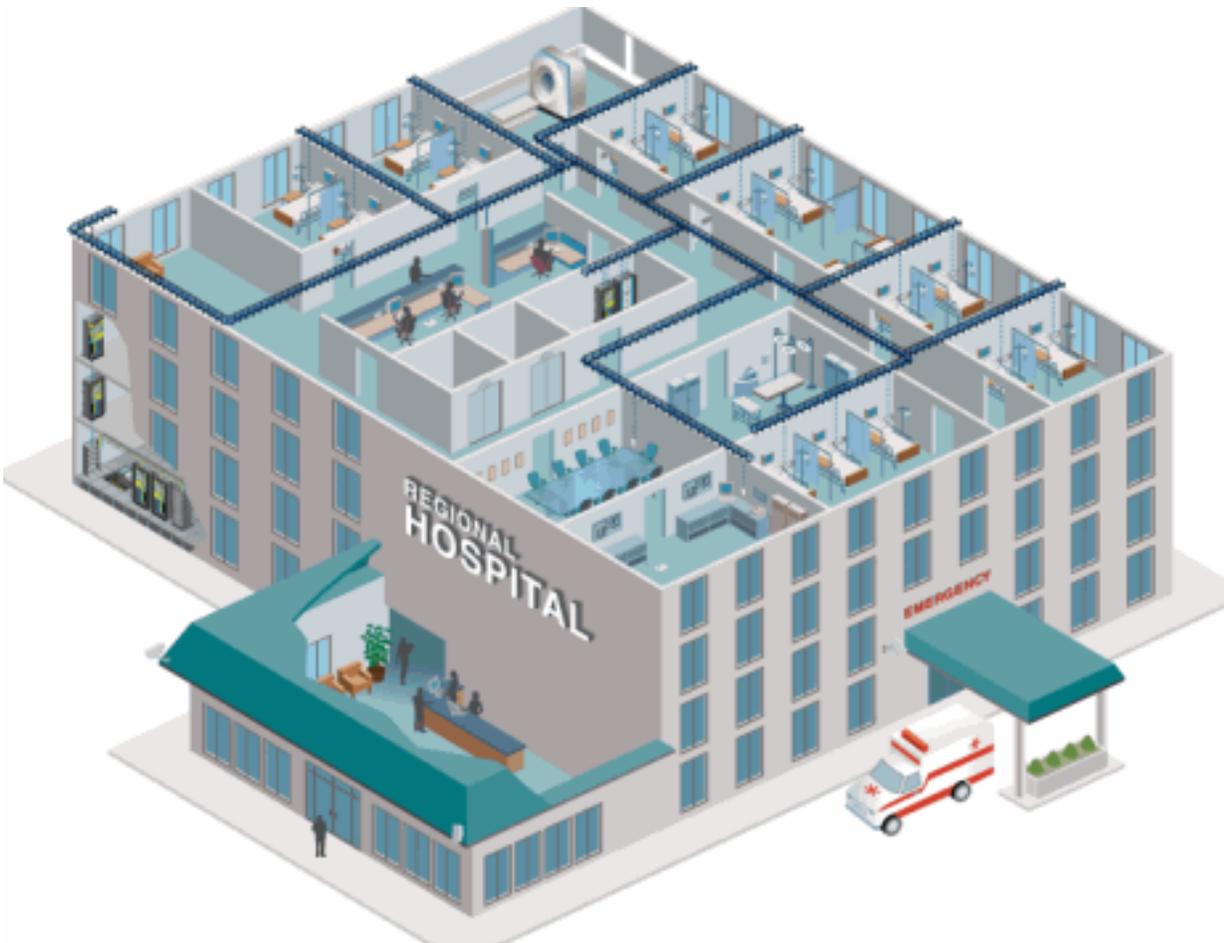


2

Acute Care Facilities, Utilization and Trends

- Acute Care



CHAPTER 2. ACUTE CARE FACILITIES, UTILIZATION AND TRENDS

To meet the complex needs of its residents, Connecticut has a health care system with a diverse array of services providing primary and specialty care. This chapter specifically focuses on the services and utilization related to acute care, emergency care, outpatient surgery and imaging.

ACUTE CARE

Acute care encompasses health care that is generally short in duration for conditions related to a severe injury, an urgent medical condition or recovery from surgery. Types of acute care services include ED visits, hospital stays, treatment in an ambulatory surgery center, diagnostic services, surgery, or follow-up care in an outpatient community setting.

Distribution of Acute Care Across Connecticut

Figure 1 shows the location and service areas of acute care hospitals throughout Connecticut (with the exception of four hospitals). For greater clarity, **Figure 2** focuses on these four hospitals—Hartford, John Dempsey, St. Francis and Yale-New Haven Hospitals. These maps highlight that the majority of acute care hospitals are located in the central or southwestern regions of Connecticut. Hospitals in Connecticut range from small community hospitals in rural regions to large hospitals in urban regions offering a broad array of specialty care. Towns in white indicate those communities that are not included in a hospital's primary service area (i.e., the towns that make up the top 75% of a hospital's discharges).

Figure 1. Map of Primary Services Areas for Acute Care Hospitals, Connecticut, October 2014 (excludes Hartford, John Dempsey, St. Francis and Yale-New Haven Hospitals)

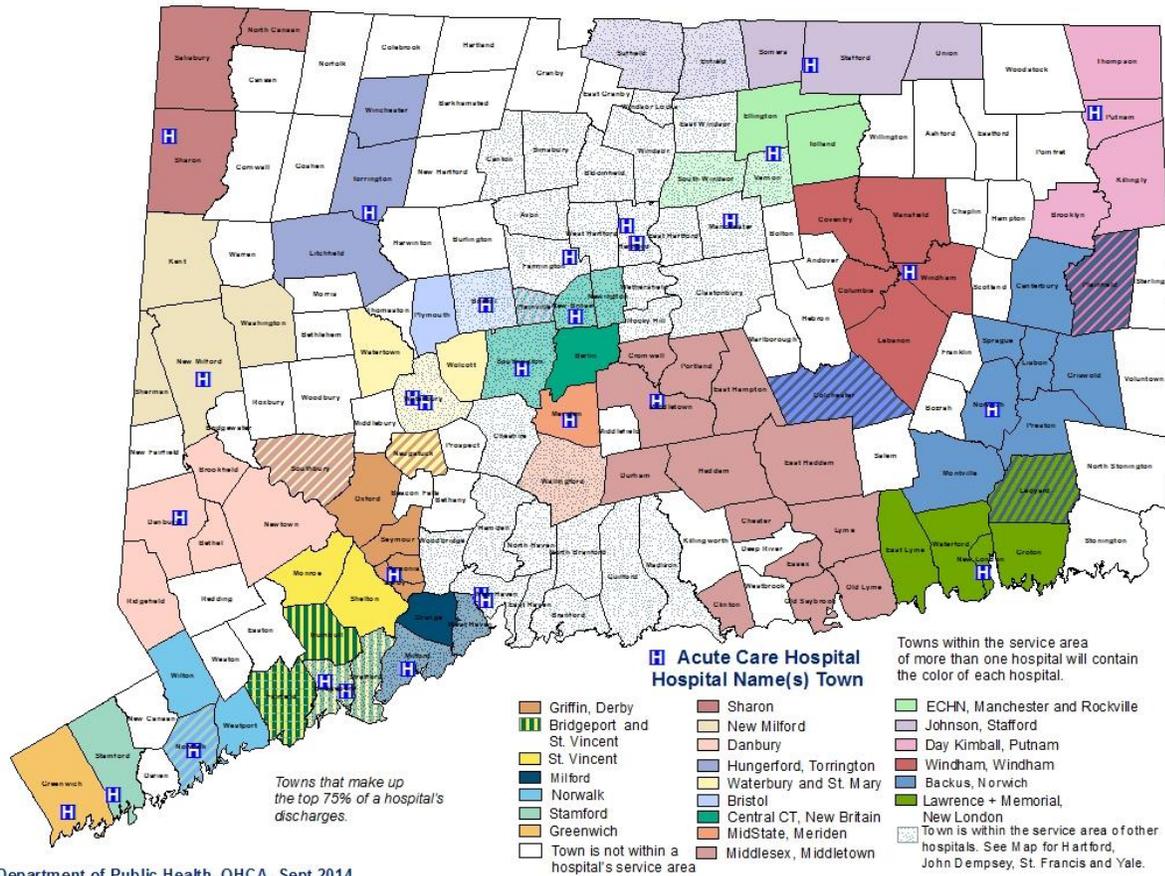
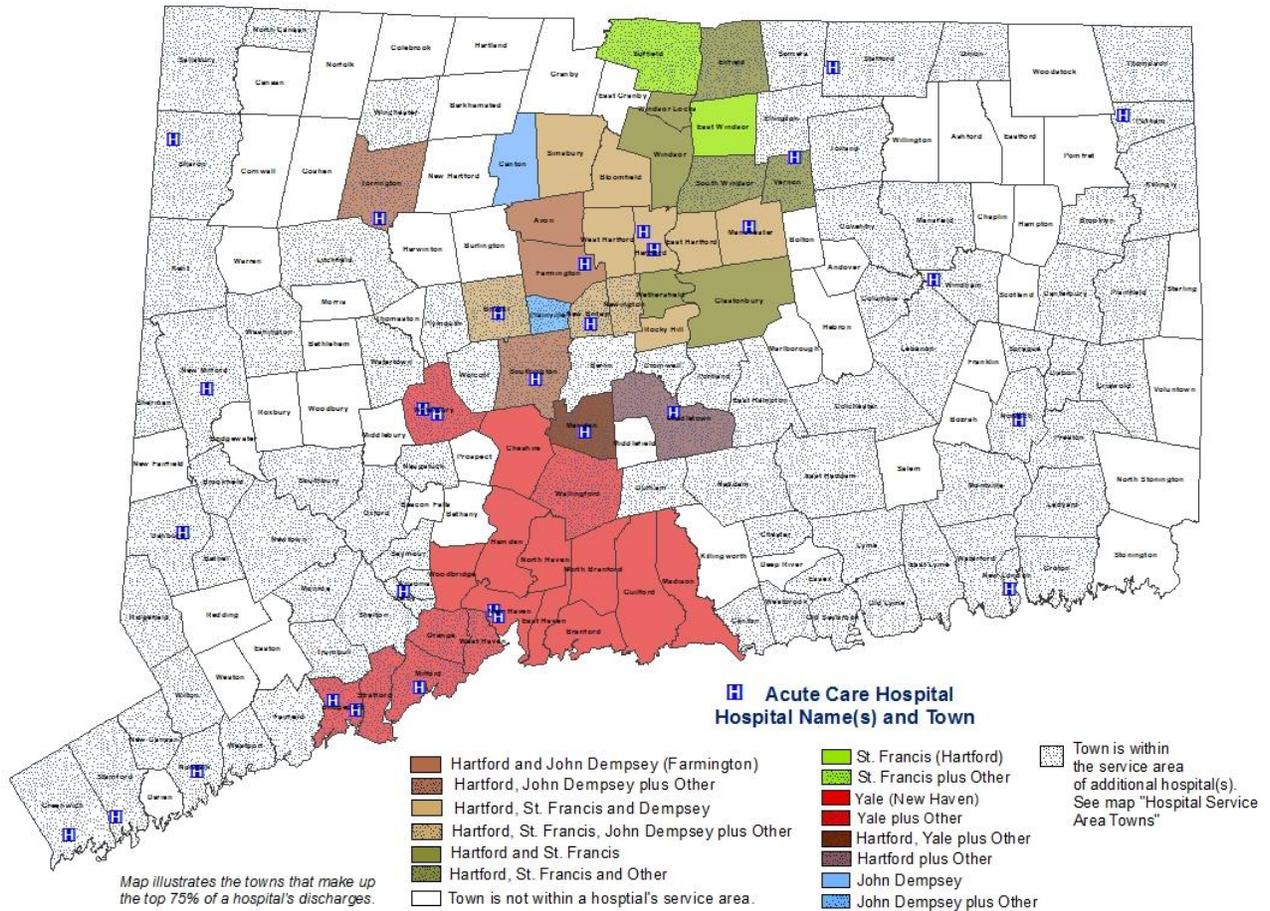


Figure 2. Map of Primary Service Areas for Hartford, John Dempsey, St. Francis and Yale-New Haven Hospitals, Connecticut, October 2014



Department of Public Health, OHCA, Sept 2014

Utilization Patterns

Leading Cause of Hospitalizations

As shown in **Table 4**, the leading cause of hospitalization varies by age. For children younger than 5 years of age, respiratory issues (i.e., asthma, COPD, pneumonia and influenza) were the leading cause of hospitalization in 2012. Mental disorders were the leading cause of hospitalization for males and females 5 to 14, 15 to 24 and 25 to 44 years of age. For persons 45 to 64 years of age, a diagnosis for mental disorders was the leading cause of hospitalization for males. For females in the 45 to 64 age group, digestive system (i.e., hernia/intestinal obstruction, colitis/enteritis, diverticula of the intestine) diagnoses were the leading cause of hospitalization. Heart disease was the leading cause of hospitalization for males and females 65 years of age or older.

Table 4. Leading Cause of Hospitalization and Rate per 100,000 Population, Connecticut 2012

Gender	Age Group						
	0-4 ^{1,2,3}	5-14 ^{1,2,3}	15-24 ^{1,2,3}	25-44 ^{1,2,3}	45-64 ^{1,2,3}	65+ ^{1,2,3}	All ages ^{1,2,3}
Males	Respiratory (1,598.8)	Mental (451.2)	Mental (1,011.0)	Mental (1,257.1)	Mental (1,354.8)	Heart (5,357.2)	Heart (1,061.8)
Females	Respiratory (1,172.9)	Mental (442.2)	Mental (1,068.1)	Mental (959.0)	Digestive (1,213.4)	Heart (4,272.2)	Digestive (972.7)

Source: Connecticut Department of Public Health, Hospital Discharge Tables, 2012, Table H-1 and H-1-All Ages.

¹ Diagnostic categories are based on *International Classification of Diseases, 9th Revision, Clinical Modification*, except for conditions related to pregnancy and childbirth, which are based on diagnosis related groups (MS-DRGs 765-782).

² First-listed diagnosis codes, except for "amputation with diabetes". First-listed procedure code 84.1 (amputation of lower limb), together with first-listed diagnosis code 249-250 (diabetes mellitus).

³ Connecticut population groupings were based on *Estimates for the July 1, 2012 United States resident population from the Vintage 2012 postcensal series by year, county, age, sex, race and Hispanic origin*, prepared under a collaborative arrangement with the U.S. Census Bureau. http://www.cdc.gov/nchs/nvss/bridged_race.htm Backus, K, Mueller, LM (2013) State-level Bridged Race Estimates for Connecticut, 2012, Connecticut Department of Public Health, Office of Health Care Quality, Statistics, Analysis & Reporting, Hartford, CT. Rates are per 100,000 population.

Denominators were for total population (males plus females), except for female breast cancer (female population only) and prostate cancer and hyperplasia of prostate (male only). Bridged estimates were used to assign individuals to a single race even if they reported more than one.

Leading cause of hospitalization also varies by race and ethnicity (**Table 5**). In 2012, diseases of the heart were the leading cause of hospitalization for white non-Hispanics. Black non-Hispanics were admitted more frequently for diseases of the respiratory system and diseases of the digestive system were the leading reason for hospitalizations of Hispanics.

Table 5. Leading Cause of Hospitalization and Rate per 100,000 Population, by Race/Ethnicity, Connecticut, 2012

Diagnostic Group (ICD-9 CM Code) ^{2,4}	White non-Hispanic ⁵			Black non-Hispanic ⁵			Hispanic ⁵		
	Rank	No. ¹	Rate ³	Rank	No. ¹	Rate ³	Rank	No. ¹	Rate ³
Disease of the heart (391-392.0, 393-398, 402, 404, 410-416, 420-429)	1	30,444	812.6	4	3,273	1067.0	5	2,162	799.2
Diseases of the respiratory system (460-519)	3	24,918	732.0	1	4,218	1,285.7	3	3,484	979.4
Diseases of the digestive system (520-579)	2	28,480	901.9	3	4,011	1,217.2	1	4,278	1,129.8
Mental disorders (290-319)	5	21,744	835.3	2	4,185	1,127.7	2	4,159	835.1

¹ Numbers of discharges represent events, not unique persons hospitalized.

² Diagnostic categories are based on *International Classification of Diseases, 9th Revision, Clinical Modification*, except for conditions related to pregnancy and childbirth, which are based on diagnosis related groups (MS-DRGs 765-782).

³ Connecticut population groupings were based on *Estimates for the July 1, 2012 United States resident population from the Vintage 2012 postcensal series by year, county, age, sex, race and Hispanic origin*, prepared under a collaborative arrangement with the U.S. Census Bureau. http://www.cdc.gov/nchs/nvss/bridged_race.htm Backus, K, Mueller, LM (2013) State-level Bridged Race Estimates for Connecticut, 2012, Connecticut Department of Public Health, Office of Health Care Quality, Statistics, Analysis & Reporting, Hartford, CT. Rates are per 100,000 population.

Denominators were for total population (males plus females), except for female breast cancer (female population only) and prostate cancer and hyperplasia of prostate (male only). Bridged estimates were used to assign individuals to a single race even if they reported more than one.

⁴ First-listed diagnosis codes, except for "amputation with diabetes". First-listed procedure code 84.1 (amputation of lower limb), together with first-listed diagnosis code 249-250 (diabetes mellitus).

⁵ The three racial and ethnic categories used here are mutually exclusive. Discharge records of persons of Asian, American Indian, Alaska Native, Hawaiian, or other Pacific Islander race when reported along with non-Hispanic ethnicity are not included due to small numbers.

Acute Care Discharges and Patient Days

From FY 2009 to FY 2013, the number of acute care discharges and patient days decreased by 4% and 2%, respectively (**Table 6**). The greatest decrease in patient volume occurred between FY 2011 and FY2012.

Table 6. Acute Care Discharges & Patient Days, Connecticut, FY 2009-FY 2013

CT Acute Care	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	% chg (09-13)
Discharges	430,159	428,428	426,235	417,009	412,071	-4%
Patient Days	2,076,937	2,053,724	2,074,265	2,025,886	2,026,012	-2%

Source: CT DPH Office of Health Care Access Acute Care Hospital Discharge Database

Acute Care Discharges by Primary Coverage

In FY 2013, two thirds of patients discharged from acute care hospitals had primary health care coverage that was government-based (**Table 7**). Correspondingly, from FY 2011 to FY 2013, the number of patients with Medicaid as their primary coverage increased by 3%, while commercially insured coverage fell 8%.

Table 7. Acute Care Discharges by Primary Coverage, Connecticut, FY 2011-FY 2013

Payer	FY 2011	FY 2012	FY 2013	FY 2013 Share	Change FY 11-13	Change FY 12-13
Medicare	177,624	174,061	173,037	42%	-3%	-1%
Commercial	143,859	137,811	132,077	32%	-8%	-4%
Medicaid	93,070	93,246	95,548	23%	3%	2%
Uninsured*	8,794	8,930	8,510	2%	-3%	-5%
Other Public	2,888	2,961	2,899	1%	0%	-2%
Total	426,235	417,009	412,071	100%	-3%	-1%

Source: CT DPH Office of Health Care Access Acute Care Hospital Discharge Database

*Includes self-pay, no charge and other

Hospital Utilization by Service Line

As shown below, the number of discharges and patient days in Connecticut from FY 2011 to FY 2013 has declined by 3.3% and 2.3%, respectively (**Table 8**). The greatest decline in discharges was seen for cardiac medical or surgery services, with a 9.1% decline from FY 2011 to FY 2013 (**Table 9**). The greatest decline in patient days over this period occurred in women’s health (9.0%) and ophthalmology (9.0%) services. From FY 2011 to FY 2013 there was a 1.9% increase in discharges and a 1.7% increase in patient days for medical services. Of note and in contrast to the vast majority of inpatient hospital services, there was a 3.8% increase in discharges and a 5.3% increase in patient days for behavioral health services (see Appendix F for individual hospital utilization).

Table 8. Hospital Utilization by Service Line, Discharges and Patient Days, Connecticut, FY 2011-FY 2013

Service	FY 2011		FY 2012		FY 2013		FY 2011-2013 % chg	
	D-chnrgs	P-Days	D-chnrgs	P-Days	D-chnrgs	P-Days	D-chnrgs	P-Days
Cardiac Med/Surg	57,252	241,178	54,311	231,129	52,016	233,453	-9.1%	-3.2%
Cancer Care Med/Surg	10,691	66,271	11,033	69,421	10,406	64,518	-2.7%	-2.6%
Neuro Med/Surg	27,542	161,907	27,396	159,925	26,837	151,793	-2.6%	-6.2%
Renal Med/Surg	21,501	98,007	21,191	96,815	20,486	95,665	-4.7%	-2.4%
Women s Health	48,451	141,202	45,919	133,592	44,374	128,453	-8.4%	-9.0%
Ortho Med/Surg	26,254	104,757	25,875	102,724	25,656	102,558	-2.3%	-2.1%
Respiratory	36,438	189,883	35,046	174,544	35,753	179,376	-1.9%	-5.5%
Medicine	87,554	420,730	87,628	419,212	89,241	427,867	1.9%	1.7%
General/Other Surgery	33,357	217,654	32,107	206,794	30,965	205,068	-7.2%	-5.8%
Newborn	39,666	154,707	38,443	151,200	37,864	147,126	-4.5%	-4.9%
Trauma Med/Surg	5,527	27,889	5,420	27,895	5,329	27,180	-3.6%	-2.5%
Behavioral Health	31,063	246,885	31,766	249,534	32,234	259,951	3.8%	5.3%
Ophthalmology	585	1,947	542	1,940	570	1,772	-2.6%	-9.0%
Dental	349	1,215	326	1,149	326	1,190	-6.6%	-2.1%
Total¹	426,235	2,074,265	417,009	2,025,886	412,071	2,026,012	-3.3%	-2.3%

Source: CT DPH Office of Health Care Access Acute Care Hospital Discharge Database

¹ Total includes 5 additional discharges/33 patient days in FY 2011, 6 discharges/12 patient days in FY 2012 and 14 discharges/42 patient days in FY 2013 that did not match any of the service categories.

Acute Care Bed Need Projections by County and Hospital

As in the 2012 Plan, OHCA developed, with the Acute Care and Ambulatory Surgery Subcommittee, a standard methodology for calculating bed need. The purpose of this analysis was to assist in evaluating the availability of acute care services, help identify areas with unmet need and provide an equitable measure to determine how acute care beds are distributed throughout the state.

OHCA is currently developing proposed regulations that will provide guidance on the criteria for determining bed need and due to their increasing frequency, will include a provision to consider observation stays. According to hospital administrators, observation stays are occurring more frequently in Connecticut. Recent studies indicate that observation stays are on the rise nationally as well. One analysis of Medicare enrollment and claims data from 2007 to 2009 found an increase in the prevalence and length of hospital observation stays for fee-for-service Medicare patients that corresponded with a decline in inpatient admissions.³⁸ This study also reported a 7% increase in the number of hours that beneficiaries were held for observation, with observation stays averaging 26.2 hours in 2007 and 28.2 hours in 2009. Approximately half of Medicare beneficiaries were under observation for at least 24 hours; approximately 40% stayed between 24 and 47 hours and more than 10% were under observation for 48 or more hours. The authors speculate that these patterns may be a consequence of Medicare payment structures that are intended to reduce hospital admissions. Similarly, a Medicare and Medicaid research review identified a significant decline in inpatient admission stays, from 283.4 stays per 1,000 Medicare beneficiaries in 2011 to 271.3 inpatient admission stays per 1,000 population in 2012.³⁹ The number of observation stays within 30 days of a hospitalization increased slightly over this period, from 3.4% in 2011 to 3.7% in 2012. CMS has expressed concerns about increases in

observation stays among Medicare beneficiaries because beneficiaries must absorb more of the financial costs for the stay and for drugs administered during the observation time and are not eligible for a Medicare-financed skilled nursing care.⁴⁰

Based on the acute care bed need projections for 2020, Connecticut has a statewide surplus of 1,444 inpatient beds (**Table 9**). Each county has a projected excess bed capacity from a low of 60 surplus beds in Middlesex County to a high of 416 surplus beds in Hartford County. Since the bed need calculation now utilizes counties instead of DEMHS—formerly known as the Department of Emergency Management and Homeland Security—regions to estimate population growth/attrition factors, the results listed below are not comparable to the 2012 Plan.

Table 9. Acute Care Hospital 2020 Bed Need, Connecticut

County	FY 2011 Patient Days ¹	FY 2012 Patient Days ¹	FY 2013 Patient Days ¹	Weighted ADC	Projected ADC 2020	Beds Needed	Licensed Beds ²	Excess (-) or Deficit (+)
Fairfield	480,275	460,793	457,685	1,267	1,348	1,762	1,998	-236
Hartford	569,493	572,292	580,516	1,578	1,664	2,156	2,572	-416
Litchfield	47,174	43,456	44,023	122	134	172	272	-100
Middlesex	54,505	53,708	57,199	152	167	215	275	-60
New Haven	588,812	568,092	571,628	1,571	1,662	2,144	2,521	-377
New London	115,720	112,707	107,227	303	328	423	493	-70
Tolland	27,206	28,888	27,840	77	86	108	194	-86
Windham	36,373	34,750	32,768	93	104	135	234	-99
Statewide	1,919,558	1,874,686	1,878,886	5,162	5,493	7,115	8,559	-1,444

Source: Source: CT DPH Office of Health Care Access Acute Care Hospital Discharge Database

¹ Excludes Newborn service category

² Excludes bassinets (861)

Projected county bed need is presented from **Table 10** through **Table 17**. Data are provided by service lines of medical/surgical, maternity, psychiatric, rehabilitation and pediatric as well as by age group of patient (see individual hospital bed need in Appendix G).

Table 10. Acute Care Hospital 2020 Bed Need, Fairfield County

County	Services ¹	FY 2011 patient days	FY 2012 patient days	FY 2013 patient days	FY 2011 ADC	FY 2012 ADC	FY 2013 ADC	Weighted ADC	Fairfield County Pop chg 2015 to 2020 ²	Projected ADC	Target Occupancy	Beds Needed 2020	Licensed Beds ³	Excess (-) or Deficit (+)	
Fairfield County	Medical/Surgical														
	0-14	30	32	24	0.1	0.1	0.1	0.1	0.94156	0.1	0.80	0			
	15 - 44	42,120	38,796	36,278	115.4	106.3	99.4	104.4	1.01179	105.6	0.80	132			
	45 - 64	100,563	101,911	99,598	275.5	279.2	272.9	275.4	1.00638	277.2	0.80	346			
	65+	216,285	206,419	209,785	592.6	565.5	574.8	574.6	1.12096	644.2	0.80	805			
	Sub Total	358,998	347,158	345,685	983.6	951.1	947.1	954.5		1027.0			1284		
	Maternity														
	0-14	28	11	13	0.1	0.0	0.0	0.0	0.94081	0.0	0.50	0			
	15 - 44	38,704	36,975	36,344	106.0	101.3	99.6	101.2	1.00774	102.0	0.50	204			
	45 - 64	282	236	203	0.8	0.6	0.6	0.6	1.01051	0.6	0.50	1			
	65+	0	0	0	0.0	0.0	0.0	-	1.09873	0.0	0.50	0			
	Sub Total	39,014	37,222	36,560	106.9	102.0	100.2	101.9		102.7			205		
	Psychiatric														
	0-14	2,603	2,097	2,233	7.1	5.7	6.1	6.2	0.94156	5.8	0.80	7			
	15 - 44	23,892	23,497	24,861	65.5	64.4	68.1	66.4	1.01179	67.2	0.80	84			
	45 - 64	17,068	17,962	18,034	46.8	49.2	49.4	48.9	1.00638	49.2	0.80	62			
	65+	8,751	8,125	8,583	24.0	22.3	23.5	23.2	1.12096	26.0	0.80	32			
	Sub Total	52,314	51,681	53,711	143.3	141.6	147.2	144.7		148.2			185		
	Rehabilitation														
	0-14	0	0	0	0.0	0.0	0.0	-	0.94156	0.0	0.80	0			
	15 - 44	1,168	1,179	1,036	3.2	3.2	2.8	3.0	1.01179	3.1	0.80	4			
	45 - 64	6,050	5,188	5,178	16.6	14.2	14.2	14.6	1.00638	14.7	0.80	18			
	65+	16,186	13,692	11,963	44.3	37.5	32.8	36.3	1.12096	40.7	0.80	51			
	Sub Total	23,404	20,059	18,177	64.1	55.0	49.8	53.9		58.4			73		
Pediatric															
0-19	6,545	4,673	3,552	17.9	12.8	9.7	12.1	0.94908	11.5	0.80	14				
20+	0	0	0	0.0	0.0	0.0	-	1.03582	0.0	0.80	0				
Sub Total	6,545	4,673	3,552	17.9	12.8	9.7	12.1		11.5			14			
Total		480,275	460,793	457,685	1,316	1,262	1,254	1,267.1		1347.8		1762	1,998	-236	

¹ Excludes Newborn service category
² Source: CT State Data Center (CTSDC)
³ Excludes bassinets

Table 11. Acute Care Hospital 2020 Bed Need, Hartford County

County	Services ¹	FY 2011 patient days	FY 2012 patient days	FY 2013 patient days	FY 2011 ADC	FY 2012 ADC	FY 2013 ADC	Weighted ADC	Hartford County Pop chg 2015 to 2020 ²	Projected ADC	Target Occupancy	Beds Needed 2020	Licensed Beds ³	Excess (-) or Deficit (+)	
Hartford County	Medical/Surgical														
	0-14	14	16	13	0.0	0.0	0.0	0.0	0.96707	0.0	0.80	0			
	15 - 44	55,161	54,326	53,013	151.1	148.8	145.2	147.4	1.01227	149.2	0.80	187			
	45 - 64	140,278	141,768	144,405	384.3	388.4	395.6	391.3	0.98238	384.4	0.80	481			
	65+	234,253	238,025	244,425	641.8	652.1	669.7	659.2	1.13688	749.4	0.80	937			
	Sub Total	429,706	434,135	441,856	1,177.3	1,189.4	1,210.6	1,198.0		1283.1		1604			
	Maternity														
	0-14	22	33	32	0.1	0.1	0.1	0.1	0.96778	0.1	0.50	0			
	15 - 44	38,978	37,287	35,522	106.8	102.2	97.3	100.5	1.00881	101.4	0.50	203			
	45 - 64	168	81	89	0.5	0.2	0.2	0.3	0.98553	0.3	0.50	1			
	65+	0	0	0	0.0	0.0	0.0	-	1.11856	0.0	0.50	0			
	Sub Total	39,168	37,401	35,643	107.3	102.5	97.7	100.9		101.7		203			
	Psychiatric														
	0-14	8,275	8,475	8,522	22.7	23.2	23.3	23.2	0.96707	22.4	0.80	28			
	15 - 44	34,738	34,797	36,177	95.2	95.3	99.1	97.2	1.01227	98.4	0.80	123			
	45 - 64	23,976	24,007	25,387	65.7	65.8	69.6	67.6	0.98238	66.5	0.80	83			
	65+	7,695	7,741	7,963	21.1	21.2	21.8	21.5	1.13688	24.4	0.80	31			
	Sub Total	74,684	75,020	78,049	204.6	205.5	213.8	209.5		211.7		265			
	Rehabilitation														
	0-14	64	0	84	0.2	0.0	0.2	0.1	0.96707	0.1	0.80	0			
	15 - 44	95	23	82	0.3	0.1	0.2	0.2	1.01227	0.2	0.80	0			
	45 - 64	15	0	0	0.0	0.0	0.0	0.0	0.98238	0.0	0.80	0			
	65+	0	0	0	0.0	0.0	0.0	-	1.13688	0.0	0.80	0			
	Sub Total	174	23	166	0.5	0.1	0.5	0.3		0.3		0			
	Pediatric														
	0-19	25,761	25,713	24,802	70.6	70.4	68.0	69.2	0.96673	66.9	0.80	84			
	20+	0	0	0	0.0	0.0	0.0	-	1.03196	0.0	0.80	0			
	Sub Total	25,761	25,713	24,802	70.6	70.4	68.0	69.2		66.9		84			
Total		569,493	572,292	580,516	1,560	1,568	1,590	1,577.9		1663.8		2156	2,572	-416	

¹ Excludes Newborn service category

² Source: CT State Data Center (CTSDC)

³ Excludes bassinets

Table 12. Acute Care Hospital 2020 Bed Need, Litchfield County

County	Services ¹	FY 2011 patient days	FY 2012 patient days	FY 2013 patient days	FY 2011 ADC	FY 2012 ADC	FY 2013 ADC	Weighted ADC	Litchfield County Pop chg 2015 to 2020 ²	Projected ADC	Target Occupancy	Beds Needed 2020	Licensed Beds ³	Excess (-) or Deficit (+)	
Litchfield County	Medical/Surgical														
	0-14	0	3	9	0.0	0.0	0.0	0.0	0.88581	0.0	0.80	0			
	15 - 44	3,358	3,152	3,187	9.2	8.6	8.7	8.8	0.98490	8.6	0.80	11			
	45 - 64	10,663	9,596	9,836	29.2	26.3	26.9	27.1	0.96706	26.2	0.80	33			
	65+	24,603	23,361	24,171	67.4	64.0	66.2	65.7	1.20043	78.8	0.80	99			
	Sub Total	38,624	36,112	37,203	105.8	98.9	101.9	101.6			113.7		142		
	Maternity														
	0-14	0	1	0	0.0	0.0	0.0	0.0	0.88634	0.0	0.50	0			
	15 - 44	2,195	2,277	1,975	6.0	6.2	5.4	5.8	0.97955	5.7	0.50	11			
	45 - 64	5	4	8	0.0	0.0	0.0	0.0	0.97230	0.0	0.50	0			
	65+	0	0	0	0.0	0.0	0.0	-	1.18059	0.0	0.50	0			
	Sub Total	2,200	2,282	1,983	6.0	6.3	5.4	5.8			5.7		11		
	Psychiatric														
	0-14	0	0	0	0.0	0.0	0.0	-	0.88581	0.0	0.80	0			
	15 - 44	1,867	1,491	1,618	5.1	4.1	4.4	4.4	0.98490	4.4	0.80	5			
	45 - 64	1,693	1,640	1,599	4.6	4.5	4.4	4.5	0.96706	4.3	0.80	5			
	65+	2,598	1,767	1,504	7.1	4.8	4.1	4.9	1.20043	5.8	0.80	7			
	Sub Total	6,158	4,898	4,721	16.9	13.4	12.9	13.8			14.5		18		
	Rehabilitation														
	0-14	0	0	0	0.0	0.0	0.0	-	0.88581	0.0	0.80	0			
	15 - 44	0	0	0	0.0	0.0	0.0	-	0.98490	0.0	0.80	0			
	45 - 64	0	0	0	0.0	0.0	0.0	-	0.96706	0.0	0.80	0			
	65+	0	0	0	0.0	0.0	0.0	-	1.20043	0.0	0.80	0			
	Sub Total	0	0	0	0.0	0.0	0.0	-			0.0		0		
	Pediatric														
	0-19	192	164	116	0.5	0.4	0.3	0.4	0.90723	0.4	0.80	0			
	20+	0	0	0	0.0	0.0	0.0	-	1.03251	0.0	0.80	0			
Sub Total	192	164	116	0.5	0.4	0.3	0.4			0.4		0			
Total		47,174	43,456	44,023	129	119	121	121.5		134.3		172	272	-100	

¹ Excludes Newborn service category

² Source: CT State Data Center (CTSDC)

³ Excludes bassinets

Table 13. Acute Care Hospital 2020 Bed Need, Middlesex County

County	Services ¹	FY 2011 patient days	FY 2012 patient days	FY 2013 patient days	FY 2011 ADC	FY 2012 ADC	FY 2013 ADC	Weighted ADC	Middlesex County Pop chg 2015 to 2020 ²	Projected ADC	Target Occupancy	Beds Needed 2020	Licensed Beds ³	Excess (-) or Deficit (+)	
Middlesex County	Medical/Surgical														
	0-14	11	4	2	0.0	0.0	0.0	0.0	0.90103	0.0	0.80	0			
	15 - 44	4,029	3,830	4,020	11.0	10.5	11.0	10.8	0.98633	10.7	0.80	13			
	45 - 64	12,915	12,835	13,999	35.4	35.2	38.4	36.8	0.97358	35.8	0.80	45			
	65+	28,391	27,516	30,147	77.8	75.4	82.6	79.4	1.20478	95.6	0.80	120			
	Sub Total	45,346	44,185	48,168	124.2	121.1	132.0	127.0		142.2			178		
	Maternity														
	0-14	0	0	0	0.0	0.0	0.0	-	0.90155	0.0	0.50	0			
	15 - 44	3,156	3,094	2,866	8.6	8.5	7.9	8.2	0.98063	8.0	0.50	16			
	45 - 64	2	3	10	0.0	0.0	0.0	0.0	0.97791	0.0	0.50	0			
	65+	0	0	0	0.0	0.0	0.0	-	1.19360	0.0	0.50	0			
	Sub Total	3,158	3,097	2,876	8.7	8.5	7.9	8.2		8.1			16		
	Psychiatric														
	0-14	0	0	0	0.0	0.0	0.0	-	0.90103	0.0	0.80	0			
	15 - 44	2,643	3,085	2,366	7.2	8.5	6.5	7.3	0.98633	7.2	0.80	9			
	45 - 64	2,557	2,738	3,018	7.0	7.5	8.3	7.8	0.97358	7.6	0.80	9			
	65+	784	599	767	2.1	1.6	2.1	2.0	1.20478	2.4	0.80	3			
	Sub Total	5,984	6,422	6,151	16.4	17.6	16.9	17.0		17.1			21		
	Rehabilitation														
	0-14	0	0	0	0.0	0.0	0.0	-	0.90103	0.0	0.80	0			
	15 - 44	0	0	0	0.0	0.0	0.0	-	0.98633	0.0	0.80	0			
	45 - 64	0	0	0	0.0	0.0	0.0	-	0.97358	0.0	0.80	0			
	65+	0	0	0	0.0	0.0	0.0	-	1.20478	0.0	0.80	0			
	Sub Total	0	0	0	0.0	0.0	0.0	-		0.0			0		
	Pediatric														
	0-19	17	4	4	0.0	0.0	0.0	0.0	0.92096	0.0	0.80	0			
20+	0	0	0	0.0	0.0	0.0	-	1.03553	0.0	0.80	0				
Sub Total	17	4	4	0.0	0.0	0.0	0.0		0.0			0			
Total		54,505	53,708	57,199	149	147	157	152.3		167.4		215	275	-60	

¹ Excludes Newborn service category
² Source: CT State Data Center (CTSDC)
³ Excludes bassinets

Table 14. Acute Care Hospital 2020 Bed Need, New Haven County

County	Services ¹	FY 2011 patient days	FY 2012 patient days	FY 2013 patient days	FY 2011 ADC	FY 2012 ADC	FY 2013 ADC	Weighted ADC	New Haven County Pop chg 2015 to 2020 ²	Projected ADC	Target Occupancy	Beds Needed 2020	Licensed Beds ³	Excess (-) or Deficit (+)	
New Haven County	Medical/Surgical														
	0-14	0	0	0	0.0	0.0	0.0	-	0.97443	0.0	0.80	0			
	15 - 44	67,280	72,263	64,808	184.3	198.0	177.6	185.5	1.01313	187.9	0.80	235			
	45 - 64	157,705	144,808	149,007	432.1	396.7	408.2	408.4	0.98400	401.8	0.80	502			
	65+	245,606	232,125	236,189	672.9	636.0	647.1	647.7	1.14363	740.7	0.80	926			
	Sub Total	470,591	449,196	450,004	1,289.3	1,230.7	1,232.9	1,241.6			1330.5		1663		
	Maternity														
	0-14	28	46	10	0.1	0.1	0.0	0.1	0.97102	0.1	0.50	0			
	15 - 44	33,367	31,760	31,296	91.4	87.0	85.7	87.1	1.01253	88.2	0.50	176			
	45 - 64	107	113	151	0.3	0.3	0.4	0.4	0.98578	0.4	0.50	1			
	65+	0	0	0	0.0	0.0	0.0	-	1.12499	0.0	0.50	0			
	Sub Total	33,502	31,919	31,457	91.8	87.4	86.2	87.5			88.6		177		
	Psychiatric														
	0-14	8,882	8,863	8,916	24.3	24.3	24.4	24.4	0.97443	23.7	0.80	30			
	15 - 44	26,814	27,540	31,128	73.5	75.5	85.3	80.0	1.01313	81.1	0.80	101			
	45 - 64	18,309	18,621	19,460	50.2	51.0	53.3	52.0	0.98400	51.2	0.80	64			
	65+	6,581	5,214	6,646	18.0	14.3	18.2	16.9	1.14363	19.3	0.80	24			
	Sub Total	60,586	60,238	66,150	166.0	165.0	181.2	173.3			175.3		219		
	Rehabilitation														
	0-14	0	0	0	0.0	0.0	0.0	-	0.97443	0.0	0.80	0			
	15 - 44	44	56	96	0.1	0.2	0.3	0.2	1.01313	0.2	0.80	0			
45 - 64	773	739	468	2.1	2.0	1.3	1.7	0.98400	1.6	0.80	2				
65+	3,188	2,847	2,072	8.7	7.8	5.7	6.9	1.14363	7.9	0.80	10				
Sub Total	4,005	3,642	2,636	11.0	10.0	7.2	8.8			9.7		12			
Pediatric															
0-19	20,128	23,097	21,381	55.1	63.3	58.6	59.6	0.96530	57.5	0.80	72				
20+	0	0	0	0.0	0.0	0.0	-	1.03672	0.0	0.80	0				
Sub Total	20,128	23,097	21,381	55.1	63.3	58.6	59.6			57.5		72			
Total		588,812	568,092	571,628	1,613	1,556	1,566	1,570.7		1661.7		2,144	2,521	-377	

¹ Excludes Newborn service category
² Source: CT State Data Center (CTSDC)
³ Excludes bassinets

Table 15. Acute Care Hospital 2020 Bed Need, New London County

County	Services ¹	2011 patient days	2012 patient days	2013 patient days	2011 ADC	2012 ADC	2013 ADC	Weighted ADC	New London County Pop chg 2015 to 2020 ²	Projected ADC	Target Occupancy	Beds Needed	Licensed Beds ³	Excess (-) or Deficit (+)	
New London County	Medical/Surgical														
	0-14	0	0	0	0.0	0.0	0.0	-	0.95225	0.0	0.80	0			
	15 - 44	10,968	10,372	9,221	30.0	28.4	25.3	27.1	0.99490	27.0	0.80	34			
	45 - 64	31,501	29,172	27,987	86.3	79.9	76.7	79.4	0.97130	77.1	0.80	96			
	65+	51,547	50,883	49,334	141.2	139.4	135.2	137.6	1.19137	163.9	0.80	205			
	Sub Total	94,016	90,427	86,542	257.6	247.7	237.1	244.1			268.0		335		
	Maternity														
	0-14	2	2	0	0.0	0.0	0.0	0.0	0.94942	0.0	0.50	0			
	15 - 44	6,925	6,660	6,285	19.0	18.2	17.2	17.9	0.98704	17.6	0.50	35			
	45 - 64	3	12	8	0.0	0.0	0.0	0.0	0.97794	0.0	0.50	0			
	65+	0	0	0	0.0	0.0	0.0	-	1.17099	0.0	0.50	0			
	Sub Total	6,930	6,674	6,293	19.0	18.3	17.2	17.9			17.6		35		
	Psychiatric														
	0-14	8	0	0	0.0	0.0	0.0	0.0	0.95225	0.0	0.80	0			
	15 - 44	3,971	4,510	4,832	10.9	12.4	13.2	12.6	0.99490	12.5	0.80	16			
	45 - 64	3,980	4,443	4,162	10.9	12.2	11.4	11.6	0.97130	11.2	0.80	14			
	65+	1,307	1,293	837	3.6	3.5	2.3	2.9	1.19137	3.5	0.80	4			
	Sub Total	9,266	10,246	9,831	25.4	28.1	26.9	27.1			27.2		34		
	Rehabilitation														
	0-14	0	0	0	0.0	0.0	0.0	-	0.95225	0.0	0.80	0			
	15 - 44	230	345	242	0.6	0.9	0.7	0.8	0.99490	0.7	0.80	1			
	45 - 64	972	1,142	918	2.7	3.1	2.5	2.7	0.97130	2.7	0.80	3			
	65+	3,546	3,267	2,979	9.7	9.0	8.2	8.7	1.19137	10.3	0.80	13			
	Sub Total	4,748	4,754	4,139	13.0	13.0	11.3	12.2			13.8		17		
	Pediatric														
	0-19	760	606	422	2.1	1.7	1.2	1.5	0.95388	1.4	0.80	2			
	20+	0	0	0	0.0	0.0	0.0	-	1.03192	0.0	0.80	0			
Sub Total	760	606	422	2.1	1.7	1.2	1.5			1.4		2			
Total		115,720	112,707	107,227	317	309	294	302.7		328.0		423	493	-70	

¹ Excludes Newborn service category
² Source: CT State Data Center (CTSDC)
³ Excludes bassinets

Table 16. Acute Care Hospital 2020 Bed Need, Tolland County

County	Services ¹	FY 2011 patient days	FY 2012 patient days	FY 2013 patient days	FY 2011 ADC	FY 2012 ADC	FY 2013 ADC	Weighted ADC	Tolland County Pop chg 2015 to 2020 ²	Projected ADC	Target Occupancy	Beds Needed 2020	Licensed Beds ³	Excess (-) or Deficit (+)	
Tolland County	Medical/Surgical														
	0-14	0	0	0	0.0	0.0	0.0	-	0.93074	0.0	0.80	0			
	15 - 44	2,226	2,171	2,264	6.1	5.9	6.2	6.1	1.00969	6.2	0.80	8			
	45 - 64	6,201	6,830	6,421	17.0	18.7	17.6	17.9	0.98044	17.5	0.80	22			
	65+	15,396	16,246	15,615	42.2	44.5	42.8	43.3	1.20444	52.1	0.80	65			
	Sub Total	23,823	25,247	24,300	65.3	69.2	66.6	67.2			75.8		95		
	Maternity														
	0-14	0	0	0	0.0	0.0	0.0	-	0.93517	0.0	0.50	0			
	15 - 44	833	608	562	2.3	1.7	1.5	1.7	1.00881	1.7	0.50	3			
	45 - 64	0	0	0	0.0	0.0	0.0	-	0.99659	0.0	0.50	0			
	65+	0	0	0	0.0	0.0	0.0	-	1.19032	0.0	0.50	0			
	Sub Total	833	608	562	2.3	1.7	1.5	1.7			1.7		3		
	Psychiatric														
	0-14	0	0	0	0.0	0.0	0.0	-	0.93074	0.0	0.80	0			
	15 - 44	1,113	1,420	1,346	3.0	3.9	3.7	3.6	1.00969	3.7	0.80	5			
	45 - 64	1,107	1,418	1,342	3.0	3.9	3.7	3.6	0.98044	3.6	0.80	4			
	65+	259	137	257	0.7	0.4	0.7	0.6	1.20444	0.7	0.80	1			
	Sub Total	2,479	2,975	2,945	6.8	8.2	8.1	7.9			8.0		10		
	Rehabilitation														
	0-14	0	0	0	0.0	0.0	0.0	-	0.93074	0.0	0.80	0			
	15 - 44	0	0	0	0.0	0.0	0.0	-	1.00969	0.0	0.80	0			
	45 - 64	0	0	0	0.0	0.0	0.0	-	0.98044	0.0	0.80	0			
65+	0	0	0	0.0	0.0	0.0	-	1.20444	0.0	0.80	0				
Sub Total	0	0	0	0.0	0.0	0.0	-			0.0		0			
Pediatric															
0-19	71	58	33	0.2	0.2	0.1	0.1	0.94612	0.1	0.80	0				
20+	0	0	0	0.0	0.0	0.0	-	1.04017	0.0	0.80	0				
Sub Total	71	58	33	0.2	0.2	0.1	0.1			0.1		0			
Total		27,206	28,888	27,840	75	79	76	76.9		85.6		108	194	-86	

¹ Excludes Newborn service category

² Source: CT State Data Center (CTSDC)

³ Excludes bassinets

Table 17. Acute Care Hospital 2020 Bed Need, Windham County

County	Services ¹	FY 2011 patient days	FY 2012 patient days	FY 2013 patient days	FY 2011 ADC	FY 2012 ADC	FY 2013 ADC	Weighted ADC	Windham County Pop chg 2015 to 2020 ²	Projected ADC	Target Occupancy	Beds Needed 2020	Licensed Beds ³	Excess (-) or Deficit (+)	
Windham County	Medical/Surgical														
	0-14	0	0	0	0.0	0.0	0.0	-	0.95771	0.0	0.80	0			
	15 - 44	2,977	2,758	2,499	8.2	7.6	6.8	7.3	1.00029	7.3	0.80	9			
	45 - 64	8,213	7,852	7,168	22.5	21.5	19.6	20.7	1.01073	21.0	0.80	26			
	65+	18,167	17,186	16,181	49.8	47.1	44.3	46.2	1.22440	56.5	0.80	71			
	Sub Total	29,357	27,796	25,848	80.4	76.2	70.8	74.2			84.8		106		
	Maternity														
	0-14	5	2	0	0.0	0.0	0.0	0.0	0.95605	0.0	0.50	0			
	15 - 44	2,408	2,623	2,464	6.6	7.2	6.8	6.9	0.99720	6.9	0.50	14			
	45 - 64	10	2	0	0.0	0.0	0.0	0.0	1.01070	0.0	0.50	0			
	65+	0	0	0	0.0	0.0	0.0	-	1.19786	0.0	0.50	0			
	Sub Total	2,423	2,627	2,464	6.6	7.2	6.8	6.9			6.9		14		
	Psychiatric														
	0-14	0	0	6	0.0	0.0	0.0	0.0	0.95771	0.0	0.80	0			
	15 - 44	2,400	2,396	2,497	6.6	6.6	6.8	6.7	1.00029	6.7	0.80	8			
	45 - 64	1,368	1,550	1,206	3.7	4.2	3.3	3.7	1.01073	3.7	0.80	5			
	65+	546	160	590	1.5	0.4	1.6	1.2	1.22440	1.5	0.80	2			
	Sub Total	4,314	4,106	4,299	11.8	11.2	11.8	11.6			11.9		15		
	Rehabilitation														
	0-14	0	0	0	0.0	0.0	0.0	-	0.95771	0.0	0.80	0			
	15 - 44	0	0	0	0.0	0.0	0.0	-	1.00029	0.0	0.80	0			
	45 - 64	0	0	0	0.0	0.0	0.0	-	1.01073	0.0	0.80	0			
	65+	0	0	0	0.0	0.0	0.0	-	1.22440	0.0	0.80	0			
	Sub Total	0	0	0	0.0	0.0	0.0	-			0.0		0		
	Pediatric														
	0-19	279	221	157	0.8	0.6	0.4	0.5	0.96487	0.5	0.80	1			
	20+	0	0	0	0.0	0.0	0.0	-	1.05121	0.0	0.80	0			
Sub Total	279	221	157	0.8	0.6	0.4	0.5			0.5		1			
Total		36,373	34,750	32,768	100	95	90	93.2		104.1		135	234	-99	

¹ Excludes Newborn service category

² Source: CT State Data Center (CTSDC)

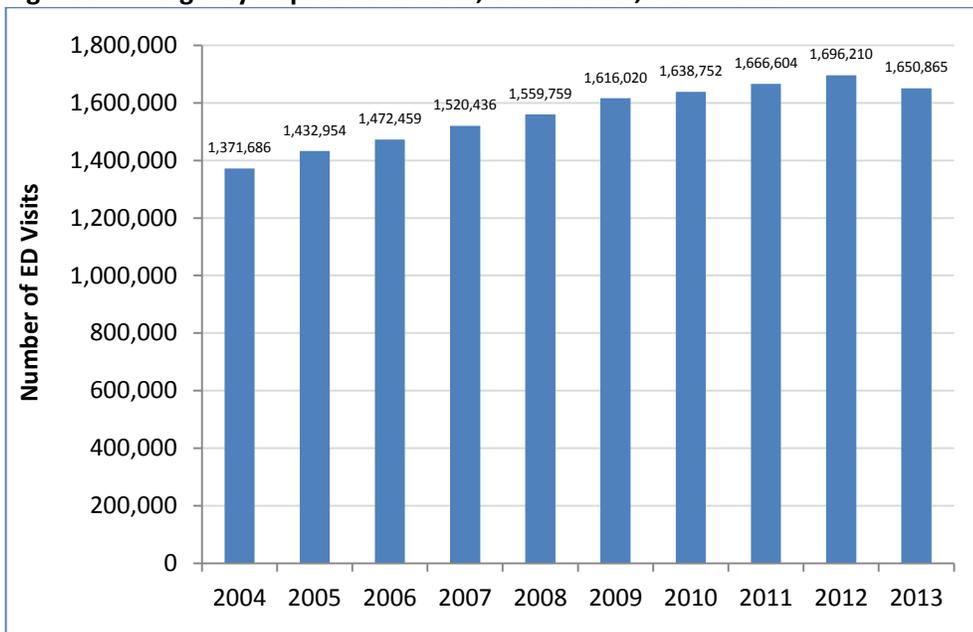
³ Excludes bassinets

Emergency Departments

Connecticut has emergency departments in each of its acute care hospitals. The emergency department (ED) provides initial treatment and assessment to patients with a broad range of illnesses and injuries, some of which may be life threatening.

As shown in **Figure 3**, in 2004, there were 1,371,686 visits made to the emergency departments (EDs) of Connecticut's acute care general hospitals. By 2013, the number of visits rose to 1,650,865, an increase of 20%. Residents of the state made 96% of those visits. The annual rate for Connecticut residents visiting the ED was 350 visits per 1,000 residents in 2004 and 459 visits in 2013. Females make up 51.3% of the population and comprised 53.5% visits to the ED in 2013 (485 visits per 1,000 females); males visited the ED at the rate of 433 per 1,000, a rate that is 12% lower than women.

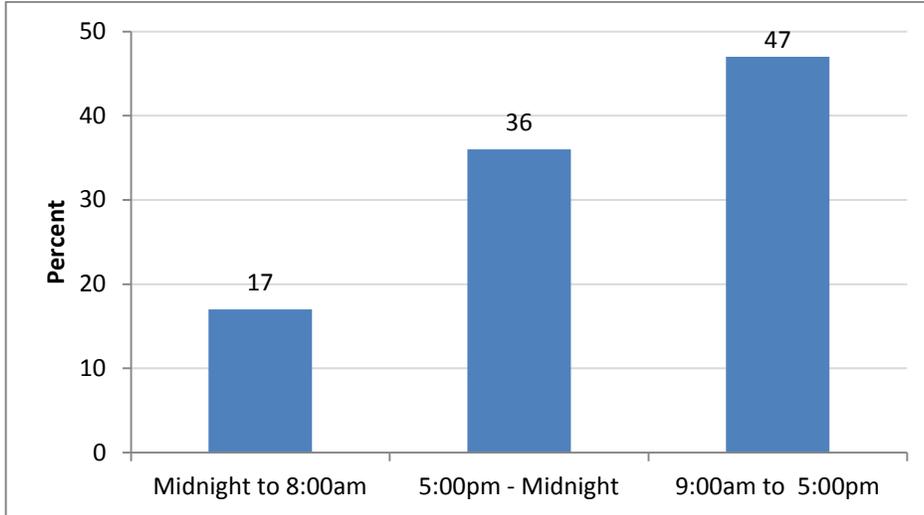
Figure 3. Emergency Department Visits, Connecticut, 2004-2013



Prepared by: Connecticut Department of Public Health, Office of Health Care Access
Source: Connecticut Hospital Association's ChimeData

From 2004 to 2013, there has been little change in the time of day that people visit the ED (**Figure 4**). The largest percentage of persons who visited the ED did so between 9:00 am and 5:00 pm (47%).

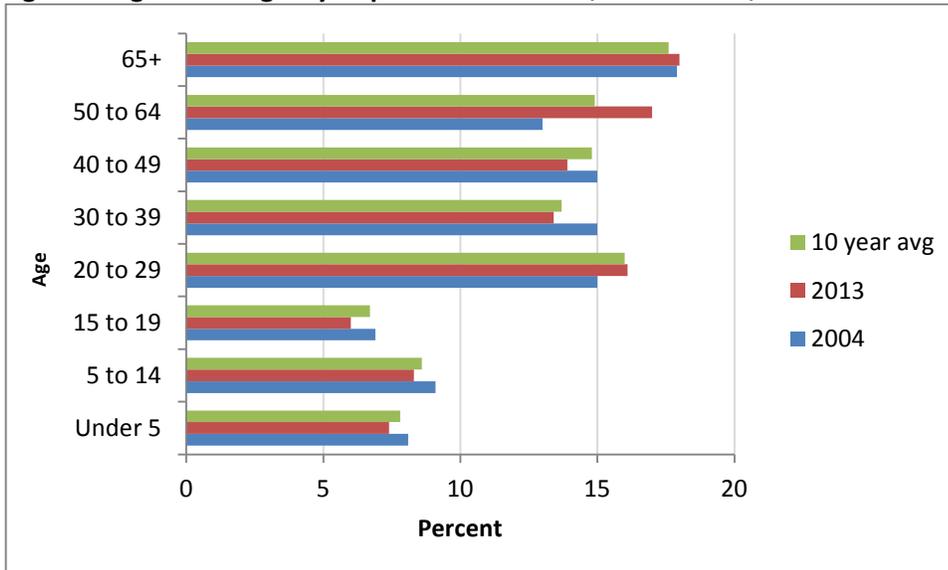
Figure 4. Time of Day of Emergency Department Visit, Connecticut, 2004-2013



Prepared by: Connecticut Department of Public Health, Office of Health Care Access
Source: Connecticut Hospital Association’s ChimeData

As shown in **Figure 5**, in 2004 and 2013 the largest proportion of emergency department visits were among persons age 65 and older, followed by those age 20 to 29 and age 50 to 64. Over this period, there was a 4% increase in the number of persons age 50 to 64 who visited the ED.

Figure 5. Age of Emergency Department Patients, Connecticut, 2004 and 2013

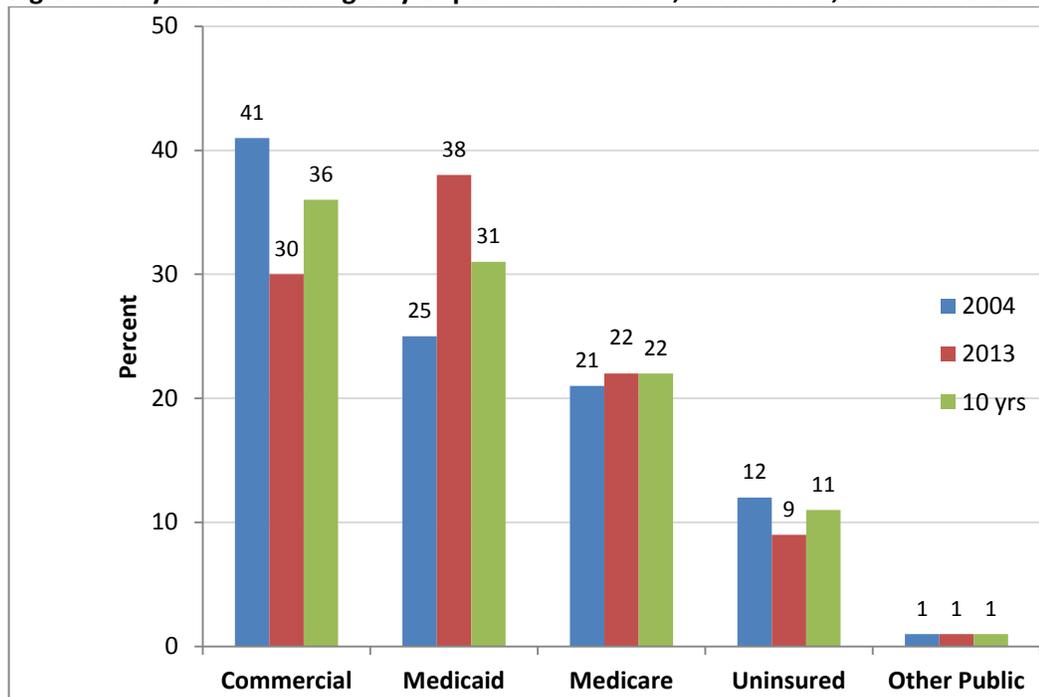


Prepared by: Connecticut Department of Public Health, Office of Health Care Access
Source: Connecticut Hospital Association’s ChimeData

In 2004 (**Figure 6**), the largest proportion of emergency department visits was among patients with commercial health insurance (41%), followed by patients with Medicaid (25%) and Medicare (21%). In contrast, in 2013, the largest proportion of emergency department visits was among patients with Medicaid (38%), followed by patients with commercial insurance (30%) and Medicare (22%). From 2004 to 2013, the percentage of uninsured patients fell from 11.7% to 9.2%.

A central goal of the Affordable Care Act (ACA) is to reduce the number of uninsured by providing a continuum of affordable coverage options through Medicaid and the health insurance marketplaces. Connecticut is one of 28 states that implemented expansion of Medicaid. This is evidenced by the increase in the number of Medicaid covered persons visiting the ED in 2013, as well as the decrease in the number of uninsured persons.

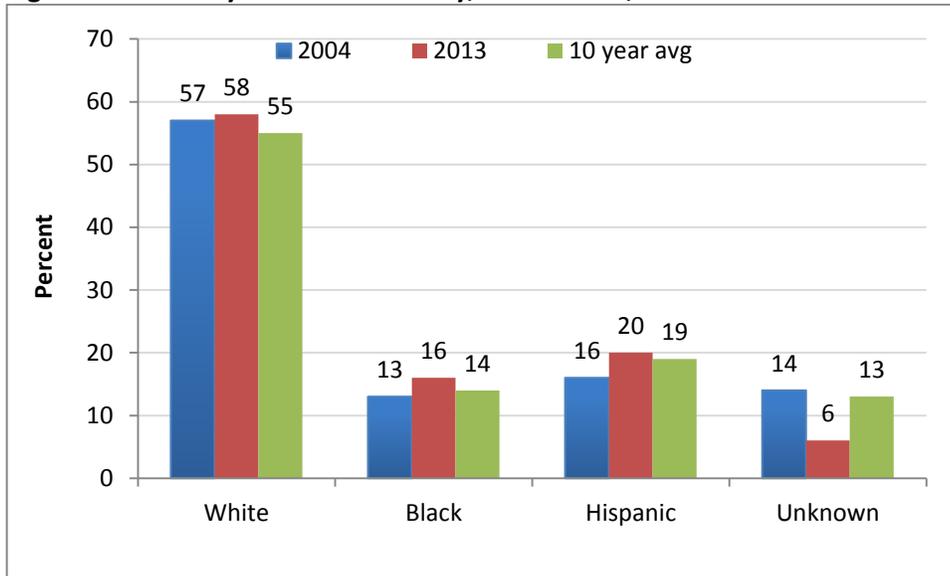
Figure 6. Payer Mix of Emergency Department Patients, Connecticut, 2004 and 2013



Prepared by: Connecticut Department of Public Health, Office of Health Care Access
Source: Connecticut Hospital Association's ChimeData

Federal law requires that providers collect information concerning a patient's race and ethnicity (**Figure 7**). In 2013, the reported race and ethnicity of ED patients was collected more thoroughly and accurately than in previous years. The number of persons reported as "Unknown" decreased from 14% in 2004 to 6% in 2013. Future reporting will make rate information based on populations of the various races and ethnicities meaningful and useful for health care planning. Collecting accurate demographic data is important, as health disparities have been identified among racial and ethnic minorities (see Chapter 3 for additional detail).

Figure 7. ED Use by Race and Ethnicity, Connecticut, 2004 and 2013



Prepared by: Connecticut Department of Public Health, Office of Health Care Access
Source: Connecticut Hospital Association’s ChimeData

An alternate method of looking at the rate of ED use is by county (**Table 18**). Connecticut’s largest cities are within one of the following counties: Fairfield, New Haven and Hartford. However, New London had the highest rate of ED visits. There may be several reasons for the higher rate, one being that New London County was previously identified as an area of the state with the highest rate of avoidable ED visits.⁴¹

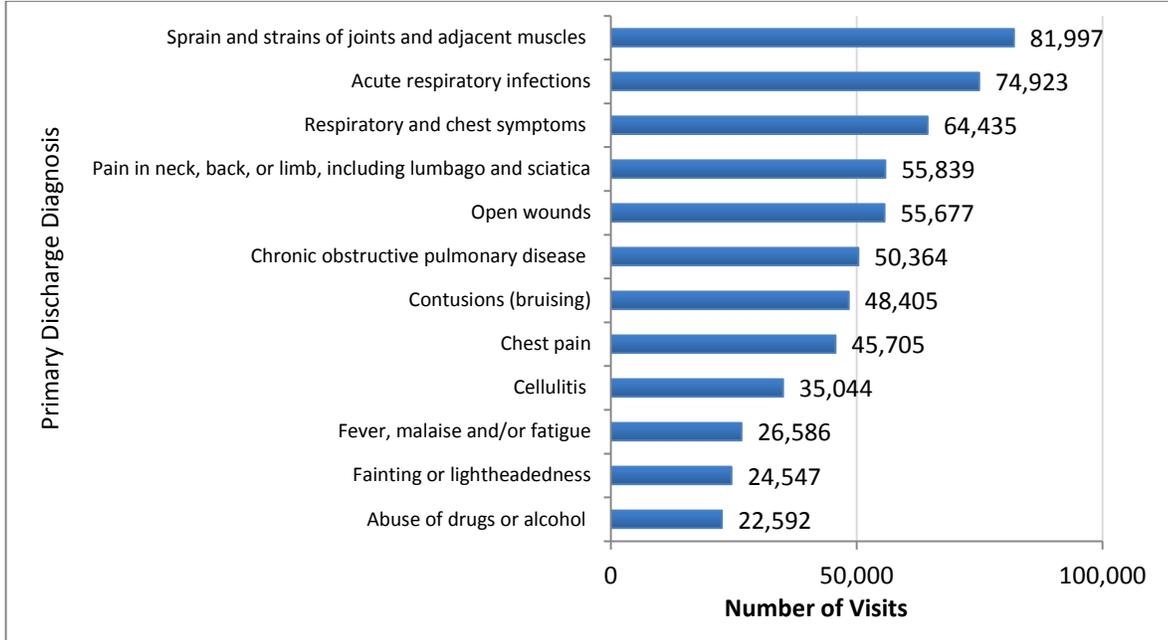
Table 18. Number of ED Visits per 1,000 Persons, Connecticut, 2004 and 2013

Number of ED Visits per 1,000 Persons		
County	FY 2004	FY 2013
Fairfield	316	370
Hartford	393	484
Litchfield	367	406
Middlesex	376	424
New Haven	417	476
New London	469	528
Tolland	284	343
Windham	376	462

Prepared by: Connecticut Department of Public Health, Office of Health Care Access
Source: Connecticut Hospital Association’s ChimeData

In FY 2013, 37% of all ED visits were for one of 12 reasons (**Figure 8**). Joint and muscle sprains and strains were the primary reasons for going to the ED, accounting for nearly 82,000 ED visits. Acute respiratory infections and respiratory and chest symptoms were the second and third top reasons for ED visits.

Figure 8. Rate of ED Visits, by Cause of Visit, Connecticut, 2013



Prepared by: Connecticut Department of Public Health, Office of Health Care Access
Source: Connecticut Hospital Association’s ChimeData

ED Use for Psychiatric/Drug or Alcohol Related Disorders

From 2009 to 2013, there were almost 8 million visits made to an ED in Connecticut by state residents. Of these visits, one million were for psychiatric, drug or alcohol-related mental disorders. **Table 19** reports selected demographic information for these visits.

Table 19. Connecticut Residents ED Visits for Psychiatric and Drug or Alcohol-Related Mental Disorders, 2009 to 2013

Category	Group	5- year Percentage	
		Drug or Alcohol Related ED Visits	Psychiatric Related ED Visits
Sex	Male	72.5%	47.9%
	Female	27.5%	52.1%
Race/Ethnicity	White	60.3%	58.3%
	Black	14.2%	13.5%
	Hispanic	15.3%	17.1%
	Other/Unknown	10.2%	11.0%
Age Group	Under 18	2.5%	15.1%
	18 to 39	36.5%	40.3%
	40 to 64	56.7%	35.5%
	65 and Over	4.3%	9.1%
Town Grouping	Urban Core	49.9%	43.4%
	Urban Periphery	32.2%	33.8%
	Rural	5.9%	9.3%
	Suburban	6.5%	7.6%
	Wealthy	5.6%	5.9%
Primary Payer	Medicaid	48.9%	43.3%
	Uninsured	18.5%	8%
	Commercial	19.2%	24.5%
	Medicare	13.4%	24.3%
Disposition	Discharged Home	80.2%	61.1%
	Admitted as Inpatient	15.4%	31.1%
Admission Time	9 a.m. to 5 p.m.	34.4%	47.7%
	5 p.m. to Midnight	43.1%	37.2%
	Midnight to 9 a.m.	22.5%	15.0%

Prepared by: Connecticut Department of Public Health, Office of Health Care Access

Source: Connecticut Hospital Association's ChimeData

Table reflects ICD-9 Codes 290-316

Adults

Drug or Alcohol-Related ED Visits

- Men make three times more drug and alcohol-related ED visits than women. White males and females, ages 40 to 64 and living in an urban core or urban periphery town make up 20% of these visits. Almost six out of ten visits involve alcohol, including drunkenness, psychoses and physical complications or long-term alcohol use.

Psychiatric-related ED Visits

- For all age groups, the primary reasons for visiting the ED are for a nonpsychotic disorder such as anxiety or depression or affective psychoses, such as bipolar disorders. In persons 65 and older, dementia also becomes one of the primary reasons. Almost one-third of persons have needed to be admitted for inpatient treatment.

Children

Of the children visiting the ED for issues relating to behavioral health, nine out of ten were treated for a psychiatric-related disorder. Common diagnoses made are episodic mood disorder, anxiety and depression. Disorders considered specific to childhood, such as oppositional defiant disorder, attention deficit disorder and disruptive behaviors are also common. Medicaid is the primary payer (57%) for children.

For ED visits by Connecticut state residents overall, Medicaid is the primary payer for drug and alcohol related disorders (48.9%) and for psychiatric disorders (43.3%). It is also the primary payer for those patients that reside in an urban core or urban periphery town.

Public Act 14-217 requires that the Department of Social Services, the state agency that oversees the Medicaid program, amend the Medicaid state plan to include services provided to Medicaid recipients age 21 or older by licensed behavioral health clinicians, psychologist, clinical social workers, drug and alcohol counselors, professional counselors and marriage and family therapists.

Alternative Sources for Urgent or Immediate Care

Published studies point toward a continued misuse of the ED for non-emergent care or visits for health issues that could be more appropriately treated in other settings. Ideally, non-emergency care should be treated at a medical home, such as a patient's regular private practitioner or community health center. Both an emergency department and a walk-in health care setting, which lack a comprehensive or continuing relationship with the patient, may be less ideal than receiving care through a medical home. However, there is growth in the models available and use of "walk-in" care. With the proliferation of urgent care settings easily available to serve patients, questions have been raised as to how patients are using such urgent care centers and other retail-based health clinics and whether they are reducing misuse of the ED.

Urgent Care Centers, Including Retail-Based Clinics

Urgent care centers (immediate care centers, walk-in clinics) have existed for a number of decades. However, different models of care in this setting continue to evolve and the overall numbers of these services appear to be increasing. Urgent care centers can be licensed by the state as an Outpatient Clinic, such as Enfield Ambulatory Care Center, LLC; as a satellite to a general hospital, such as Saint Vincent's Urgent Care Walk-In Center or, like the vast majority in Connecticut, under a private physician's or advanced practice registered nurse's (APRNs) license. There is not a single license category for the urgent care setting or a statutory definition for this term. As such, it remains difficult to fully inventory, categorize or discuss this level of service in the state. However, the issue has increased in prominence as these sites may relieve EDs of unnecessary patient visits for non-emergent care, but also may syphon off patient visits that would be better seen at a regular private practitioner or medical home, familiar with the patient and the patient's medical history. In the last several years, the issue of retail-based care (urgent care offered in a convenient retail setting) has jumped to the forefront of discussions of appropriate placement for patient care. A summarization of this follows based on literature available regarding the models of urgent care and its effect on the health care system overall.

Unlike EDs, which are generally open 24 hours/7 days a week and provide services for life-threatening issues, urgent care centers provide walk-in, extended hour access for acute illness and injury care, but are generally not equipped to address major medical trauma or conditions.⁴² Urgent care centers often have on-site x-ray machines and laboratory testing.^{43, 44} There are more than 9,000 urgent care centers across the nation, seeing approximately 115,596,000 patient visits each year and costing about \$100 each due to lower overhead costs.^{45, 46, 47} Growth in this industry, which is a \$14.5 billion market, is largely driven by investments from private equity firms; a rise in the insured population; growing demand for convenient alternatives to long waits at EDs and limited office hours at physician's offices; and greater use of electronic health records, patient portals and e-prescribing to facilitate access to health care records.⁴⁸

Urgent care centers may exacerbate health care inequities as they may not accept Medicaid or treat persons who do not have health insurance, whereas hospital's EDs are mandated to treat everyone.⁴⁹ There is also some concern in the field regarding the quality of care and potential fragmentation of care through these urgent care centers.⁵⁰ Most states do not require urgent care centers to be licensed.⁵¹

Retail-based health clinics are clinics that offer basic health care services and are located within a retail setting such as a drug store, pharmacy, grocery store or superstore.⁵² An APRN alone or physician's assistant, under the supervision of an off-site physician, provides clinic services. Health care services and costs are clearly indicated and diagnostics may be protocol-driven. Services are available daily and generally do not require an appointment.⁵³ Basic services generally cost \$45 to \$75 on average, not including prescription costs.⁵⁴ Treatment at these settings may be limited to minor illnesses (e.g., allergy symptoms, sore throat).

The concept of retail clinics began in 2000 and grew by a 65% annual growth rate from 2000 to 2007, with an estimated 15% growth rate from 2008 to 2009. Estimates from 2009 anticipate a 10-15% growth rate from 2010 to 2012 and more than 30% growth rate from 2013 to 2014.⁵⁵ Estimates indicate that from 2007 to 2009, use of retail clinics grew four- to ten-fold.^{56, 57} Retail clinics account for approximately 6 million annual visits.⁵⁸ Initially, clinic visits were not paid for through health insurance.⁵⁹ However, insurance companies are increasingly covering care received at retail clinics.⁶⁰

One study indicates a shift in the population and health care needs addressed by the growing retail clinic industry. Compared to patients who visited retail clinics from 2000 to 2006, those who visited clinics in 2007 to 2009 were more likely to be 65 years of age or older. Further, preventive care (e.g., influenza vaccine) comprised a larger share of the clinic visits than in prior years.⁶¹ From 2007 to 2009, 44.4% of retail clinic visits occurred during the weekend or weekday evenings, when most physicians' offices are closed.⁶²

Implications for Primary Care and Emergency Department Usage

The growth of urgent care settings, such as retail clinics has contributed to some concern in the field and among several medical associations that this type of care setting may contribute to the fragmentation of care, inadequate follow-up and preventive care, and misdiagnoses, particularly for clinics that are not affiliated with a health care system.^{63, 64} One study based on an analysis of claims data from 2007 to 2009 found that retail clinics may disrupt two aspects of primary care: whether patients go to a primary care physician (PCP) first for new conditions and for continuity of care. However, this study found that retail clinics do not adversely impact preventive care or diabetes management.⁶⁵

An analysis of retail clinic utilization from 2000 to 2007 indicates the ten common clinical conditions that retail clinics address comprise 30.1% of pediatric primary care visits, 13.0% of primary care visits for adults, 23.2% of pediatric ED visits and 8.3% of ED visits for adults.⁶⁶ In another study, estimates based on retail clinic claims data from 2007 indicate that 13.7% of all ED visits could be addressed at retail clinics.⁶⁷ Utilization of retail clinics and urgent care centers, rather than the ED, are estimated to save potentially \$.4.4 billion annually.⁶⁸

While urgent care settings and models appear to be experiencing continued growth, their effect on Connecticut's health care system is not clear. As DPH is only made aware of the location of those entities that it licenses as outpatient clinics or satellites of hospitals, the agency is limited in its ability to assess the Connecticut-specific impact of this level of care. Questions remain, including how the population should use these settings and whether or not their continued growth has or will alleviate inappropriate use of the hospital emergency department for non-emergent care.

Safety Net Preservation

Hospitals and their EDs serve as critical safety net providers of health care to many Connecticut residents, treating a substantial number of patients who are uninsured, have limited ability to pay or are indigent. As OHCA’s mission is to ensure access to a quality health care delivery system, it is important that the Certificate of Need (CON) process consider how health care facility and service changes will affect the viability of the overall health care system and to preserve safety net providers. These factors along with impending changes resulting from the Affordable Care Act (ACA) spurred CON reform in 2010.

The goal of CON reform was to improve CON review criteria to address the financial stability of the health care delivery system, preserve access to safety net services and to align better with federal health care reform. To align better with new value driven models of health care delivery (as opposed to volume driven), OHCA sharpened the focus of CON oversight to include two services identified as being of concern for potential overutilization, outpatient surgical facilities and imaging.

In order to better assess community need for these services, OHCA in its initial Health Care Facilities and Services Plan, developed an inventory of providers and gathered some preliminary aggregate utilization data to learn more about the use and distribution of these services. Gaps in the data, however, were evident. As a result, more comprehensive data will be collected from outpatient surgical facilities beginning in July 2015 to help OHCA assess the need for these services.

The information available regarding outpatient surgery and imaging is summarized in **Table 20** and **Table 21** below:

Table 20. Outpatient Surgical Specialty by Facility Type, Connecticut, 2014

Surgery Type	Hospital-Based Surgical Location	Hospital Satellite Surgical Location	Outpatient Surgical Facility
Gastroenterology	30	12	25
General	28	14	10
Gynecology	28	12	11
Neurosurgery	24	6	6
Ophthalmology	27	14	15
Oral	22	7	5
Orthopedic	28	13	18
Otolaryngology	27	12	7
Pain Management	16	11	18
Plastic	25	14	18
Podiatry	26	11	9
Urology	27	12	6
Other Services	11	4	7

Source: Connecticut Department of Public Health, Office of Health Care Access, Health Care Facilities and Services Survey 2014

Table 21. Imaging Services by Facility Type, Connecticut, 2014

Type of Imaging Service	Number of Facilities that Provide Imaging Service	Quantity of Imaging Technology
MRI	110	131
Acute Care Hospitals	29	46
Hospital Satellite Locations	29	32
Non-Hospital Provider Sites	52	53
CT Scanner	102	129
Acute Care Hospitals	29	55
Hospital Satellite Locations	27	28
Non-Hospital Provider Sites	46	46
PET/PET-CT	25	26
Acute Care Hospitals	16	17
Hospital Satellite Locations	7	7
Non-Hospital Providers	2	2

Source: Connecticut Department of Public Health, Office of Health Care Access, Health Care Facilities and Services Survey, 2014.