Statewide Health Care Facilities and Services Plan

March 2025

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Update History

This plan was updated on July 2, 2025, to correct a typographical error in Table 5.2 Summary of Proposed New Capacity Thresholds for Imaging Equipment by Type, Ownership, and Mobility, 2022. The Hospital-Based CT Revised Threshold has been corrected to read 14,100 consistent with the methodology in Section 5.5.3 on page 142.

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List of Acronyms

Term	Definition
AAPM	Advanced Alternative Payment Model
ACA	Affordable Care Act
ACAD	Academic Comprehensive Cancer Program
ACCF	American College of Cardiology Foundation
ACEP	American College of Emergency Physicians
ADC	Average Daily Census
ADLs	Activities of Daily Living
AHA	American Health Association
AI	Artificial Intelligence
AIDS	Acquired Immunodeficiency Syndrome
ALSAs	Assisted Living Services Agencies
APCD	All-Payer Claims Database
APRNs	Advanced Practice Registered Nurses
ARPA	American Rescue Plan Act
ARRA	American Recovery and Reinvestment Act
ASCs	Ambulatory Surgery Centers
ASOs	Administrative Services Organizations
BIP	Balancing Incentive Program
C.A.G.	Connecticut Agency Regulations
CAHs	Critical Access Hospitals
CARES	The Coronavirus Aid, Relief, and Economic Security Act
CCCP	Comprehensive Community Cancer Program
CCNH	Chronic Convalescent Nursing Homes
CCP	Community Cancer Program
C.G.S.	Connecticut General Statues
CHNA	Community Health Needs Assessment
CJR	Comprehensive Care for Joint Replacement
CMAP/Medicaid	Connecticut Medical Assistance Program
CMHI	Connecticut Medical home Initiative
CMMI	Center for Medicare and Medicaid Innovation
CMS	The Centers for Medicare & Medicaid Services
CoC	Commission on Cancer
COHI	Connecticut Oral Health Initiative
CON	Certificate of Need
CT	Computed Tomography
CYSHCN	Children and Youth with Special Health Care Needs
DOI	Connecticut Department of Insurance
DPH	Connecticut Department of Public Health
DRG	Diagnosis-Related Groups

Term	Definition
DSH	Disproportionate Share Hospital
ECs	Eligible Clinicians
ED	Emergency Department
EHRs	Electronic Health Records
EHs	Eligible Hospitals
EMS	Emergency Medical Services
EMTALA	Federal Emergency medical Treatment and Active Labor Act
FDA	United States Food and Drug Administration
FFS	Fee-for-Service
FFY	Federal Fiscal Year
FPL	Federal Poverty Level
FQHC	Federally Qualified Health Center
FSP	Facilities and Service Plan
HAIs	Health Care Acquired Infections
HCAs	Homemaker Companion Agencies
HCBS	Home and Community-Based Services
HHS	United States Department of Health and Human Services
HIE	Health Information Exchange
HITE/HITE-CT	Health Information Technology Exchange/Health Information Technology Exchange-CT
HITECH	Health Information Technology for Economic and Clinical Health
HIV	Human Immunodeficiency Virus
HOPDs	Hospital -Based Outpatient Departments
HPSAs	Health Professional Shortage Areas
HRRP	Hospital Readmissions Reduction Program
HRSA	United States Health Resources and Administration
HSP	Health Systems Planning Unit
IADLs	Instrumental Activities of Daily Living
ICM	Intensive Case management
INCP	Integrated Network Cancer Program
IRA	Inflation Reduction Act
IRS	Internal Revenue Service
LTSS	Long-Term Services and Supports
MAPs	Medication Adherence Programs
MCTA	Maternity Care target Areas
MIPS	Merit-based Incentive Payment System
MRCs	Managed Residential Communities
MRI	Magnetic Resonance Imaging
MUAs	Medically Underserved Areas
MUPs	Medically Underserved Populations
NCI	National Cancer Institute
NCIP	NCI- Designated Comprehensive Cancer Center Program

Term	Definition
NCSBN	National Council of State Boards of Nursing
OB-GYN	Obstetricians and Gynecologists
OEMS	Office of Emergency Medical Services
OHS	Office of Health Strategy
ONC	US Office of the National Coordinator for Health Technology
OOH	Department of Public Health: Office of Oral Health
OSFs	Outpatient Surgery Facilities
P4P	Pay for Performance
PAC	Post-Acute Care
PAs	Physician Assistants
PCA	Coronary Angioplasty
PCI	Percutaneous Coronary Intervention
PCMH	Person-Centered Medical Home
PCMH+	Person-Centered Medical Home Plus
PCO	Connecticut Primary Care Office
PCP	Primary Care Practitioner
PET	Position Emission tomography
PHC	Connecticut Public Health Code
PHE	Public Health Emergency
PHSA	Public Health Service Act
PIP	Promoting Interoperability Program
PLWHA	People Living with HIV or AIDS
PSAs	Primary Service Area
QPP	Medicare Quality Payment Program
RCH	Residential Care Homes
RHNS	Rest Homes with Nursing Supervision
RNs	Registered Nurses
SBHCs	School-based Health Centers
SBRIT	Connecticut Screening, Brief Intervention and Referral to Treatment Program
SCAI	Society for Cardiovascular Angiography and Interventions
SDOH	Social Determinants of Health
SHA	Connecticut State Health Assessment
SHIP	Connecticut State health Improvement Plan
SHOP	Small Business Health Options Program
SIM	State Innovation Model
SPCAA	Statewide Primary Care Access Authority
TCM	Transitional Care Management
The Plan	Statewide Healthcare Facilities and Services Plan
UPL	Upper Payment Limit
VACP	Veterans Affairs Cancer Program
VHA	US Veterans Health Administration

Glossary of Terms

Term	Definition
Advanced Alternative Payment Model	A type of Alternative Payment Model that includes specific features and allows participants to seek Qualifying APM Participant status by achieving threshold levels of payments or patients.
Academic Comprehensive Cancer Program	Facilities that participate in postgraduate medical education in at least four program areas, including internal medicine and general surgery. The facility takes on more than 500 newly diagnosed cancer cases each year.
Average Daily Census	The average number of inpatient stays for a day in a hospital over a designated period of time.
Activities of Daily Living	The tasks of everyday life. Basic ADLs include eating, dressing, getting into or out of a bed or chair, taking a bath or shower, and using the toilet.
Artificial Intelligence	The ability of a digital computer or computer-controlled robot to perform tasks commonly associated with human intelligence.
Assisted Living Services Agencies	An entity licensed by the Department of Public Health that provides nursing services and assistance with activities of daily living to a population that is chronic and stable.
All-Payer Claims Database	Large state databases that include medical claims, pharmacy claims, dental claims, and eligibility and provider files collected from private and public payers.
Ambulatory Surgery Centers	Medical facilities specializing in outpatient surgical procedures that do not exceed 24 hours in duration.
Balancing Incentive Program	Provides financial incentives to States to increase access to non-institutional long term services and supports.
Critical Access Hospitals	A medical center that provides health care services to rural, often underserved communities.
Comprehensive Community Cancer Program	A medical facility that takes on 500 or more newly diagnosed cancer cases each year.
Chronic Convalescent Nursing Homes	A facility that provides 24-hour nursing supervision, can perform simple, non-surgical treatments, and fulfill dietary meal orders from doctors.
Community Cancer Program	A medical facility that takes on more than 100 but fewer than 500 newly diagnosed cancer cases each year.
Community Health Needs Assessment	A State, tribal, local or territorial health assessment that identifies key health needs and issues through systematic, comprehensive data collection and analysis.
Connecticut Medical Assistance Program	Programs in Connecticut that provide medical assistance to low income persons and children.
Connecticut Medical Home Initiative	Program or children and youth ages 0-21 who have or are at risk for a chronic physical, developmental, behavioral, or emotional condition and who also require health and resulted services of a type or amount beyond what is generally required for children or youth.
Commission on Cancer	A consortium of professional organizations dedicated to improving survival and quality of life for patients with cancer by setting and raising standards.

Term	Definition
Connecticut Oral Health Initiative	An initiative that advocates for access, quality, and equity in oral health care for all Connecticut residents.
Certificate of Need	A state regulatory governmental program requiring certain types of health care providers to obtain state approval prior to making certain capital investments in new equipment or facilities, changing bed capacity, and adding or discontinuing a health care service.
Computed Tomography	Computerized x-ray imaging procedure in which a narrow beam of x-rays is aimed at a patient and quickly rotated around the body, producing signals that are processed by the machine's computer to generate cross-sectional images.
Children and Youth with Special Health Care Needs	Children and youth who require more care for their physical, developmental, behavioral, or emotional differences than their typically developing peers.
Diagnosis-Related Groups	A system used by Medicare and other insurance provider to categorize and pay for hospital inpatient services.
Emergency Department	A hospital facility that is staffed 24 hours a day, 7 days a week, and provides unscheduled outpatient services to patients whose condition requires immediate care.
Electronic Health Records	An electronic version of a patients' medical history that is maintained by the provider over time and may include all of the key administrative clinical data relevant to that person's care under particular provider, including demographics, progress notes, problems, medications, vital signs, past medical history, immunizations, laboratory data, and radiology reports.
Emergency Medical Services	A system that provides emergency medical care to the patient(s), transportation to a hospital, documentation of patient condition and treatment, and handoff to appropriate medical personnel.
Fee-for-Service	A method of payment in which doctors and other health care providers are paid for each service performed.
Federally Qualified Health Center	Federally funded nonprofit health centers or clinics that serve medically underserved areas and populations, providing primary care services regardless of ability to pay, and service are provided on a sliding scale fee based on ability to pay.
Home and Community-Based Services	Services and support provided by most state Medicaid programs in your home or community that gives help with such daily tasks as bathing or dressing.
Health Information Exchange	The mobilization of health care information electronically across organizations within a region, community, or hospital system.
Health Information Technology Exchange/Health Information Technology Exchange-CT	A partnership with the Connecticut Department of Public Health and a quasi-public group to develop processes for Medicaid providers to participate in health information exchange.
Hospital -Based Outpatient Departments	Medical services provided at an on-site hospital outpatient clinic or other hospital affiliated location.
Health Professional Shortage Areas	A shortage of providers for a specific group of people within a defined geographic area.
Instrumental Activities of Daily Living	Instrumental activities of daily living. Activities related to independent living such as preparing meals, managing money, shopping, doing housework, and using a telephone.

Term	Definition
Integrated Network Cancer Program	Facilities belonging to an organization that owns a group of facilities that offer integrated and comprehensive cancer care services and is overseen by a centralized governance structure/board and Chief Executive Officer.
Long-Term Services and Supports	The broad range of paid and unpaid medical and personal care assistance that people may need for several weeks, months, or years when they experience difficulty completing self-care tasks as a result of aging, chronic illness or disability.
Medication Adherence Programs	Programs designed to improve the extent to which patients take medications as prescribed by their health care provider.
Maternity Care Target Areas	A maternal health professional shortage area based on the ratio of females aged 15-44 to maternity care providers, lower-income women, distance/travel time to care, fertility rates, social vulnerability, and maternal health indicators.
Merit-based Incentive Payment System	A payment system that ties physicians' Medicare payments to their individual, group practice or alternative payment model score on reported and applicable quality measures, cost measures, health IT use, and practice improvement activities.
Managed Residential Communities	A for-profit or not-for-profit facility consisting of private residential units that provides a managed group living environment consisting of housing and services for persons who are primarily fifty-five years of age or older.
Magnetic Resonance Imaging	A non-invasive imaging technology that produces three dimensional detailed images used for disease detection, diagnosis and treatment monitoring.
Medically Underserved Areas	Geographic areas with a lack of access to primary care health services.
Medically Underserved Populations	A shortage of primary care health services for a specific population subset within an established geographic area. These groups may face economic, cultural, or linguistic barriers to health care.
NCI- Designated Comprehensive Cancer Center Program	Cancer centers that meet rigorous standards for transdisciplinary, state-of-the-art research focused on developing new and better approaches to preventing, diagnosing, and treating cancer.
Office of Emergency Medical Services	The office responsible for strategic planning, regulatory & statutory oversight, as well programmatic implementation of the Emergency Medical Services system in Connecticut.
Outpatient Surgery Facilities	Health care facilities providing surgical care without the need for the patient to stay in the hospital overnight.
Pay for Performance	A payment system that attaches financial incentives or disincentives to provider performance.
Post-Acute Care	Rehabilitation or palliative services that patients receive after or in some cases instead of, a stay in an acute care hospital.
Coronary Angioplasty	A procedure to open blocked coronary arteries caused by coronary artery disease in order to return blood flow to the heart.
Percutaneous Coronary Intervention	A minimally invasive procedure to open blocked or narrowed arteries to allow blood flow to the heart.

Term	Definition
Primary Care Medical Home	A model or philosophy of primary care that is patient-centered, comprehensive, team-based, coordinated, accessible, and focused on quality and safety.
Primary Care Medical Home Plus	Builds on the Primary Care Medical Home initiative with a more advanced payment model and more intensive care coordination requirements.
Primary Service Areas	A specific geographic area to which the majority of patients living in that area use primary care services from within the area.
Residential Care Homes	Community-based care settings for individuals who are unable to live completely independently.
Rest Homes with Nursing Supervision	A facility that provides 24-hour nursing supervision, but does not provide treatment or dietary adherence.
School-based Health Centers	Located in schools or on school grounds, these centers provide primary care services that address physical and mental health needs of students, including dental care.
Social Determinants of Health	The conditions in the environment where people are born, live, learn, work, play, worship, and age that affect a wide range of health, functioning, and quality-of-life outcomes and risks.
Transitional Care Management	Services that address the hand-off period between the inpatient and community setting after a hospitalization or other inpatient facility stay.
Upper Payment Limit	A reasonable estimate of the amount that would have been paid for the same service under Medicare payment structures.

Executive Summary

Overview

The Connecticut Office of Health Strategy (OHS), successor to the Office of Health Care Access (OHCA), is charged with conducting planning and regulatory activities intended to increase access, continuity and quality of health services; prevent unnecessary duplication of health resources; and provide financial stability and cost containment of health care services per Connecticut General Statute (C.G.S.) § 19a-634.[1] One component of this charge is the development and maintenance of the *Statewide Health Care Facilities and Services Plan (the Plan)*, alongside a biennial inventory of all Connecticut health care facilities and services.

This Plan and accompanying inventory serve as an advisory document and a blueprint for health care delivery in Connecticut, by providing a resource for policymakers to understand the Connecticut health care landscape and contributing information and guidelines as an input to OHS's evaluation of CON applications. As set out in C.G.S. § 19a-639(a)(2),[2] OHS must consider "the relationship of the proposed project to the state-wide health care facilities and services plan" as one of the 12 factors in making CON decisions. The plan includes standards/guidelines/methodologies for Acute Care Bed Need, Outpatient Surgery, Cardiac Services, Imaging Services/Equipment, Behavioral Health and Substance Use Disorder Treatment, and Labor and Delivery Services that are also utilized in the CON review process.[3]

Additionally, the Plan serves as overarching policy document, highlighting broader statewide trends and policies impacting the use of Connecticut health care facilities and services, including topics on the use of services by different Connecticut populations, data on possible gaps in services and unmet need, assessments of the impact of medical technologies, and projections of future health care supply needs given ongoing trends contributing to health drivers.

This plan incorporates and updates findings of service-specific subcommittees (e.g., Acute Care/Ambulatory Surgery, Behavioral Health, and Primary Care) from prior Plan versions, specifically information on professional society quality guidelines and methodologies for calculating current capacity, utilization, and estimates of need for health care facilities and services. This plan builds on the prior work of those service-specific subcommittees and incorporates updated advice from the OHS Health Care Cabinet (a committee of health care policy experts who advise the Office of Health Strategy)[4] on the CON guidelines, standards, and methodologies that guide the content in these

[1] Connecticut General Statutes, Section 19a-634. (2018).
[2] Connecticut General Statutes, Section 19a-634 (a)(2). (2018).
[3] These standards and guidelines serve as guidance and are an articulation of the Agency's decision making process. They are expected to be adopted as regulation pursuant to cga.ct.gov/current/pub/chap 054.htm of the C.G.S.
[4] State of Connecticut. (2024). Overview of the health care cabinet. portal.ct.gov/ohs/content/healthcare-cabinet

critical Plan sections. OHS convened service-specific subcommittees as part of the stakeholder engagement plan following the release of the preliminary report. OHS reviewed recommendations from the subcommittees and comments from stakeholders[5] and the public (which can be found in Appendix 2) in preparing this final 2024 Plan.

Summary of Plan Findings

The Plan identifies the following key findings on the Connecticut health care landscape:

- Major state health care trends impacting the use and affordability of health care facilities and services in Connecticut include above average rates of health insurance coverage; Medicaid expansion to new populations, including the Covered Connecticut program; the rising cost of healthcare coverage and shifts in costs from employers to employees; healthcare consolidation; the entry of Private Equity and other investors into the healthcare marketplace; continued racial and ethnic disparities in healthcare utilization and health outcomes; a growing emphasis on Health Related Social Needs as key drivers of health and healthcare; and imbalance in the availability of key workforce sectors, including primary care and geriatrics. A growing population of older adults is likely to present challenges to the current health care workforce in Connecticut, where projected demand for healthcare services is expected to increase between now and 2030.
- Use of health care technologies like health information exchanges, telemedicine, and artificial intelligence will change the way health care is provided and has the potential to improve the quality of care in the state.
- Use of inpatient acute care hospital beds declined from 2018 to 2023 for many service lines, indicating a shift to outpatient alternatives and highlighting the impacts of the COVID-19 pandemic on elective services. Lower levels of use of surgical service lines by persons of color and those with Medicaid could indicate barriers to accessing certain types of care.
- Applying the Connecticut Acute Care Bed Need Model, it is projected that by 2030 eight of the nine Connecticut Planning Regions (Planning Regions) will have an excess number of acute care hospital beds, although shortages could remain for specific service lines. The only region with an expected need for more acute care beds in 2030 (after incorporating population growth and inpatient discharge trend adjustments), given current licensed beds, is the South Central Planning Region.

[5] Stakeholder groups included the Physician Practice Advisory Work Group; the Cardiac Services Advisory Work Group; the Reproductive Health Advisory Work Group; the Acute Care, Outpatient Surgery, Bed Need Work Group; the Imaging Advisory Work Group; Health Care Cabinet.

- Avoidable emergency department use in Connecticut declined between 2018 and 2023. Some residents in the state appear to have barriers to accessing this care based on data capturing "time spent in the ED" and "percent leaving without being seen." High rates of "avoidable" emergency department visits indicate gaps in access to primary and behavioral health care in some areas of the state.
- Use of acute care cardiac services held mostly constant between 2018 and 2023, with total discharges declining slightly and total patient days increasing slightly. The overall rate of performed percutaneous coronary interventions (PCI) per 100,000 residents is lower in Connecticut compared to other states and below the national average. Just over a third of these treatments occurred in an outpatient setting in 2021.
- The most common procedures/surgeries performed in outpatient settings in 2021 were colonoscopies and biopsies, upper gastrointestinal endoscopies, and sutures of skin and subcutaneous tissue. These surgeries occurred in hospital outpatient departments, outpatient surgery facilities, and other outpatient settings. The share of surgeries performed in OSFs increased in 7 planning regions, 1 planning region stayed the same, and 1 planning region decreased between 2016 and 2021.
- Use of magnetic resonance imaging (MRI), computed tomography (CT), and positron emission tomography-computed tomography (PET-CT) imaging reveal that many machines in the state operate above the "total capacity per scan" thresholds used in the 2012 Plan. Therefore, new thresholds for imaging capacity are set in this FSP based on observed use of imaging machines by type and ownership. There is significant variation in the percent utilization of regional scanner capacity and many regions/subpopulations in Connecticut use imaging at rates higher than national averages.
- There are risks of significant future gaps in long-term services and supports (LTSS) and post-acute care for the aging population. Demand for LTSS is rising and meeting new demand is challenging due to staffing constraints. Demand for nursing home beds fell temporarily due to the COVID-19 pandemic and there was a notable shift in post-acute care away from nursing homes toward home health over the last five years.
- Health status, chronic conditions, and health behaviors like smoking and substance misuse are contributors to poor health alongside barriers to accessing health care (including financial, transportational, and cultural barriers). Vulnerable populations often have higher levels of unmet need for health care in Connecticut due to these health-related social needs. Medicaid coverage and safety net facilities are positive contributors to health care access for these populations.
- Primary care in Connecticut is provided by a network of office-based practitioners, outpatient clinics, community health centers, hospital operated primary care centers, and federally operated primary care centers.

- Connecticut has numerous health provider shortage areas (HPSAs), including for primary care, dental care, and mental health care, potentially contributing to avoidable emergency department use.
- Data on Maternity Care Target Areas (MCTAs) in Connecticut suggest that access to maternity services may be an issue in some areas of the state.
- Overall need for behavioral health care services in Connecticut has increased significantly over the past decade, including higher rates of mental health conditions and substance use disorders. The number of specialized treatment facilities, including offerings for both inpatient and outpatient care have increased, although unmet need remains in many parts of the state.
- Consolidation among Connecticut health care providers, particularly hospital consolidation, is occurring across the state and is likely contributing to higher health care prices, especially among privately insured patients. Impacts of consolidation on the availability of care are less severe, although consolidation does appear to lead to fewer low-profitability services being provided in hospital settings.

Key Issues

The Plan identifies the following key issues and trends that are likely to impact the delivery of health care in Connecticut:

- The lack of availability and mix of providers in the health care workforce in Connecticut may lead to an undersupply of needed health care services if more health care workers cannot be hired. Workforce shortages have contributed to gaps in care across a variety of settings in the State.
- The types of payment for health care services, the mix of payers across health care settings, and an increasing use of alternative payment models, pay for performance, and volume-based purchasing are changing the way in which providers are paid and their total revenues across the State.
- An increasing consolidation in health care providers in Connecticut, including larger hospital networks, fewer independent hospitals, and a greater number of physicians employed by hospitals/health systems in Connecticut could alter the financial and operational dynamics of certain health care sectors.
- Potential changes in the availability of certain service lines at hospitals in the state; for example, access to maternity and delivery care in hospitals may reduce access to needed services for vulnerable populations.

- An increasing prevalence and need to treat and manage behavioral health conditions (mental health and substance use disorders) will impact the need for behavioral health care providers, and facilities.
- There is a significant impact of social, economic, and cultural drivers of health on overall health care needs which exacerbate health disparities, particularly for vulnerable populations. Greater detail on these social and economic drivers of health and how these influence the need for care across Connecticut will be addressed in an upcoming addendum to this Plan.

Recommendations and Next Steps

Next steps and recommendations for further development of OHS data collection, additional Plan analyses to assess health care need and capacity, and integration of Plan findings with other health sector tracking are as follows:

- **Data Recommendations**
  - Continue to develop data collection on Connecticut planning regions **(Figure 1.1)** and gather further detail on capacity and need in hospital primary service areas and planning regions.
  - Begin to capture and track race/ethnicity data in the All-Payer Claims Database and other data sources to better identify health disparities and needs for Connecticut populations.
  - Collect data on the service type classification of acute care beds, so that average daily census and bed capacity by service line can be calculated.
  - Track detailed data on the capacity, wait time, number of available beds, overall volume, number of admissions, demographics, and conditions of patients using emergency departments in Connecticut to better assess overall capacity and utilization of ED care.
  - Investigate the ability to measure the capacity and annual utilization of facilities licensed to provide cardiac angioplasty (separately measure primary and elective PCI capacities and use), to provide a better understanding of current use of available resources and possible need for additional cardiac services across the State.
  - Gather additional data on the use of behavioral health care services by type of care and condition severity to determine if capacity is meeting patient needs. Integrate this data with observed use of behavioral health care services in different settings to estimate remaining unmet need for care.

- Investigate if additional categories of imaging machines can be collected in the survey of providers to better estimate the total annual capacity of each machine and if there are any restrictions on the types of scans each machine can conduct.
- Combine and integrate data from other state sources, including information from the Connecticut Department of Mental Health and Addiction Services (DMHAS) and Department of Children and Families (DCF) to provide greater detail on the volume of behavioral health care provided in state-run versus other health care facilities.
- Begin to gather enhanced data on ownership of health care facilities, equipment, and physician group practices, such that evaluations of the impact of various ownership types on the quality, cost effectiveness, and access to care can be assessed.
- Continue to investigate ways to identify underlying need for specific services among Connecticut residents, driven by condition prevalence and expected treatment modalities for care, to compare with observed utilization of care. Focus on identifying need and utilization by race/ethnicity and age in addition to geographic location in order to identify and address gaps in care.

- **Plan assessments of need, capacity, and access**
  - Work towards data and analyses that independently assess the available capacity for health care services, as well as the expected need for those services based on population and condition-prevalence data.
  - Consider applying any new data collected on race/ethnicity and condition prevalence by Connecticut subpopulations to assessments of need, capacity, and access to care for specific groups. Require the consideration of race/ethnicity in assessments for both overall need and need for specific groups.
  - Expand the evaluation of utilization (e.g. use of imaging, cardiac interventions) to track the quality and appropriateness of services provided by

service category. Use these insights to assess if utilization of capacity is “high-value” versus “low-value” and if current capacity could be sufficient if lower quality or unnecessary care was reduced and “high-value” services were employed instead.

  - Work on developing approaches to quantify the impact of social and economic barriers on utilization of existing resources. Use this information to estimate what necessary total capacity for care would be, if barriers to access were eliminated, to ensure sufficient capacity is available.

- **Integration of Plan information with other health care, social, and economic data**
  - Overlay areas and populations of health care need with social and economic data for Connecticut to better understand the connection between social drivers of health and health care need.
  - Identify and track specific barriers to accessing health care services and the impact these barriers have on health care utilization and outcomes for Connecticut residents.

Section 1

Section 1 Chapter 1
INTRODUCTION

1.0 Introduction

1.1 Legal Authority and Mandate

Connecticut General Statutes § 19a-634[6] charges the OHS with the responsibility of developing and maintaining a *Statewide Health Care Facilities and Services Plan (the Plan)*, along with establishing and maintaining an inventory of all Connecticut health care facilities and services and conducting a biennial utilization study.

1.2 Purpose and Value

The Plan is an advisory document intended to be a blueprint for health care delivery in Connecticut, a resource for policymakers and those involved in the Certificate of Need (CON) process, and a planning tool to identify unmet needs and gaps in service. It is also one of twelve enumerated guidelines contained in C.G.S. § 19a-639[7] that OHS must take into consideration when analyzing CON applications.

The CON program is intended to guide the establishment of health care facilities and services which best serve public needs; ensure that high quality health services are provided; prevent unnecessary duplication of health care facilities and services; and promote cost containment. However, the CON statutes do not include a definition of "clear public need." Accordingly, OHS has utilized professional societies and organizations held to be the experts to establish standards, guidelines, and need methodologies to facilitate the review and analysis of CON applications. In reviewing CON applications, OHS first applies the guidelines and principles in the enumerated criteria of C.G.S § 19a-639,[8] and then considers any additional standards, guidelines, and need methodologies provided in the Plan.

1.3 Guiding Principles

OHS is a State agency within the executive branch established in 2018 to develop and implement a comprehensive health care vision for the State. Its work is guided by the best available healthcare data, and the input and advice of health care consumers, state leaders, legislators, employers, providers, payers, national local and regional experts, and advocates. Its guiding principle is that policies and practices lead to better health for all residents of the state. The agency's focus is the improved health of all residents of Connecticut.

The mission of the Office of Health Strategy is to implement comprehensive, data-driven strategies that promote equal access to high-quality health care, control costs, and ensure better health outcomes for all Connecticut residents.

[6] Connecticut General Statutes, Section 19a-634. (2018).
[7] Connecticut General Statutes, Section 19a-639. (2018).
[8] Connecticut General Statutes, Section 19a-639. (2018).

C.G.S. § 19a-754a[9] charges OHS with:

> *Developing and implementing a comprehensive and cohesive health care vision for the state, including, but not limited to, a coordinated state health care cost containment strategy.*
>
> *Promoting effective health planning and the provision of quality health care in the state in a manner that ensures access for all state residents to cost-effective health care services, avoids the duplication of such services and improves the availability and financial stability of such services throughout the state.*
>
> *Directing and overseeing the State Innovation Model Initiative and related successor initiatives.*
>
> *Coordinating the state's health information technology initiatives,*
>
> *Seeking funding for and overseeing the planning, implementation and development of policies and procedures for the administration of the all-payer claims database program established under section 19a-775a,*
>
> *Establishing and maintaining a consumer health information Internet web site under 19a-755b, and*
>
> *Designating an unclassified individual from the office to perform the duties of a health information technology officer as set forth in sections 17b-59f and 17b-59g.*
>
> *Directing and overseeing the Health Systems Planning Unit established under section 19a-612 and all of its duties and responsibilities as set forth in chapter 368z.*
>
> *Convening forums and meetings with state government and external stakeholders, including, but not limited to, the Connecticut Health Insurance Exchange, to discuss health care issues designed to develop effective health care cost and quality strategies.*

The development of the Plan helps ensure that health care facilities are financially stable and helps to monitor for over- or under-supply of services which are appropriate to meet the medical needs of consumers in all geographic areas. It is also intended to:

- Show gaps in the availability of, and access to, health care services, show the underserved or reduced access to certain health care services for geographic areas and subpopulations, show unmet needs of persons at risk and vulnerable populations, and make recommendations for addressing such gaps.
- Project future demand for health care services and the impact of technology on demand, capacity, or need for services.
- Identify potential policy options based on best practices and evidence-based research.
- Encourage health care providers to consider the plan into their long-range planning.
- Facilitate communication among state agencies concerning innovations or changes that may affect future health planning.

[9] Connecticut General Statutes, Section 19a-754a. (2018).

1.4 Overview of Plan Structure

The Plan consists of four major sections:

- **Section 1** provides an overview of the Plan and examines overarching policy issues.
- **Section 2** consists of chapters related to health care facilities, services, and equipment, for which CON standards and guidelines are included (Acute Care, Outpatient Surgery, and Imaging Services/Equipment),[10] Behavioral Health, Primary Care, and Skilled Nursing Facilities and Post-Acute Care.
- **Section 3** provides next steps/recommendations and discusses data sources and limitations.
- **Section 4** consists of appendices including tables, figures, and maps of health care facilities, services, and imaging equipment in Connecticut.

Note: these standards and guidelines provide guidance to applicants and articulate the agency's methodology for applying the statutory con criteria. They will be adopted as regulation pursuant to chapter 54 of the Connecticut general statues.

In addition to containing CON guidelines, standards, and methodologies, the Plan incorporates available health care facilities inventories and service utilization data.[11] These data are useful from a policy and planning perspective as they provide important information regarding shifts in the use of health care resources and services, identify what types of services specific populations use and how frequently, assist in examining the impact of new medical technologies or procedures, and may also indicate areas that warrant further study. These data serve as a foundation for projecting future health care needs and as the basis for determining resource needs (e.g., personnel, training, or facilities planning).[12] Additionally, through the reporting of utilization of services the Plan provides a means of monitoring the adequacy of access.

1.5 Interpretation of the Plan

The Plan is effective upon publication and is applicable to all CON filed beginning March 15, 2025. It will be in effect until the next version of the Plan takes effect.

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[10] While not part of the main focus of the guidelines, Long Term Care and Rehabilitation Services are also broadly addressed in this plan, these services and facilities are part of its planning and inventorying efforts as they represent a significant portion of the continuum of care.

[11] In years when a complete Facilities and Services Plan is not published, utilization data are presented in annual utilization study and new health care facility/equipment inventories are published biannually. In this plan, Inventory Tables are cited by number and the most recent information will be made available here: business.ct.gov/ohs/services/health-systems-planning/facilities-plan-and-inventory

[12] Bernstein A.B., Hing, E., Moss, A.J., Allen, K.F., Siller. A.B. & Tiggle, R.B. (2003). *Health care in America: Trends in utilization.* National Center for Health Statistics. cdc.gov/nchs/data/misc/health care.pdf

In its deliberations involving a CON application, when making findings concerning the relationship of a proposed project to the Plan, OHS shall consider the most recent version of the Plan in effect on the date of the decision, regardless of when the application was filed or public hearing held.

In reviewing CON applications, OHS starts with the criteria provided in C.G.S. § 19a-639 and employs any additional standards adopted through regulation or provided in the Plan in conducting such analysis.

As previously noted, these standards and guidelines provide guidance to applicants and articulate the agency's methodology for applying the statutory CON criteria. They will be adopted as regulation pursuant to Chapter 54 of the C.G.S.

In reviewing CON applications, the latest version of the *Inventory of Connecticut Health Care Services and Facilities* and published utilization reports shall be considered.

The *Statewide Health Care Facilities and Services Inventory* is available from OHS at Facilities Plan and Inventory (CT.gov).

Unless otherwise noted in the Plan, primary service areas for individual providers and facilities are rolled up to the Connecticut Regional Councils of Governments Connecticut Planning Regions[13] for the geographic areas used in determining utilization rates. The presentation of regional planning area data is to provide the public and policymakers with important information for making policy decisions and planning for the future of the healthcare system. These regional planning regions used in utilization calculations may differ from the service area definitions for individual CON applications. Individual CON applications will continue to be evaluated for the service area of the specific applicant, not for the whole planning region.

Any references, guidelines or national standards mentioned in this Plan means the most current version, and the Plan incorporates the most recent version, as amended from time-to-time.

1.6 Relationship of Plan to Healthy People 2030

Healthy People 2030, led by the US Department of Health and Human Services, set data-driven national objectives to improve health and well-being over the next decade. The initiative tracks 359 core, or measurable objectives, as well as developmental and research objectives. And while efforts to improve population health in the U.S. have typically focused on the health care system, there is growing recognition that to improve health and reduce disparities, social determinants of health (SDOH) must be addressed. For the first time since its inception in 1980, Healthy People set 10-year targets for objectives related SDOH, "the conditions in the environments where people are born, live, learn, work, play, worship, and age that affect a wide range of health, functioning, and quality-of-life

[13] State of Connecticut Office of Policy and Management. (2024). *Regional councils of governments in Connecticut.* portal.ct.gov/opm/igpp/org/planning-regions/planning-regions---overview

outcomes and risks."[14] Specifically, one of the five overarching goals of Healthy People 2030 is to "Create social, physical, and economic environments that promote attaining the full potential for health and well-being for all." SDOH-related objectives are grouped into five categories: Economic Stability, Education Access and Quality, Health Care Access and Quality, Neighborhood and Built Environment, and Social and Community Context.[15]

Access to comprehensive, high-quality health care services is important for maintaining health, preventing and managing disease, reducing disability and premature death, addressing health disparities, and creating an environment in which health equity is possible for all Americans. Important components of access include insurance coverage, timeliness of care, and access to primary and preventive health care services, all of which are explored in the Plan.

1.7 Connecticut's State Health Assessment and State Health Improvement Plan

In Connecticut, aligned efforts are underway to advance health promotion and disease prevention, specifically addressing the social, economic, and environmental determinants of health that create and perpetuate poor health outcomes for some Connecticut residents.

The most recent Connecticut State Health Assessment (SHA) was completed in 2019 and details the health status of Connecticut residents.[16] It focuses on the SDOH that are having the greatest impact on health outcomes. The Connecticut State Health Improvement Plan (SHIP) is "a guiding roadmap for promoting and advancing population health and ensuring all people in Connecticut have the opportunity to attain their highest potential for health." The SHA, together with the SHIP, comprise the state health planning framework Healthy Connecticut 2025.

1.7.1 Integration of the State Health Assessment, State Health Improvement Plan, and Facilities and Services Plan

As the health care sector has expanded its focus to include conditions that exist outside of the healthcare system and can indirectly impact health outcomes for populations along with the delivery of health care services, the 2024 Facilities and Services Plan has also broadened its scope and reach. Incorporating data and recommendations from the Healthy Connecticut 2025 SHIP, the Plan includes new, equity-focused analyses to assess overall needs, gaps in access, and affordability of care by demographic and economic characteristics.

The updated Plan incorporates an equity-focused lens in a few ways. First, the Plan now includes additional analyses that assess need, utilization, access, and gaps in care for health care services across demographic, health insurance coverage, and economic strata. This provides additional

[14] U.S. Department of Health and Human Services. (2020). *Social determinants of health*. Office of Disease Prevention and Health Promotion. health.gov/healthypeople/priority-areas/social-determinants-health
[15] U.S. Department of Health and Human Services. (n.d.) *Healthy People 2030*. health.gov/healthypeople
[16] An updated SHA was under development during the review and publication of this Plan, future SHA reports will be made available on the Department of Public Health website: portal.ct.gov/dph

information to identify any existence and magnitude of disparities in access to many different health care facilities and disparities in the use of services that may exist across Connecticut populations. Second, the CON guideline sections of the Plan now include language supporting the use of assessments of disparities in utilization and access to care in OHS decision-making on new CON applications. This new language seeks to ensure that health disparities are explicitly considered when applications to add or remove health care services in Connecticut are received, because making decisions exclusively on statewide or regional averages can obscure the needs of or worsen the gaps for certain subpopulations based on demographic, economic, or insurance characteristics. Third, alongside development of the five current sections of the Plan, OHS is developing an addendum that will highlight trends in social, economic, and community-based drivers of health that have been tracked in previous SHA/SHIP documents and will link those health driver metrics to the need for traditional health care services. This integration in the future addendum will highlight overlapping social and health care needs and how SDOH drive health outcomes and vice versa.

Together, the components of the SHIP, SHA, and FSP provide a holistic, comprehensive mechanism for identifying community need, assessing the health care system's capability of meeting those needs and allowing for the allocation of the necessary resources to address those needs.

1.8 Connecticut Regional Councils of Government and Planning Regions

Beginning in 2022, the State of Connecticut adopted a set of nine "planning regions" as new county-equivalent definitions and asked that federal data collectors, such as the U.S. Census Bureau begin using them for the "purposes of collecting, tabulating, and disseminating statistical data, replacing the eight counties which ceased to function as governmental and administrative entities in 1960."[17] We follow this change in federal data collection in this Plan, and use the nine Connecticut Planning Regions as the primary definitions for aggregating data and results. This is a change from the prior 2012 Plan that aggregated data at the former county-level. A map of the Connecticut Planning regions is shown in **Figure 1.1**.

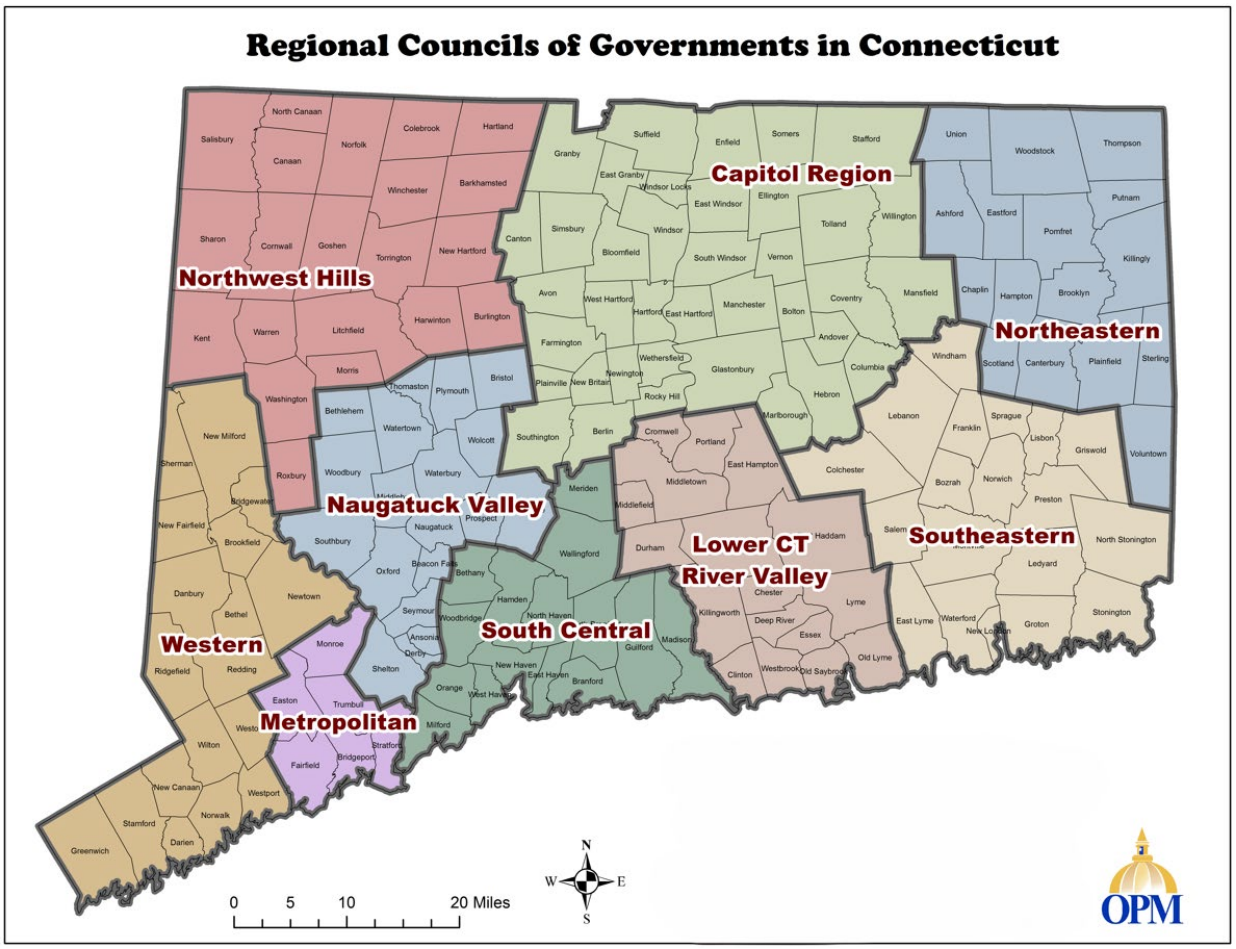
It is important to note that these planning regions may differ from regional definitions used in other Connecticut health care planning and evaluation documents. For example, regional Division of Emergency Management and Homeland Security (DEMHS) and Department of Mental Health and Addiction Services (DMHAS) regional definitions split the state into a different set of five regions each, which may or may not correlate with any of the planning regions. Find further information in their associated documentation.[18, 19]

[17] Change to County-Equivalents in the State of Connecticut, 87 F.R. 34235 (proposed June 6, 2022) govinfo.gov/content/pkg/FR-2022-06-06/pdf/2022-12063.pdf

18 Connecticut State Department of Mental Health and Addiction Services (n.d.). CT.gov - Connecticut's Official State Website. portal.ct.gov/dmhas/programs-and-services/dmhas-directories/regional-directory

19 Regional offices. (n.d.). CT.gov - Connecticut's Official State Website. portal.ct.gov/demhs/emergency-management/resources-for-officials/regional-offices

Figure 1.1 Connecticut Planning Regions Reference Map



1.9 Certificate of Need CON Overview

1.9.1 CON Definition, Purpose, and History

CON is a state regulatory governmental program[20] requiring specific types of health care providers to obtain state approval prior to making certain capital investments in new equipment or facilities, changing bed capacity, and adding or discontinuing a health care service.[21]

[20] Connecticut's CON program is regulated by two State agencies. The Department of Social Services (DSS) operates the program for nursing homes, homes for the aged and rest homes (Department of Social Services. (n.d.). *Certificate of need (CON)*. Retrieved December 11, 2023, from portal.ct.gov/dss/health-and-home-care/reimbursement-and-certificate-of-need/certificate-of-need). The Office of Health Strategy administers the program for all other health care facilities (Connecticut State Office of Health Strategy. (2018, February). Overview: An introduction to Connecticut's Office of Health Strategy. CT.gov. Retrieved May 7, 2024, from portal.ct.gov/ohs/about). CON functions were previously regulated by the Department of Public Health (DPH) Office of Health Care Access (OHCA), which was consolidated within the Office of Health Strategy as the Health Systems Planning Unit on July 1, 2018 (Connecticut State Department of Public Health. (n.d.). *Office of Health Care Access - Health Systems Planning.* CT.gov. portal.ct.gov/DPH/Communications/About-Us/Office-of-Health-Care-Access)

[21] Specific providers and services requiring a CON can be found at C.G.S. § 19a-638(a), and specific exemptions from CON requirements can be found at C.G.S. § 2+a-638(b).

States maintain CON programs to achieve several health policy goals. While each state's CON program is unique, CON regulations and related planning are intended to promote access, ensure quality, and help control costs by limiting market entry to those facilities and services that are found to be needed, appropriately supported, and designed to promote quality and equitable access to care. The rationale behind CON is that by managing the volume of health care resources available in a region, policymakers could mitigate overuse of services and thereby contain health care costs for patients, payers, and providers.[22] Connecticut's CON statutes also provide certain restrictions on reducing or terminating services to ensure appropriate access to care is maintained.

Connecticut's CON program was established in 1973 by P.A. 73-117 in anticipation of The National Health Planning and Resources Development Act (P.L. 93-641), federal legislation which required that all states seeking federal funding for health programs implement a CON program. These programs were established in an attempt to exercise control over a rapidly expanding health care system. Changes in health care delivery, increased health care spending, gains in private and public health insurance coverage, population growth, and physician workforce expansion and specialization all contributed to states' push to require certificates of need in the health care industry. While the federal legislation and associated funding was repealed in 1987, Connecticut, along with 36 other states, maintained its CON program.[23, 24, 25]

In 2010, in an effort to align with federal health reform following the passage of the Affordable Care Act (ACA) Connecticut's CON program underwent significant reform to: 1) simplify the CON process; 2) oversee "safety net" services and areas of potential overutilization; 3) develop CON criteria to address the financial stability of the health care system; and 4) improve the quality of patient care.[26]

Finally, P.A. 15-146 in 2015 required the state to closely scrutinize large ownership changes of hospitals to ensure continuity of affordable health care for impacted residents.[27] For example, hospitals requesting a transfer of ownership must submit a three-year plan detailing how care will be provided (e.g., elimination or expansion of existing services).

1.9.2 Recent CON Changes

For nearly five decades, CON has shaped the structure of the health care system in Connecticut. The state's CON program has evolved over time and most recently, the scope of the program has become

[22] Butler, J., Rakotoniaina, A., & Fournier, D. (2020, May 22). *50-state scan shows diversity of state certificate-of-need laws.* National Academy for State Health Policy. nashp.org/50-state-scan-shows-diversity-of-state-certificate-of-need-laws

[23] Connecticut's Official State Website. (2016, April 12). *A brief history of Connecticut's Certificate of need program.* CT.gov. portal.ct.gov/-/media/Malloy-Archive/Cert-of-need/CON-Doc-20160412-Brief-History.pdf

[24] Connecticut's Official State Website. (2023, January 17). *Certificate of need task force: Final report.* CT.gov. cga.ct.gov/2023/rpt/pdf/2023-R-0009.pdf

[25] Koopman, C., Stratmann, T., & Elbarasse, M. (2015, May 19). *Certificate-of-need laws: Implications for Michigan.* Mercatus Center George Mason University. mercatus.org/research/policy-briefs/certificate-need-laws-implications-michigan

[26] Connecticut's Official State Website. (2023, January 17). *Certificate of need task force: Final report.* CT.gov. cga.ct.gov/2023/rpt/pdf/2023-R-0009.pdf

[27] Connecticut Senate. (2015). Public Act No. 15-146 An Act Concerning Hospitals, Insurers and Health Care Consumers. cga.ct.gov/2015/act/Pa/pdf/2015PA-00146-R00SB-00811-PA.pdf

more focused on a limited number of health care facilities and project categories. In 2010, Connecticut's CON program underwent significant changes, in part as a response to impending changes from federal health reform efforts focused on the development of a patient-centered integrated delivery system. The changes also improved CON's utility as a planning tool by:

- Simplifying CON procedural requirements.
- Focusing CON oversight on preserving access to "safety net" services.
- Avoiding potential areas of over-saturation or over-utilization.

These changes had the goals of aligning health care resources more closely with community needs and improving CON criteria to address the financial stability of the health care delivery system and enhancing quality of patient care.

Prior to 2022, several notable changes were made to CON criteria in C.G.S. § 19a-638 and § 19a-639 which are discussed throughout the rest of this document. Changes include:

- 2011: Added termination of inpatient or outpatient services and termination of surgical services by certain facilities to the list of changes that require a CON.
- 2013 and 2014: Added consideration of service access for Medicaid recipients and indigent persons to the existing requirement that applicants must demonstrate that a proposal will improve quality, access, and cost effectiveness of health care delivery in the region. The state also added that applicants who fail to provide service or reduce access to services for Medicaid recipients and indigent persons must demonstrate good cause for doing so apart from Medicaid having a different reimbursement rate than other payers.
- 2014: Added a requirement that applicants must demonstrate that proposals will not negatively impact the diversity of health care providers and patient choice in the region.
- 2014: Added a requirement that applicants must demonstrate that consolidation resulting from proposals will not adversely affect health care costs or access to care.
- 2014: Required a CON for the transfer of ownership of a group practice (defined as a practice of eight or more full-time equivalent physicians) to any entity other than a physician or group of physicians.[28]
- 2015: Required submission requirements for hospitals involved in a transfer of ownership.
- 2015: Required OHCA deny the CON unless it finds that the affected community would be assured of continued access to high quality affordable care.

[28] Bartiromo, M. A., & Cowherd, S. M. (2014, July 7). New Connecticut law requires disclosure of certain transactions involving group medical practices, amends the CON Law, and more. Pullman & Comley. pullcom.com/connecticut-health-law-blog/new-connecticut-law-requires-disclosure-certain-transactions-involving-group-medical-practices-amends-con-law

- 2015: Required a cost and market impact review for hospital transfers where the purchaser has net patient revenue greater than $1.5 billion or is organized for profit.[29]
- 2022: Allowed certain facilities to increase mental health bed capacity without a CON in response to the COVID-19 pandemic and increased demand for services.

In 2022 and 2023, several pieces of legislation were passed altering the CON application process, criteria, penalties, and enforcement mechanisms. Public Act 22-118,[30] passed in 2022, revised the CON process as follows:

- Defined Termination of Service to mean the cessation of any services for a period of greater than one hundred eighty days.
- Changed the CON application fee structure to be based on the cost of the project as follows:
  - One thousand dollars for a project that will cost not greater than fifty thousand dollars
  - Two thousand dollars for a project that will cost greater than fifty thousand dollars but not greater than one hundred thousand dollars.
  - Three thousand dollars for a project that will cost greater than one hundred thousand dollars but not greater than five hundred thousand dollars.
  - Four thousand dollars for a project that will cost greater than five hundred thousand dollars but not greater than one million dollars.
  - Five thousand dollars for a project that will cost greater than one million dollars but not greater than five million dollars.
  - Eight thousand dollars for a project that will cost greater than five million dollars but not greater than ten million dollars.
  - Ten thousand dollars for a project that will cost greater than ten million dollars.[31]

Public Act PA 22-57,[32] passed in 2022, amended the CON process for long-term care facilities, including:

- Allowing proposals to build a nontraditional, small-house style nursing home designed to enhance the quality of life for nursing facility residents under certain circumstances, and empowers the commissioner to consider a variety of factors including whether the proposal

[29] Connecticut General Assembly, S.B. 811, Public Act No. 15-146 (2015). cga.ct.gov/2015/act/Pa/pdf/2015PA-00146-R00SB-00811-PA.pdf
[30] Connecticut General Assembly, H.B. 5506, Public Act No. 22-118 (2022). cga.ct.gov/2022/act/pa/pdf/2022PA-00118-R00HB-05506-PA.pdf
[31] Connecticut General Assembly, H.B. 5506, Public Act No. 22-118. (2022). cga.ct.gov/2022/act/pa/pdf/2022PA-00118-R00HB-05506-PA.pdf
[32] Connecticut General Assembly, Substitute, H.B. 5313, Public Act No. 22-57 (2022). cga.ct.gov/2022/act/pa/pdf/2022PA-00057-R00HB-05313-PA.pdf

promotes person-centered care, provides enhanced quality of care, creating community space for facility residents, and developing stronger relationships between facility residents and the surrounding community.

- Amending the criteria that The Department of Social Services (DSS) must take into account when considering a CON request for relocating nursing beds to include the effects of the proposal on the utilization statistics of other facilities in the applicant's service area and whether the availability of beds in the applicant's service area will be adversely affected, and prohibiting proposed relocation of nursing home beds from increasing the number of Medicaid certified beds or resulting in the closure of at least one licensed facility.[33]

Public Act 22-47,[34] enacted in 2022, temporarily exempted increases in the licensed bed capacity of mental health facilities until 2026 if the facility meets certain criteria.[35]

Public Act 23-171,[36] passed in 2023, made substantive changes to enforcement of CON approval and compliance. Effective October 1, 2023:

- Health care facilities and institutions that either negligently (previously "willfully") fail to seek CON approval for required activities or agree to resolve a CON application through settlement and negligently fails to comply with terms of the settlements are subject to existing civil penalties up to $1,000 per day of relevant activities without CON approval or for each day any conditions of settlement agreement are not met.
- The Health Systems Planning Unit of the Office of Health Strategy may retain an independent consultant with expertise in the specific area of health care that is the subject of the application filed by an applicant if the review and analysis of an application cannot reasonably be conducted by the unit without the expertise of an industry analyst or other actuarial consultant.
- No CON is required for the acquisition of nonhospital based linear accelerators that are replacing existing equipment that already received CON approval or determination.[37]

[33] Connecticut General Assembly, Substitute S. Bill No. 286, Public Act No. 22-145 (2022). cga.ct.gov/2022/ACT/PA/PDF/2022PA-00145-R00SB-00286-PA.pdf

[34] Connecticut General Assembly, Substitute, H.B. 5001, Public Act No. 22-47 (2022). cga.ct.gov/2022/act/pa/pdf/2022PA-00047-R00HB-05001-PA.pdf

[35] National Conference of State Legislatures. (2024, February 26). *Certificate of need state laws.* ncsl.org/health/certificate-of-need-state-laws

[36] Connecticut General Assembly, Substitute, H.B. 6669, Public Act No. 23-171 (2023). cga.ct.gov/2023/act/Pa/pdf/2023PA-00171-R00HB-06669-PA.pdf

[37] Connecticut General Assembly, Substitute H.B. Bill No. 6669, Public Act No. 23-171, cga.ct.gov/2023/act/Pa/pdf/2023PA-00171-R00HB-06669-PA.pdf

- OHS is authorized to issue cease and desist orders to health care facilities that have violated the CON law, alongside additional deadlines and expanded OHS oversight and enforcement authorities.
- In addition to publishing notices of forthcoming CON applications in a local newspaper, CON applicants must also publish applications in two locations within an affected community and on the website of the municipal or local health department, as well as requirements for facilitating OHS publication on forthcoming applications.[38, 39, 40]

Lastly, Public Act No. 23-147,[41] passed in 2023, implemented a new licensure category for freestanding birth centers in Connecticut effective January 2024 and exempts birth centers that enroll as providers in the Connecticut Medical Assistance (Medicaid) program from the CON requirements until June 30, 2028.[42]

Connecticut also established a task force in 2016[43] and 2022[44] to review the state's CON program and make recommendations for any updates and changes to the process to ensure its relevance and efficiency.

1.9.3 CON Statutes and Implementation

Health care projects that fall within certain jurisdictional parameters are subject to review and decision by C.G.S. § 19a-638 specifies that a CON is required for:

1. The establishment of a new health care facility.
2. A transfer of ownership of a health care facility.
3. A transfer of ownership of a large group practice to any entity other than a (A) physician, or (B) group of two or more physicians, legally organized in a partnership, professional corporation or limited liability company formed to render professional services and not employed by or an affiliate of any hospital, medical foundation, insurance company or other similar entity.

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[38] Connecticut General Assembly, Substitute H.B. Bill No. 6669, Public Act No. 23-171, cga.ct.gov/2023/act/Pa/pdf/2023PA-00171-R00HB-06669-PA.pdf

[39] Bartiromo, M. A., & Cowherd, S. M. (2023, July 28). *CT and NY are looking closely at transactions involving group practices.* Pullman & Comley. pullcom.com/connecticut-health-law-blog/ct-ny-transactions-group-practices

[40] Turkis, E., Duffy , C., & Lisitano, M. (2023, June 9). *Connecticut governor's health care bill makes important changes to the Certificate of need process.* Health Law Diagnosis. healthlawdiagnosis.com/2023/06/connecticut-governors-health-care-bill-makes-important-changes-to-the-certificate-of-need-process

[41] Connecticut General Assembly, Substitute S. Bill No. 986, Public Act No. 23-147, cga.ct.gov/2023/act/pa/pdf/2023PA-00147-R00SB-00986-PA.pdf

[42] Robinson+Cole Health Law Diagnosis, Duffy, C., Turkis, E., & Miller, I. (2023, July 20). *Connecticut governor signs bill introducing programs to improve maternal health.* JD Supra. jdsupra.com/legalnews/connecticut-governor-signs-bill-3733095

[43] Connecticut's Official State Website. (2023, January 17). *Certificate of need task force: Final report.* CT.gov. cga.ct.gov/2023/rpt/pdf/2023-R-0009.pdf

[44] Connecticut's Official State Website. (2023, January 17). *Certificate of need task force: Final report.* CT.gov. cga.ct.gov/2023/rpt/pdf/2023-R-0009.pdf

4. The establishment of a freestanding emergency department.
5. The termination of inpatient or outpatient services offered by a hospital, including, but not limited to, the termination by a short-term acute care general hospital or children's hospital of inpatient and outpatient mental health and substance abuse services.
6. The establishment of an outpatient surgical facility, as defined in C.G.S. § 19a-493b, or as established by a short-term acute care general hospital.
7. The termination of surgical services by an outpatient surgical facility, as defined in C.G.S. § 19a-493b, or a facility that provides outpatient surgical services as part of the outpatient surgery department of a short-term acute care general hospital, provided termination of outpatient surgical services due to (A) insufficient patient volume, or (B) the termination of any subspecialty surgical service, shall not require CON approval.
8. The termination of an emergency department by a short-term acute care general hospital.
9. The establishment of cardiac services, including inpatient and outpatient cardiac catheterization, interventional cardiology and cardiovascular surgery.
10. The acquisition of computed tomography scanners, magnetic resonance imaging scanners, positron emission tomography scanners or positron emission tomography-computed tomography scanners, by any person, physician, provider, short-term acute care general hospital or children's hospital, except (A) as provided for in subdivision (22) of subsection (b) of this section, and (B) a CON issued by the unit shall not be required where such scanner is a replacement for a scanner that was previously acquired through CON approval or a CON determination.
11. The acquisition of nonhospital based linear accelerators.
12. An increase in the licensed bed capacity of a health care facility, except as provided in subdivision (23) of subsection (b) of this section.
13. The acquisition of equipment utilizing technology that has not previously been utilized in the state.
14. An increase of two or more operating rooms within any three-year period, commencing on and after October 1, 2010, by an outpatient surgical facility, as defined in C.G.S. § 19a-493b, or by a short-term acute care general hospital.
15. The termination of inpatient or outpatient services offered by a hospital or other facility, or institution operated by the state that provides services that are eligible for reimbursement under Title XVIII or XIX of the federal Social Security Act, 42 USC 301, as amended.

C.G.S. § 19a-639 specifies that when considering a CON application, OHS must take into consideration and make written findings concerning each of the following guidelines and principles:

1. Whether the proposed project is consistent with any applicable policies and standards adopted in regulations by the OHS.
2. The relationship of the proposed project to the state-wide health care facilities and services plan.
3. Whether there is a clear public need for the health care facility or services proposed by the applicant.
4. Whether the applicant has satisfactorily demonstrated how the proposal will impact the financial strength of the health care system in the state or that the proposal is financially feasible for the applicant.
5. Whether the applicant has satisfactorily demonstrated how the proposal will improve quality, access to, and cost effectiveness of health care delivery in the region, including, but not limited to, provision of or any change in the access to services for Medicaid recipients and indigent persons.
6. The applicant's past and proposed provision of health care services to relevant patient populations and payer mix, including, but not limited to, access to services by Medicaid recipients and indigent persons.
7. Whether the applicant has satisfactorily identified the population to be served by the proposed project and satisfactorily demonstrated that the identified population has a need for the proposed services.
8. The utilization of existing health care facilities and health care services in the service area of the applicant.
9. Whether the applicant has satisfactorily demonstrated that the proposed project shall not result in an unnecessary duplication of existing or approved health care services or facilities.
10. Whether an applicant, who has failed to provide or reduced access to services by Medicaid recipients or indigent persons, has demonstrated good cause for doing so, which shall not be demonstrated solely on the basis of differences in reimbursement rates between Medicaid and other health care payers.
11. Whether the applicant has satisfactorily demonstrated that the proposal will not negatively impact the diversity of health care providers and patient choice in the geographic region.
12. Whether the applicant has satisfactorily demonstrated that any consolidation resulting from the proposal will not adversely affect health care costs or access to care.

Additional criteria apply when the CON application is related to the transfer of ownership of a hospital. Under C.G.S. 19a-639(d), OHS *shall deny* any CON application involving a transfer of ownership of a hospital unless the Commissioner finds that the affected community will be assured of continued access to high quality and affordable health care after accounting for any proposed change impacting hospital staffing. Additionally, the section allows that OHS *may deny* any CON application

involving transfer of ownership of a hospital that is subject to a cost and market impact review if the Commissioner finds both that the affected community will not be assured of continued access to high quality and affordable health care after accounting for any consolidation in the hospital and health care market that may lessen health care provider diversity, consumer choice and access to care, and that any likely increases in the prices for health care services or total health care spending in the state may negatively impact the affordability of care.

1.9.4 Guiding Principles in Development of CON Standards, Guidelines, and Evaluating of Capacity and Need for Services

The OHS Facility and Services Plan is a document that serves multiple purposes. First, the Plan gives a broad review of the Connecticut health care system, provider landscape, and key trends affecting the use of health care within the State. Second, it assists policymakers and the public with better understanding the interplay of broad state, policy, and industry factors contributing to health care needs and outcomes and its evolution. Third, the Plan informs the CON process, since plan elements must be considered when evaluating each CON application to determine the extent to which capacity, access, and need are impacted by relevant changes in the capacity and/or ownership of certain health care services.

Pertinent to this second purpose, the Plan contains an inventory that details capacity, utilization, and need for certain health care facilities and services in Connecticut. The goal of providing this inventory is to inform and assist applicants and OHS with better understanding the level of need (and the extent to which need is being met by current supply) for different services, populations, and regions of state, to make informed decisions on the addition or termination of services. While there are slight variations in the approaches used to evaluate facility and service categories within the Plan given the data that were available, the following methodological approach was used to guide the assessment of the current capacity, need, and adequacy of supply:

1. Evaluate the number of beds, facilities and equipment to identify the capacity of current health care facilities and services (supply) across geographic regions.
2. Identify the underlying health care service needs that could be met with this supply and detail this need by age, state region, demographics, insurance coverage, and clinical patient characteristics.
3. Compute the current level of need for the specific health care beds, facilities, or equipment given a population-level regional evaluation, while also considering projected future need and need by specific populations in equity analyses. Where possible, regional evaluations that simultaneously consider demographic characteristics are also used in analysis.
4. Compare the estimated need to the available supply and capacity of health care facilities to evaluate the adequacy of supply, including “unmet need” or “oversupply,” while incorporating estimates of future need (population growth) and buffer in capacity “target occupancy/utilization rates.”

5. Evaluate if (and where) capacity changes would provide a public benefit to the overall Connecticut health care system, in consideration of the overall state population, populations across regions, and across different demographic/insurance coverage subpopulations in equity analyses.

This approach, when possible, was applied in the Plan and should be followed when evaluating all proposals for changes in health care supply within the State, specifically when using estimates of underlying population-based need for care that are independent from the observed utilization of existing capacity.

While there are data available for conducting assessments of current state facility, bed, and equipment capacity to inform the CON process, these data are limited. The data that are practical to utilize include:

1. Current counts of facilities, beds, or equipment by geographic location, and (sometimes) the total size and capacity of that supply.
2. Current utilization rates of existing capacity by individual facilities, equipment, or beds, by geography.

While these two components of current capacity and its utilization rate are useful (e.g., overall high utilization rates **may** indicate an undersupply of existing resources and overall low utilization rates **may** indicate a sufficient or oversupply), independent population-based estimates of need data would be valuable to the overall assessment process.

For example, low levels of utilization of a particular service capacity could mistakenly be interpreted as "sufficient" or an "oversupply" of resources as a result of access barriers (e.g., financial, social, transportation, willingness to seek care, cultural competency of providers, or other health disparities) that prevent patients from receiving needed services or fully using the available service capacity. Additionally, high levels of utilization do not necessarily indicate an "undersupply" or a need for greater capacity due to possible overutilization of existing services or use of services for cases outside the typical standard of care. This "overuse" of existing capacity can be caused by "supplier-induced" demand or "supply-driven" demand. The variation in use of some types of health care services may result from financial incentives or "defensive medicine" incentives for providers to fully use available capacity, even in cases when a service might not be medically necessary. This phenomenon has been studied particularly in cases such as imaging[45,46] and some cardiac services.[47]

Due to these limitations of utilization analyses in evaluating the need for capacity, the following additional approaches are used in this Plan and should be analyzed when evaluating proposals for additional supply or terminations:

[45] Zabrodina, V., Dusheiko, M., & Moschetti, K. (2020). A moneymaking scan: Dual reimbursement systems and supplier-induced demand for diagnostic imaging. *Health Economics*, 29: 1566-1585. doi.org/10.1002/hec.4152

[46] Müskens J.L.J.M., Kool R.B., van Dulmen S.A., et al. (2021). Overuse of diagnostic testing in healthcare: a systematic review. *BMJ Quality & Safety,* 31:54-63.

[47] Lown Institute. (2023). Avoiding coronary stent overuse. lownhospitalsindex.org/avoiding-coronary-stent-overuse

1. Evidence of differences in population-based utilization rates by demographics, insurance coverage, and other population characteristics to assess if low utilization of existing capacity could be due to other factors.
2. Independent measures of underlying levels of need for the service in question, based on condition prevalence for relevant services (For example, find the consideration of behavioral health and substance use disorder condition prevalence in Chapter 6).
3. Computations of population-based rates of utilization and comparisons of these rates to national and other state data to assess if potential overuse is occurring. If utilization rates of current capacity are high, but population-based rates of use are also above average without explanation, it could indicate overuse.
4. Validation of "target occupancy" or "target utilization rate" thresholds used in analyses based on evaluations of OHS data to ensure internal validity as well as comparisons to such target rates used in other states and professional societies to ensure external consistency.
5. Assessments of additional information indicating a lack of access, depending on available data for a service including:
    a. Distance to care and/or travel time (for example Chapter 7's section on Maternity and Delivery Care).
    b. Average waiting time for care (for example, Chapter 3's section on EDs).
    c. Large volumes of individuals getting care in other geographic regions suggesting a potential lack of access in their own regions (for example, Chapter 3's section on Cardiac Care).

Lastly, we consider the previously mentioned concerns about possible "over-utilization" or "under-utilization" of existing capacity in developing language for the CON Standards and Guidelines components of the Plan, and at times incorporate the following:

- Recommendations of quality-based criteria for the establishment of additional supply (Find, for example, Cardiac Care, Imaging, and ED sections), to ensure that any additional supply will follow the best standards of care and would reduce possible overuse or oversupply of care.
- Recommendations to consider observed utilization by region, demographic populations, and insurance-coverage types in making CON decisions, to ensure that there is an adequate supply of services to reach all Connecticut residents.

The methodological approaches detailed above can serve as a generic methodology to define, demonstrate, and quantify the level of unmet need for any particular service, facility, or equipment within Connecticut. Applicants to the OHS CON process seeking to demonstrate significant unmet need for a proposed service or facility can use this methodology (in addition to the necessary components of the C.G.S. § 19a-639 statutory guidelines and description of CON standards and guidelines in Section 2 of this document) to provide evidence for that population need.

Further, in establishing and demonstrating the need for additional service, facility, or equipment and considerations of CON applications, OHS emphasizes that the greatest weight will be given to data provided by the State of Connecticut on its current capacity/need and supporting documentation that comes from peer-reviewed academic literature or publicly-available federal or state government grey literature sources. Additional information on services and need provided in applications that come from industry or commercial sources will also be considered and can be submitted, but will carry substantially less weight than data and information from peer-reviewed or government-produced literature.

Section 1 Chapter 2
OVERARCHING TRENDS

2.0 Overarching Trends

Since the inaugural facilities and services plan in 2012 there have been a series of health care policies aimed at reshaping health care service provision across the country to address affordability, quality, access, and equity. This chapter presents an overview of some key trends that affect the current and future health care environment; including ***Health Care Access and Affordability; Population and Health Care Workforce; Innovation and Health Care Technology; and Oversight, Accountability, and Transparency in Health Care.***

While it is unlikely the United States (U.S.) will see that same level of sweeping health care reform resulting from the ACA in the upcoming decade, there has been recent federal legislative activity. In 2020, the No Surprises Act established protections for patients against surprise bills for medical care when an enrollee in an individual and group health insurance plan receives emergency care at an out-of-network facility or from an out-of-network provider; when an enrollee requires air-ambulance transportation; and when an enrollee receives elective nonemergency care at an in-network facility but is inadvertently treated by an out-of-network health care provider.[48] In 2022, the Inflation Reduction Act (IRA) took the next steps toward making health care more accessible and affordable in the U.S primarily by lowering Medicare spending for prescription drugs through negotiation authority and limiting increases in pharmaceutical prices and by extending enhanced premium subsidies through the ACA Marketplace for purchasing health insurance through 2025.[49] Through the ACA, Connecticut's health care system changed by building on Medicaid expansion, establishing commercial health insurance through a state-based Marketplace, and beginning the introduction of payment reforms such as bundled payment and linking reimbursement to the quality of care provided.[50] While initial national findings showed a shift in utilization from emergency departments to outpatient and preventive services associated with the implementation of the ACA, more recent national analyses suggest there has been no substantial increase in office visits and other preventive services.[51,52]

This chapter provides additional context surrounding these overarching trends, several subdomains within these trends, and the national and state policy landscape affecting health care delivery.

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[48] Stovicek, N. (2024). *Map: No Surprises Act Enforcement.* The Commonwealth Fund. commonwealthfund.org/publications/maps-and-interactives/2022/feb/map-no-surprises-act

[49] U.S. Dept. Health and Human Services. (2022). *Inflation reduction act of 2022*. U.S. Department of Health and Human Services. hhs.gov/inflation-reduction-act

[50] CT Healthcare Explained. (n.d.). *Affordable care act*. CT Healthcare Explained. cthealthexplained.org/affordable-care-act

[51] National Academies of Sciences, Engineering, and Medicine; Health and Medicine Division; Board on Health Care Services; Committee on Health Care Utilization and Adults with Disabilities. (2018). Changing patterns of health insurance and health-care delivery. In *Health-Care Utilization as a Proxy in Disability Determination*. National Academies Press. ncbi.nlm.nih.gov/books/NBK500098

[52] Levine, D.M., Chalasani, R., Linder, J.A., Landon, B.E. (2022). Association of the Patient Protection and Affordable Care Act with Ambulatory Quality, Patient Experience, Utilization, and Cost, 2014-2016*. JAMA Network Open, 5*(6). doi:10.1001/jamanetworkopen.2022.18167

2.1 Health Care Access and Affordability

2.1.1 Insurance Trends, Quality of Coverage, Private Health Insurance Trends

Working to make health care affordable is a priority that intersects with health care facilities and services, particularly as it relates to health insurance coverage. The number of people across the country with health insurance coverage has steadily risen since the passage of the ACA in 2010 with the implementation of Medicaid expansion and the health insurance Marketplace in 2014.[53] Prior to the ACA, approximately 17% of Americans and 11% of Connecticut residents, did not have health insurance. By 2022, the rate of people who were uninsured dropped to 8% nationally and to 5.2% in Connecticut.[54] By 2021, Connecticut's Medicaid program provided coverage to more than one million residents, including 364,000 adults in the expansion group created by the ACA.[55] Further details on expanding Medicaid health insurance coverage are discussed in the next section.

In addition to the federal government's focus on making health care more affordable and accessible, Connecticut has pursued many different policies to address making health care more affordable for residents including: requiring hospitals provide free or discounted care for lower-income patients; requiring providers screen patients for insurance and charity care eligibility; requiring providers notify patients of charity care policies before collecting payment; retroactively extending Medicaid coverage ninety days prior to application date; effectively eliminating short-term, limited-duration health plans; and requiring annual reporting on community benefit spending.[56] The *CoveredCT* program offers no-cost health insurance, dental insurance and non-emergency medical transportation to non-Medicaid eligible individuals ages 19 to 64[57] with incomes up to 175% of the federal poverty limit. Connecticut provides additional surprise medical bill protections for certain laboratory services through PA 15-146,[58] but not for other services not covered by federal law, including ground ambulance services.[59]

2.1.2 Insurance Coverage and Medicaid Expansion

Connecticut was the first state to adopt Medicaid expansion, which extends coverage to childless adults with an annual household income below 138% of the federal poverty level (FPL) (which for a one-person household in 2024 is $15,060[60] per year).[61] Before expansion, Medicaid eligibility in

[53] Sullivan, J., Orris, A. & Lukens, G. (2024). Entering their second decade, affordable care act coverage expansions have helped millions, provide the basis for further progress. Center on Budget and Policy Priorities. cbpp.org/research/health/entering-their-second-decade-affordable-care-act-coverage-expansions-have-helped

[54] U.S. Census Bureau (2023, September), Percentage of Population Without Health Insurance Coverage by State: 2021 and 2022. census.gov/library/visualizations/interactive/percentage-without-health-insurance-coverage-by-state-2021-2022.html

[55] KFF. (2023, June). *Medicaid in Connecticut.* files.kff.org/attachment/fact-sheet-medicaid-state-CT

[56] Healthcare Value Hub. (2024). *Health care affordability policy snapshot* [Unpublished report]. Altarum.

[57] Covered Connecticut Program. (n.d.). Overview. *CT.gov Home*. portal.ct.gov/dss/health-and-home-care/covered-connecticut-program

[58] Connecticut General Assembly. S.B. 811, Public Act No 15-146. cga.ct.gov/2015/act/pa/pdf/2015PA-00146-R00SB-00811-PA.pdf

[59] Healthcare Value Hub. (2024). *Health care affordability policy snapshot* [Unpublished report]. Altarum.

[60] ASPE. (n.d.) *Poverty guidelines*. U.S. Department of Health and Human Services. aspe.hhs.gov/topics/poverty-economic-mobility/poverty-guidelines

[61] Nikpay, S., Buchmueller, T., & Levy, H. (2015). Early Medicaid expansion in Connecticut stemmed the growth in hospital uncompensated care. *Health Affairs,* 34(7), 1170–1179. doi.org/10.1377/hlthaff.2015.0107

Connecticut was limited to lower-income children, parents, seniors, and individuals with disabilities. At present the state's Medicaid program, HUSKY Health, covers approximately a quarter of Connecticut residents, with roughly 34% of enrollees insured through HUSKY D, the coverage group for the expansion population.[62,63]

Connecticut has also created the *Covered CT (Connecticut)* program, which offers no out-of-pocket cost health insurance, including dental and non-emergency medical transportation and are provided through Medicaid's delivery and payment system. Covered CT is available for residents with an annual household income up to 175% of the FPL who are not otherwise eligible for Medicaid. This option addresses coverage gaps among residents whose earned income is above Medicaid income eligibility and is provided through the state-based health insurance exchange, Access Health CT (Connecticut).[64]

The state covers 12-month postpartum Medicaid coverage, regardless of immigration status. Connecticut Medicaid covers eye exams and eyeglasses for adults; covers hearing aids and other hearing devices for adults; and offers some dental coverage for extraction, dentures, root canal, restorative (both fillings and crowns), preventive, and diagnostic services. Connecticut has not authorized 12-month continuous eligibility for adults in its Medicaid program.[65]

Recently passed legislation increased the income eligibility threshold for HUSKY C, effective July 1, 2024, from 143% to 159% of the Temporary Family Assistance (TFA) payment standard. Income eligibility for HUSKY A, parents and relative caregivers, is available only for those with incomes not exceeding 138% of the FPL. HUSKY D also has an income eligibility threshold of 138% of the FPL.[66]

Recently, Connecticut introduced a state-funded coverage option for immigrant children aged 12 years and below who would otherwise qualify for Medicaid if not for their immigration status. Enrollment for this coverage group began January 1, 2023 and pursuant to PA 23-204, DSS expanded coverage to undocumented children age 15 and under beginning July 1, 2024.[67,68] Existing participants are able to stay on the program through age 18 as long as they continue to meet other eligibility criteria. Nationally, immigrants are overrepresented among people who are uninsured, and

[62] Connecticut Open Data. (2023). *DSS program participation by month CY 2012-2023: Medicaid 2023-11*. State of Connecticut Data and Policy Analytics. data.ct.gov/widgets/sx77-vjbh

[63] Woolston, G., & Halsey, B. (2023, January). *Key facts about HUSKY Health (Medicaid and CHIP)* [Presentation]. Connecticut Department of Social Services. cga.ct.gov/hs/related/20230131_Medicaid 101 Joint Informational Forum/2023 Legislative Session -- Key HUSKY facts.pdf

[64] Connecticut's Official State Website. (n.d.). *Covered Connecticut Program: Overview – program description and eligibility.* portal.ct.gov/DSS/Health-And-Home-Care/Covered-Connecticut-Program

[65] Healthcare Value Hub. (2024). *Health care affordability policy snapshot* [Unpublished report]. Altarum.

[66] Connecticut General Assembly, H.B. 5523, Public Act No. 24-81 (2024). cga.ct.gov/2024/ACT/PA/PDF/2024PA-00081-R00HB-05523-PA.pdf

[67] Broder, T. (2023, July). *Medical assistance programs for immigrants in various states.* National Immigration Law Center. nilc.org/wp-content/uploads/2023/07/med-services-for-imms-in-states-2023-7-10-.pdf

[68] Connecticut General Assembly, H.R. 6941, Public Act No. 23-204. (2023). cga.ct.gov/2023/ACT/PA/PDF/2023PA-00204-R00HB-06941-PA.pdf

data preceding the law indicates that about 68% of foreign-born children in Connecticut are eligible for Medicaid based on their household income.[69]

The state offers additional state-based premium subsidies for residents with incomes up to 175% FPL through the Covered CT (Connecticut) program, resulting in no out-of-pocket costs for qualifying individuals. It does not provide a Basic Health Plan or other affordable coverage option beyond the state-based marketplace for non-pregnant adults between 175% and 200% FPL.[70]

Health care coverage alone does not guarantee access to health care services. Access to health care is contingent on the adequacy of the state's health care infrastructure (e.g., hospitals, clinics, etc.), available technology, and workforce capacity. The capacity of the state's workforce is discussed later in this chapter.

2.1.3 Social Determinants of Health (SDOH)

Nonmedical factors can influence a person and community's health. Living in poor housing conditions, lacking transportation to get to doctor visits, or living in a neighborhood that does not have access to fresh fruits and vegetables can impact health. These factors may also include demographic characteristics, like gender, race, ethnicity, and disability. These "upstream" factors, among others, are known as social determinants of health (SDOH). SDOH can contribute to health disparities and inequities and by addressing these factors that are seemingly unrelated to health care delivery, we can improve health and reduce disparities.[71]

Barriers to accessing health care relates to several objectives of the Healthy People 2030 initiative. Limited health care resources can impact access to primary care. Shortages of doctors or nurses, or fewer health care facilities may result in longer wait times and delayed care for patients. Transportation or an inability to take time off from work can also interfere with access to health care, and research has shown transportation barriers and residential segregation are associated with late-stage presentation of certain medical conditions like breast cancer.[72,73] Research shows that value-based payment models can provide the financial flexibility and accountability for health care organizations to address SDOH at the community level.[74] However, health care value-based payment reforms that fail to target nonmedical SDOH may be less effective in improving population health,

[69] LaCarte, V. (2022, June). *Immigrant children's Medicaid and CHIP access and participation: A data profile.* Migration Policy Institute. migrationpolicy.org/sites/default/files/publications/mpi_chip-immigrants-brief_final.pdf

[70] Connecticut's Official State Website. (n.d.). *Covered Connecticut Program: Overview – program description and eligibility.* portal.ct.gov/DSS/Health-And-Home-Care/Covered-Connecticut-Program

[71] Healthy People 2030. (2024). *Social Determinants of Health*. Office of Disease Prevention and Health Promotion. health.gov/healthypeople/priority-areas/social-determinants-health

[72] Healthy People 2030. (2024). *Access to Health Services*. Office of Disease Prevention and Health Promotion. health.gov/healthypeople/priority-areas/social-determinants-health/literature-summaries/access-health-services

[73] Healthy People 2030 (2024). *Access to Primary Care*. Office of Disease Prevention and Health Promotion. health.gov/healthypeople/priority-areas/social-determinants-health/literature-summaries/access-primary-care

[74] Crook, H., Zheng, J., Bleser, W., Whitaker, R., Masand, J., and Saunders, R. (2021). *How are payment reforms addressing social determinants of health? Policy implications and next steps*. Milbank and Duke Margolis Center for Health Policy. milbank.org/wp-content/uploads/2021/02/Duke-SDOH-and-VBP-Issue-Brief_v3-1.pdf

advancing equity, and lowering health care costs demonstrating the need for investments in factors further upstream.[75]

There are several different mechanisms to address SDOH. States can utilize Section 1115 waivers to modify the services Medicaid offers, how they are financed, and to pilot new approaches to care. Currently there are 20 states with approved Medicaid 1115 waivers with SDOH provisions and another 17 states with applications for waivers pending approval.[76] However states are in the early stages of incorporating SDOH into their value-based payment designs and tend to focus on screening for SDOH, providing referrals to services, and building partnerships with community-based organizations. Few states have more advanced strategies such as including nutrition, housing, and transportation within their payment models.[77]

Connecticut currently does not have a Section 1115 waiver with SDOH provisions[78] but does has submitted an application for an 1115 waiver to address the specific needs of Justice Involved individuals, including strategies to address SDOH post-incarceration. Connecticut also requires OHS to report annually on Connecticut nonprofit hospitals' community benefit programs, which is defined as activities and services that promote preventive health care, improve health equity by reducing health disparities, and overall improve the health status of people served in each of the regions the hospitals serve.[79] In 2022, the total community benefit expense in Connecticut was $1.7 billion, the majority of which, as reported by hospitals, is unreimbursed costs from Medicaid ($1 billion), health professions education ($265 million), and financial assistance or charity care ($256 million).[80] OHS and other related state agencies may have the opportunity to play a role in identifying the most effective ways to address SDOH, along with issues regarding access and affordability of health care.

2.1.4 Provider Reimbursement Based on Performance

Traditionally, providers have been paid for every unit of service they deliver known as fee-for-service (FFS), regardless of quality, outcome, or efficiency of care. Alternative payment structures are used to encourage providers to deliver high quality care for lower costs. These alternative payment methods

[75] Crook, H., Zheng, J., Bleser, W., Whitaker, R., Masand, J., and Saunders, R. (2021). *How are payment reforms addressing social determinants of health? Policy implications and next steps*. Milbank and Duke Margolis Center for Health Policy. milbank.org/wp-content/uploads/2021/02/Duke-SDOH-and-VBP-Issue-Brief_v3-1.pdf

[76] KFF. (2024). Medicaid Waiver Tracker: Approved and pending section 1115 waivers by state. kff.org/medicaid/issue-brief/medicaid-waiver-tracker-approved-and-pending-section-1115-waivers-by-state

[77] Crook, H., Zheng, J., Bleser, W., Whitaker, R., Masand, J., and Saunders, R. (2021). *How are payment reforms addressing social determinants of health? Policy implications and next steps*. Milbank and Duke Margolis Center for Health Policy. milbank.org/wp-content/uploads/2021/02/Duke-SDOH-and-VBP-Issue-Brief_v3-1.pdf

[78] KFF. (2024). *Medicaid Waiver Tracker: Approved and pending section 1115 waivers by state*. kff.org/medicaid/issue-brief/medicaid-waiver-tracker-approved-and-pending-section-1115-waivers-by-state

[79] OHS. (2024). *Hospitals' community benefit summary and analysis report*. portal.ct.gov/-/media/ohs/community-benefits/community-benefit-summary-and-analysis-report_2022_draft.pdf

[80] OHS. (2024). *Hospitals' community benefit summary and analysis report*. portal.ct.gov/-/media/ohs/community-benefits/community-benefit-summary-and-analysis-report_2022_draft.pdf

are broadly considered Value-Based Payment and constitute a major policy effort to improve healthcare quality and outcomes while containing costs.

There are several payment structures that directly tie reimbursement to performance, including quality withholds, bundled payments, Total Cost of Care models, pay for performance, and capitation.

Quality Withholds: The ACA mandates a value-based purchasing model for participating hospitals, where incentive payments are given to hospitals that meet or exceed quality benchmarks set by The Centers for Medicare & Medicaid Services (CMS). CMS withholds 2% of hospitals' Medicare payments to fund the value-based incentive. Hospitals are scored on measures including mortality, health care-associated infections, patient safety, patient experience, efficiency, and cost reduction.

Bundled payments are a set payment for all services delivered for a given condition or treatment. The goal of bundled payments is to incentivize the different providers involved in a patient's course of treatment—or episode of care—to collectively deliver high-quality care at a lower cost.[81] For example, Medicare's Comprehensive Care for Joint Replacement (CJR) Model provides bundled payments for hip, knee, and ankle replacements and encourages providers to improve quality and coordination of care for the episode of care.[82]

Pay for performance (P4P) is another type of payment model where providers are paid for meeting certain quality performance goals. In addition, providers that perform poorly may be financially penalized.[83] However, evaluation of P4P models finds limited effects on patient outcomes.[84]

Capitation is a payment model wherein providers are paid—usually ahead of time—a fixed rate per patient to cover all care within a specified scope of services, regardless of the services actually provided. Providers who deliver care for less than the capitated rate can share in the savings, while those who deliver care for more than the capitated rate are responsible for the excess. This payment model incentivizes providers to keep patients healthy and to deliver care efficiently. To prevent providers from unnecessarily limiting care to save money, payers may attach quality measures to payments.[85]

Global budgets are a form of capitation where providers—typically hospitals—are paid a fixed amount ahead of time for the total number of services they provide in a specific timeframe. Providers are responsible for expenditures above the set budget and must meet quality outcomes, creating an incentive to reduce unnecessary utilization and invest in prevention. Maryland has implemented

[81] Healthcare Value Hub. (n.d.). *Bundled Payments.* Altarum health carevaluehub.org/improving-value/browse-strategy/bundled-payments
[82] Centers for Medicare and Medicaid Services. (n.d.). *Comprehensive Care for Joint Replacement Model*. cms.gov/priorities/innovation/innovation-models/cjr
[83] Healthcare Value Hub. (n.d.). *Pay for Performance (P4P)*. health carevaluehub.org/improving-value/browse-strategy/pay-performance-p4p
[84] Mathes, T., Pieper, D., Morche, J., Polus, S., Jaschinski, T., & Eikermann, M. (2019). *Pay for Performance for Hospitals (Review)*. Cochrane Database of Systematic Reviews, 2019(7). doi.org/10.1002/14651858.CD011156.pub2
[85] Healthcare Value Hub. (n.d.). *Capitation.* healthcarevaluehub.org/improving-value/browse-strategy/capitation

global budgets for its hospitals as part of its all-payer rate setting program and has seen success in controlling rising hospital costs.[86]

Total Cost of Care Models are models where a group of providers are held accountable for the quality and total cost of care for a population and have the opportunity to share in savings (or are at risk for excess spending) when quality targets are met.[87]

The Center for Medicare and Medicaid Innovation (CMMI) develops and tests new health care payment and service delivery models to improve patient care, lower costs, and better align payment systems to promote patient-centered practices. Connecticut was awarded a State Innovation Model (SIM) grant from CMMI that operated from 2015–2020, which aimed to improve patients' access to care, improve patient and provider experience, encourage the use of appropriate and high value care, foster better health outcomes while eliminating health disparities, and improve population health. SIM efforts have led to achievements such as including a significant increase in the number of Connecticut residents in value-based payment arrangements, more primary care practices utilizing a patient-centered approach to care, and an increase in the number of employers adopting Value-Based Insurance Design plans.[88] Connecticut has received a CMS State Advancing All-Payer Health Equity Approaches and Development Model (AHEAD) award. The Connecticut AHEAD (CT AHEAD) collaborative includes the Office of Health Strategy and the Department of Social services and will focus on improving population health, enhancing health equity/reducing disparities in health outcomes, and slowing healthcare cost growth.[89]

2.1.5 Health Care Consolidation

Health care consolidation occurs from mergers, acquisitions, partnerships, or affiliations between different health care businesses. There are two main types of consolidation: *horizontal consolidation* and *vertical consolidation.* Each can affect patient outcomes and health economic trends. There are also various incentives behind consolidations, including goals of reducing costs of capital, reduced operating costs, benefits of scale, and clinical standardization.[90] In some instances, rural hospitals have joined larger hospital systems to prevent closure.[91] However, evidence regarding the impact of consolidation is largely mixed. Prior research has found health care consolidation leads to increases in prices patients and insurers are charged,[92] greater costs of care,[93] decreased cost of running health

[86] Healthcare Value Hub. (n.d.). *Global Budgets*. healthcarevaluehub.org/improving-value/browse-strategy/global-budgets
[87] HCPLAN. (n.d.). *APM framework: Overview.* HCPLAN. hcp-lan.org/apm-framework
[88] UConn Health, Center for Population Health, & Yale School of Public Health. (2020 May). *Connecticut State Innovation Model, Final Evaluation Report*. health.uconn.edu/population-health/wp-content/uploads/sites/210/2020/06/SIM Evaluation Report 2020.pdf
[89] CT OHS. (n.d.). Connecticut AHEAD. *Office of Health Strategy*. portal.ct.gov/ohs/programs-and-initiatives/connecticut-ahead
[90] Noether, M., & May, S. (2017). Hospital merger benefits: Views from hospital leaders and econometric analysis. *CRA*. aha.org/system/files/2018-04/Hospital-Merger-Full-Report-FINAL-1.pdf
[91] O'Hanlon, C., Kranz, A., DeYoreo, M., Mahmud, A., Damberg, C., & Timble, J. (2019). Access, quality, and financial performance of rural hospitals following health system affiliation. *Health Affairs*, 38 (12). healthaffairs.org/doi/10.1377/hlthaff.2019.00918
[92] Vita, M.G. & Sacher, S. (2001). The competitive effects of not-for-profit hospital mergers: A case study. *The Journal of Industrial Economics*, *49*, 63-84. doi.org/10.1111/1467-6451.00138
[93] Cooper, Z., Craig, S. V., Gaynor, M., & Van Reenen, J. (2019). The price ain't right? Hospital prices and health spending on the privately insured. *The Quarterly Journal of Economics, 134*(1), 51–107. doi.org/10.1093/qje/qjy020

care facilities[94] and does not necessarily establish a higher quality of care, but may produce concentrated health care markets with fewer competitors.[95]

There is some evidence that hospital mergers can decrease the costs of delivering care by reducing operating and non-operating expenses.[96] This could be as a result of larger systems removing redundancies in non-operating activities such as administrative costs[97] or slowing the rate of pay increases for health care workers.[98] There is evidence that horizontal consolidation is associated with lower wages for health care workers. Although this decreases overall health care costs, it leads to decreased earnings for employees.

Horizontal hospital mergers and acquisitions create larger systems and increased market power. Increased market power gives hospital systems more leverage in negotiations with payers which often leads to higher negotiated prices paid for hospital care.[99] Patients who are privately insured (those who receive insurance from their employers or purchase their own insurance) usually face higher prices because prices are typically negotiated between hospitals and insurers.[100] Higher prices for care can occur for two primary reasons: 1) moving care from physician offices to hospital facilities can cause new facility fees, and/or 2) hospitals can negotiate higher prices with insurance companies. The impact on prices paid by public insurance (e.g., Medicare or Medicaid) is less, as these prices are set by the government, however shifting services to hospital facilities still results in higher overall spending for public payers.

Vertical consolidation (hospital purchases of physician groups, affiliations with or direct hiring of physicians from previously independent practices) on the other hand is associated with lower average expenses to provide care, changes in care delivery standards, and increased utilization of particular services.[101] The evidence regarding the impact on quality of patient care and access is mixed. Some

[94] Schmitt, M. (2017). Do hospital mergers reduce costs? *Journal of Health Economics, 52*, 74-94. sciencedirect.com/science/article/abs/pii/S0167629617300930
[95] Gaynor, M. (2021). Antitrust applied: Hospital consolidation concerns and solutions. *Committee on the Judiciary Subcommittee on Competition Policy, Antitrust, and Consumer Rights, U.S. Senate.* judiciary.senate.gov/imo/media/doc/Gaynor Senate Judiciary Hospital Consolidation May 19 2021.pdf
[96] Craig, S. V., Grennan, M., & Swanson, A. (2021). Mergers and marginal costs: New evidence on hospital buyer power. *The RAND Journal of Economics, 52*(1), 151-178. onlinelibrary.wiley.com/doi/abs/10.1111/1756-2171.12365
[97] Kaul, A., Prabha, K.R., & Katragadda, S. (2016). Size should matter: Five ways to help healthcare systems realize the benefits of scale. *PwC*. strategyand.pwc.com/media/file/Size-should-matter.pdf
[98] Prager, E., & Schmitt, M. (2021). Employer consolidation and wages: Evidence from hospitals. *American Economic Review, 111*(2), 397-427. aeaweb.org/articles?id=10.1257/aer.20190690
[99] Devers, K. J., Casalino, L. P., Rudell, L. S., Stoddard, J. J., Brewster, L. R., & Lake, T. K. (2003). Hospitals' negotiating leverage with health plans: How and why has it changed? *Health services research*, *38*(1 Pt 2), 419–446. doi.org/10.1111/1475-6773.00123
[100] Liu, J. L., Levinson Z. M., Zhou A., Zhao X., Nguyen P., & Qureshi N. (2022). Environmental scan on consolidation trends and impacts in health care markets. *RAND Corporation*. rand.org/pubs/research_reports/RRA1820-1.html
[101] Sinaiko A. D., Curto V.E., Ianni K., Soto M., Rosenthal M.B. (2023). Utilization, steering, and spending in vertical relationships between physicians and health systems. *JAMA Health Forum, 4*(9), e232875. doi.org/10.1001/jamahealthforum.2023.2875

studies have shown vertical consolidation increases quality of care and patient access,[102] but that overall spending likely also increases.[103]

The impact of horizontal consolidation on access,[104] utilization,[105] quality,[106] and equity[107] are also less clear.[108] Hospital mergers could lead to larger, better-coordinated systems that have greater care standardization. It could also lead to coordination, efficiency, and financial stability associated with larger hospital systems, though there may be pressure to cut costs or produce greater financial returns once hospitals join larger systems. However, this evidence is not as strong as the evidence on mergers' impacts on hospital prices.

The hospital sector in Connecticut has seen a lot of consolidation of smaller hospitals and major health systems through mergers and acquisitions over the past decade. Between 2013 and 2021, the four large systems operating in the State either joined or purchased 14 different hospitals which increased the market power for many of the large systems.

Most of the Connecticut hospital regions are highly concentrated and market power for local systems has been increasing, as measured by the Herfindahl-Hirschman Index (HHI) **(Table 2.1).**[109] The HHI is a common measure of market concentration that is used to determine market competitiveness. In 2016, two of the Planning Regions were "Moderately Concentrated," six were "Highly Concentrated," and one was "Very Highly Concentrated." In 2021, the least concentrated region for acute care services was Naugatuck Valley, while the most concentrated was the South-Central Planning Region.

[102] Neprash H. T. (2020). Vertical integration likely increases spending, but does it also improve quality of care? *Journal of general internal medicine*, *35*(3), 630–632. doi.org/10.1007/s11606-019-05602-6
[103] Ho, V., Metcalfe, L., & Vu, L. et al. (2020). Annual spending per patient and quality in hospital-owned versus physician-owned organizations: An observational study. *Journal of General Internal Medicine, 35*, 649–655. doi.org/10.1007/s11606-019-05312-z
[104] O'Hanlon, C. E., Kranz, A. M., DeYoreo, M., Mahmud, A., Damberg, C. L., & Timbie, J. (2019). Access, quality, and financial performance of rural hospitals following health system affiliation. *Health Affairs*, *38*(12), 2095-2104. doi.org/10.1377/hlthaff.2019.00918
[105] Hayford T. B. (2012). The impact of hospital mergers on treatment intensity and health outcomes. *Health services research*, *47*(3 Pt 1), 1008–1029. doi.org/10.1111/j.1475-6773.2011.01351.x
[106] Beaulieu, N. D., Dafny, L. S., Landon, B. E., Dalton, J. B., Kuye, I., & McWilliams, J. M. (2020). Changes in quality of care after hospital mergers and acquisitions. *The New England journal of medicine*, *382*(1), 51–59. doi.org/10.1056/NEJMsa1901383
[107] Desai, S. M., Padmanabhan, P., Chen, A. Z., Lewis, A., & Glied, S. A. (2023). Hospital concentration and low-income populations: Evidence from New York State Medicaid. *Journal of health economics*, *90*, 102770. doi.org/10.1016/j.jhealeco.2023.102770
[108] Liu, J. L., Levinson Z. M., Zhou A., Zhao X., Nguyen P., & Qureshi N. (2022). Environmental scan on consolidation trends and impacts in health care markets. *RAND Corporation*. rand.org/pubs/research_reports/RRA1820-1.html
[109] Connecticut Office of Health Strategy. (2024). Impacts of Connecticut Hospital and Health Care System Consolidation (2016-2021). *OHS*. analysis-of-impacts-of-hospital-consolidation-in-ct_032624.pdf

Table 2.1 Connecticut Hospital Region Competitiveness Based on Hospital Discharges*

Region	Hospitals with Primary Service Areas in each Region	2016 Competitiveness *(HHI Index)*	2021 Competitiveness *(HHI Index)*	Change in HHI Value
Capitol Region	Bristol, CT Children's Medical Center, Hartford, Hospital of Central CT, John Dempsey, Johnson Memorial, Manchester Memorial, Middlesex Memorial, Rockville General, Saint Francis, Windham Community	**Highly Concentrated** *(3,098)*	**Highly Concentrated** *(3,381)*	**+ 283**
Greater Bridgeport Region	Bridgeport, Saint Vincent's Yale-New Haven	**Highly Concentrated** *(4,604)*	**Highly Concentrated** *(4,832)*	**+ 228**
Lower Connecticut River Valley Region	Hartford, Middlesex Memorial	**Highly Concentrated** *(3,738)*	**Highly Concentrated** *(3,710)*	**- 29**
Naugatuck Valley Region	Bridgeport, Bristol, Griffin, Hartford, Saint Mary's, Saint Vincent's, Waterbury, Yale-New Haven	**Moderately Concentrated** (1,557)	**Moderately Concentrated** *(1,596)*	**+ 38**
Northeastern Region	Day Kimball, William W. Backus	**Highly Concentrated** *(3,622)*	**Highly Concentrated** *(3,973)*	**+ 351**
Northwest Hills Region	Charlotte Hungerford, Hartford, Sharon	**Moderately Concentrated** *(2,368)*	**Highly Concentrated** *(4,587)*	**+ 2,219**
South Central Region	Bridgeport, Midstate Medical Center, Hartford, Saint Vincent's Medical Center, Yale-New Haven	**Very Highly Concentrated** *(6,477)*	**Very Highly Concentrated** *(6,699)*	**+ 222**
Southeastern Region	Lawrence and Memorial, Hartford, Windham Community Memorial, William W. Backus	**Highly Concentrated** *(4,258)*	**Highly Concentrated** *(4,297)*	**+ 39**
Western Region	Danbury, Greenwich, Norwalk, Stamford	**Highly Concentrated** *(3,741)*	**Highly Concentrated** *(3,623)*	**- 118**

***Data Source:** Impacts of Connecticut Hospital and Health Care System Consolidation (2016-2021)*

***Note:** HHI Index Categories range from: <1,500 indicating a Unconcentrated Market; 1,500–2,499 is Moderately Concentrated; 2,500–4,999 is Highly Concentrated; and 5,000+ is Very Highly Concentrated.*

OHS commissioned a study that analyzed the impact of hospital and health care system consolidation in Connecticut from 2016 through 2021.

OHS compared trends in economic outcomes for hospitals and regions where hospital consolidation occurred to those where there were no consolidations over the past five years. The study measured

trends in health care prices, spending, service utilization, and facility operating outcomes, then examined how those trends changed for hospitals and regions that gained market power compared to the rest of the State.

The report, *Impacts of Connecticut Hospital and Health Care System Consolidation (2016–2021),* found that overall, hospital consolidation in Connecticut appears to have contributed to faster increases in health care prices and greater use of "high profit" health care services during the study period.[110]

2.1.6 Incentives to Improve Quality, Access, Delivery, and Outcomes

Federal health care reform includes numerous incentives and opportunities for states, health care providers, and others to improve health care quality, access, delivery, and outcomes. The Prevention and Public Health Fund—established by the ACA—is intended to provide ongoing support to public health and prevention programs at the national, state, and local level. The burden of chronic disease (e.g., asthma, heart disease, cancer, and diabetes) presents a significant public health challenge to Connecticut.[111] Connecticut received over $12 million for fiscal year 2022 to fund wellness and prevention efforts, including over $900,000 for diabetes, over $4,900,000 for immunization programs, and over $1,400,000 for health care-associated infections.[112]

Anti-competitive contracting practices aim to reduce a provider's competition, which can provide an opportunity for the provider to increase prices. Nationally, the Consolidated Appropriations Act of 2021 prohibited gag clauses that formerly restricted disclosure of price and quality information related to health insurance contracts. States can limit anti-competitive contracting practices by prohibiting:

- Most favored nation policies – when a dominant insurer enters into contract in which a provider or health system agrees not to offer lower prices to any other insurer.[113]
- All-or-nothing clauses – when a health system requires health plans to work with *all* of the providers in that health system *or none* of them.[114]

[110]Connecticut Office of Health Strategy. (2024).Impacts of connecticut hospital and health care system consolidation (2016.2021). portal.ct.gov/-/media/ohs/reports/analysis-of-impacts-of-hospital-consolidation-in-ct_032624.pdf
[111] Dept. of Public Health (n.d.). *Chronic disease prevention and health promotion*. portal.ct.gov/dph/health-education-management--surveillance/chronic-disease-prevention-and-health-promotion/chronic-disease-prevention-and-health-promotion
[112] Trust for America's Health. (2021). *The Prevention and Public Health Fund at Work: Connecticut*. tfah.org/wp-content/uploads/2021/03/CT_FAW.pdf
[113] Gudikesen, K., Fuse Brown, E., & Butler, J. (n.d.). *A tool for states to address health care consolidation: Prohibiting anticompetitive health plan contracts*. NASHP. nashp.org/wp-content/uploads/2021/04/Anticompetitive-Contract-report-PDF-final-4-9-2021.pdf
[114] Gudikesen, K., Fuse Brown, E., & Butler, J. (n.d.). *A tool for states to address health care consolidation: Prohibiting anticompetitive health plan contracts*. NASHP. nashp.org/wp-content/uploads/2021/04/Anticompetitive-Contract-report-PDF-final-4-9-2021.pdf

- Gag clauses – when either health systems or an insurer prevents either party from disclosing terms of their agreement, including prices, to a third party.[115]
- Anti-tiering or anti-steering clauses – when a health system requires health plans to place the systems' facilities or providers in the most preferred tier, even if the health systems' providers do not meet the insurers' cost or quality standards for being in the highest value tier. Anti-steering is when a health system forbids the insurer from using cost-sharing incentives to steer patients to other providers, even if they offer better value.[116]

Connecticut prohibits most favored nation clauses, all-or-nothing contract provisions, gag clauses, and anti-tiering or anti-steering contract provisions; Connecticut does not ban non-compete agreements but does state that agreements cannot restrict a physician's competitive activities for more than one year or in an area more than fifteen miles from the primary site where they practice. Connecticut is a leader in limiting anti-competitive contracting practices along with Massachusetts and Texas.[117,118]

Another avenue for states to improve access to care is to waive or reduce cost-sharing for high value services, including prescription drugs. Many states are active in reducing out-of-pocket costs for prescription drugs, including Connecticut, which protects consumers from excess costs associated with pharmacy benefit managers, limits the price of insulin and diabetes supplies, and requires coverage parity for intravenous and oral cancer medication.[119] Connecticut requires any payment or discount made for the patient to be applied to their annual out-of-pocket cost-sharing requirement and mandates separate prescription drug deductibles. The state limits cost-sharing in most plans for certain high-value services and limits the number of services subject to co-insurance.[120]

2.1.7 Medicaid and Public Health Unwinding

In response to the COVID-19 pandemic, the federal government initiated a public health emergency (PHE) and passed legislation requiring states to continuously cover Medicaid beneficiaries for the duration of the PHE and provided states with an enhanced federal match to help cover the cost. That requirement ended on March 31, 2023, beginning the "Medicaid unwinding" process over the

[115] Gudikesen, K., Fuse Brown, E., & Butler, J. (n.d.). *A tool for states to address health care consolidation: Prohibiting anticompetitive health plan contracts*. NASHP. nashp.org/wp-content/uploads/2021/04/Anticompetitive-Contract-report-PDF-final-4-9-2021.pdf
[116] Gudikesen, K., Fuse Brown, E., & Butler, J. (n.d.). *A tool for states to address health care consolidation: Prohibiting anticompetitive health plan contracts*. NASHP. nashp.org/wp-content/uploads/2021/04/Anticompetitive-Contract-report-PDF-final-4-9-2021.pdf
[117] Healthcare Value Hub. (2024). *Health care affordability policy snapshot* [Unpublished report]. Altarum.
[118] Consolidated Appropriations Act of 2021, 134 U.S.C. Section 1182. (2021). congress.gov/116/plaws/publ260/PLAW-116publ260.pdf
[119] Healthcare Value Hub. (2024). *Health care affordability policy snapshot* [Unpublished report]. Altarum.
[120] Healthcare Value Hub. (2022 November). *Health care Affordability State Policy Scorecard*. Altarum. healthcarevaluehub.org/affordability-scorecard

following twelve months as states return to normal eligibility and enrollment practices; at least 19,156,000 Medicaid enrollees have been disenrolled nationally as of March 26, 2024.[121]

Each state approached the unwinding process differently and, as such, there are many different experiences across the country. In Connecticut, approximately 176,500 people have been disenrolled from Medicaid, with 75% of those people being disenrolled for procedural reasons such as incomplete renewal applications or out-of-date contact information and 25% because they were determined ineligible.

Medicaid unwinding may impact emergency department utilization, but more data is needed to determine whether it increases or decreases demand for services. There has been concern among providers that as people lose coverage and no longer have access to primary care and chronic disease management services, they may turn to emergency departments and urgent care centers when needs arise. However, Medicaid expansion had mixed effects on total ED volume, and even states with the largest increases in Medicaid enrollment experienced an increase in ED visit, although not at a statistically significant level.[122] As more data becomes available, it will be important to examine whether Medicaid redetermination is associated with an increase or decrease in ED and outpatient urgent care utilization, and which types of resources the change is associated with, ranging from ED beds to staffing levels.

2.2 Health Care Workforce Trends

The health care and social assistance industry is the largest employer in Connecticut, encompassing various roles such as health care practitioners (including clinicians and nurses), technical occupations, and health care support occupations.[123] Among these, registered nurses (RNs) form the largest segment of health care practitioners in Connecticut, with 89,819 registered nurses actively licensed in the state in 2022.[124] However, it is important to note that licensing data may inflate practitioner supply as key workforce elements, such as whether the individual is actively practicing, are not often captured. For example, only 45,014 (50.1%) of the licensed registered nurses in the state were employed in a nursing capacity (either full time or part-time) in 2022 **(Figure 2.1).**[125]

[121] Cardwell, A., & Gould, G. (2023, March 14). *The Long Unwinding Road: States Prepare for the End of the Medicaid Continuous Coverage Requirement*. National Academy for State Health Policy. nashp.org/the-long-unwinding-road-states-prepare-for-the-end-of-the-medicaid-continuous-coverage-requirement

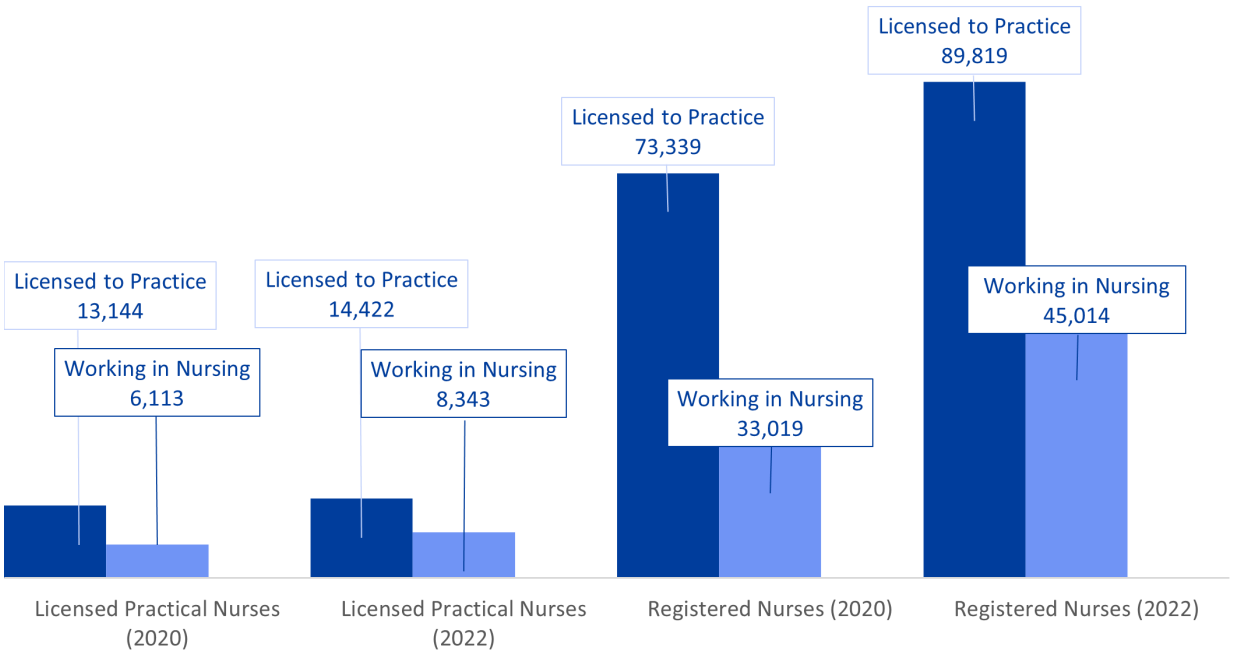
[122] Zhao, F., & Nianogo, R.A. (2021 October 25). Medicaid Expansion's Impact on Emergency Department Use by State and Payer. *Value in Health*, *25(4)*, 630-637. doi.org/10.1016/j.jval.2021.09.014

[123] Bureau of Labor Statistics. (2022). *OEWS research estimates May 2022 – all sectors [Raw Data].* bls.gov/oes/current/oes_research_estimates.htm

[124] Connecticut Data Collaborative. (2023). *The nursing workforce supply in Connecticut.* ctdata.org/nursing-2022

[125] Connecticut Data Collaborative. (2023). *The nursing workforce supply in Connecticut.* ctdata.org/nursing-2022

Figure 2.1 Licensed and Actively Practicing RNs and LPNs in Connecticut, 2020 and 2022*



***Data Source:** Connecticut Data Collaborative. (2023). The Nursing Workforce Supply in Connecticut. Connecticut Center for Nursing Workforce. Retrieved from ctdata.org/nursing-2022*

The data comparing the number of licensed and actively practicing nurses illustrate the importance of routine monitoring and assessment of whether the size, clinician mix, and statewide distribution of the health care workforce is sufficient to meet the standard demand for services. Likewise, insight gained over the course of the COVID-19 pandemic shows that it also is important to regularly monitor the capacity of the workforce to respond to the projected increase in demand in the event of another public health emergency.

It is also important to consider expected demographic shifts when examining workforce adequacy. Projections indicate that the state will witness an increase in the population over the next twenty years, particularly among those aged sixty-five and older.[126] Extrapolating current inpatient hospitalization rates to the 2040 population estimates also reflect an anticipated increase in hospital admissions across various age groups, with the highest increase among older adults **(Table 2.2).** In addition to being prepared to provide an increase in the number of inpatient hospital services, it is likely that Connecticut must be also prepared to manage an uptick in the demand for emergency and outpatient health care services as the population grows.

[126] Connecticut State Data Center. (2023). *Connecticut Town Population Projections, 2015 – 2040*. Data and Policy Analytics Unit. data.ct.gov/Government/2015-2040-Population-Projections-Town-Level/p6hp-fnp7

Table 2.2 Population and Inpatient Utilization Projections by Age Group, Connecticut, 2020 and 2040

Age Group	Estimated Population 2020[a]	Projected Population 2040[a]	Projected Population Change %	2021 Inpatient Discharges[b,c]	2021 Inpatient Use Rate per 1,000	2040 Projected Inpatient Discharges	2020 – 2040 Inpatient Use Rate % Change
0 – 4	192,964	203,317	5.37%	6,517	33.77	6,867	5.4%
5 – 14	429,251	444,069	3.45%	4,908	11.43	5,077	3.5%
15 – 24	489,864	461,325	-5.83%	10,906	22.26	10,271	-5.8%
25 – 44	900,098	977,034	8.55%	38,081	42.31	41,336	8.5%
45 – 64	1,012,767	935,173	-7.66%	83,563	82.51	77,161	-7.7%
65 +	579,659	633,098	9.22%	142,580	245.97	155,725	9.2%

[a] *Connecticut Open Data. (2024). Connecticut Population Projections – State, County, and Regional Councils of Governments Level, 2015-2040 [Raw Data]. Data and Policy Analytics Unit.* data.ct.gov/Government/Connecticut-Population-Projections-State-County-an/pv2w-k7qu/about_data

[b] *Connecticut Office of Health Strategy. (2024). Hospitalization Statistics: Table H-1 Hospital Discharges by Diagnosis, Age, and Sex, Connecticut 2021 [Raw Data]. Connecticut Department of Public Health.* portal.ct.gov/dph/Health-Information-Systems--Reporting/Hisrhome/Hospitalization-Statistics

[c] *Number of inpatient discharges represent total discharges excluding perinatal, pregnancy, and childbirth-related events and does not reflect the number of unique persons hospitalized.*

The growing population of older adults statewide will likely present challenges in terms of workforce adequacy, a trend that is covered in more detail in Chapter 6.

2.2.1 Health Care Workforce Composition

As a significant portion of health care providers in Connecticut are approaching retirement age, proactive measures can help to ensure seamless succession planning. Currently, 36% of practicing physicians in the state are aged 60 or older, representing a 25% increase since 2012.[127] This figure varies across specialties, with a large proportion of pulmonologists (81%), psychiatrists (53%), family physicians (39%), and infectious disease specialists (33%) aged 60 or older. Similarly, between 20-30% of registered nurses, licensed practical nurses, and dentists are also approaching retirement age, potentially worsening the projected shortage of practitioners in the next decade **(Table 2.3).**

Connecticut would also benefit from efforts to diversify the existing workforce. Despite comprising 11% of the state's population, Black or African American residents represent only 5% of practicing physicians and only 4% of dentists in Connecticut **(Table 2.3).** The literature indicates that there is a positive correlation between representation and population health measures, and establishing a diverse health care workforce is an important aspect of addressing health disparities among minority

[127] AAMC. (2023). *State Physician Workforce Data Reports*. aamc.org/data-reports/workforce/report/state-physician-workforce-data report

groups.[128] Among other strategies, policymakers may consider allocating funds to establish scholarships to support people of color who are interested in pursuing a career in health care.[129]

Table 2.3 Selected Health Care Provider Demographics, Connecticut, 2020 and 2022

Demographic	Active Physicians (2020)[a]	Registered Nurses (2022)[b]	Licensed Practical Nurses (2022)[b]	Dentists (2022)[c]	Connecticut (2022)[d]
60 and Older	36%	24%	20%	30%	25%
Non-Hispanic White	63%	76%	50%	70%	70%
Black or African American	5%	9%	31%	4%	11%
Asian	18%	6%	3%	19%	5%
Hispanic or Latine	5%	6%	11%	5%	17%

[a] *AAMC. (2022). Connecticut Physician Workforce Profile. aamc.org/media/58146/download*

[b] *Connecticut Data Collaborative. (2023). The Nursing Workforce Supply in Connecticut. Connecticut Center for Nursing Workforce. ctdata.org/nursing-2022*

[c] *American Dental Association. (2023). Dentist Demographics Dashboard. Health Policy Institute. ada.org/resources/research/health-policy-institute/us-dentist-demographics*

[d] *U.S. Census Bureau. (2022). American Community Survey, ACS 5-Year Estimates Data Profiles, Table DP05. hdata.census.gov/table/ACSDP5Y2022.DP05?g=040XX00US09*

2.2.2 Health Care Workforce Demand

Although it is likely that the aging population will require more frequent and complex care, other factors influencing the workforce demand are not as clearly defined. Shifts in patient care trends and proposed changes in health care related law may rapidly alter the health care settings and practitioner mix necessary to deliver optimal, affordable patient care.

However, Connecticut has observed notably high demand for a variety of health care professionals. Nursing and direct care positions face significant shortages, and workforce projections from the United States Health Resources and Services Administration (HRSA) indicate that Connecticut is expected to face shortages among family medicine physicians, mental health counselors, and addiction counselors by 2030 **(Table 2.4).** Many of the open positions across the industry are expected to result from the need to replace workers who exit the labor force, while others will be needed to accommodate population growth.

[128] Snyder, J., Upton R., Hassett, T., Lee, H., Nouri, Z., & Dill, M. (2023). Black Representation in the Primary Care Physician Workforce and Its Association With Population Life Expectancy and Mortality Rates in the US. *JAMA Network Open, 6(4).* doi:10.1001/jamanetworkopen.2023.6687

[129] Taylor, K. J., Ford, L., Allen, E. H., Mitchell, F., Eldridge, M., & Caraveo, C. A. (2022). *Expanding and Supporting a Diverse Health Care Workforce*. Urban Institute. urban.org/sites/default/files/2022-05/Findings and Recommendations for State and Federal Policymakers.pdf

Table 2.4 Selected HRSA Health Workforce Supply and Demand Projections, 2030*

Health Care Professional	Total Projected Supply 2030	Total Projected Demand 2030	Total Percent Adequacy 2030
Family Medicine Physicians	640	1,530	42%
Mental Health Counselors	1,280	1,610	80%
Addiction Counselors	1,330	1,650	81%

***Data Source:** United States Health Resources and Services Administration. (2023). Workforce Projections [Dashboard]. Retrieved January 9, 2023, from data.hrsa.gov/topics/health-workforce/workforce-projections*

Connecticut has allocated a portion of its funding from the American Rescue Plan Act (ARPA) to provide stimulus payments to nursing homes, health workforce needs, direct care staff, and to invest in health care employment training programs.[130,131] More recently, Connecticut passed Public Act 23-70[132] which requires the state to convene a working group to develop a plan to establish clinical placements and create a student loan subsidy program for certain "high demand professions" including nursing, mental health, and emergency medicine.[133]

2.2.3 Nursing Demand

HRSA projects a national shortage of 362,640 RNs by 2030, with Connecticut expecting a deficit of 8,470 RNs by the same year (a supply of 33,760 and a demand for 42,230).[134,135] These projections do not account for the impact of the COVID-19 pandemic on the nursing workforce, including factors such as staff turnover due to burnout, illness, and early retirements among nurses aged in their 50s and 60s. Despite an increase in the number of registered and practicing nurses between 2020 and 2023, only approximately half of Connecticut's registered nurses are actively employed in nursing roles.[136] As of August 2022, Connecticut has a total of 34,290 employed registered nurses, or 9.52 nurses per 1,000 population.[137]

[130] State of Connecticut Department of Social Services. (2021, July). State of Connecticut Spending Plan for Implementation of the American Rescue Plan Act of 2021, Section 9817: Enhancing, Expanding, and Strengthening Medicaid Home and Community-Based Services. portal.ct.gov/-/media/Departments-and-Agencies/DSS/Press-Releases/2021/State-of-Connecticut-ARPA-Spending-Plan-2021-FINAL-71221.pdf

[131] State of Connecticut. (2024). American Rescue Plan Act (ARPA) Funding and Project Inventory Dashboard. data.ct.gov/stories/s/ARPA-Project-Inventory/d8eu-4zpa

[132] Connecticut General Assembly, Substitute, H.B. 5441, Public Act No. 23-70 (2023). cga.ct.gov/2023/act/pag/pdf/2023PA-00070-R00HB-05441-PA.pdf

[133] An Act Concerning Clinical Placements for Nursing Students, Reporting by the Office of Workforce Strategy, Promotion of the Development of the Insurance Industry and Connecticut Higher Education Supplemental Loan Authority Student Loan Subsidy Programs for Various Professions, Public Act No. 23-70 (2023). cga.ct.gov/2023/ACT/PA/PDF/2023PA-00070-R00HB-05441-PA.pdf

[134] National Center for Health Workforce Analysis. (2022, November). *Nurse Workforce Projections, 2020-2035*. HRSA Health Workforce. bhw.hrsa.gov/sites/default/files/bureau-health-workforce/Nursing-Workforce-Projections-Factsheet.pdf

[135] Juraschek, S. P., Zhang, X., Ranganathan, V., Lin, V. W. (2019). Republished: United States Registered Nurse Workforce Report Card and Shortage Forecast. *American Journal of Medical Quality, 34(5), 473-481.* doi.org/10.1177/1062860619873217

[136] CT Data Collaborative. (n.d.). *Nursing Supply Data 2022*. ctdata.org/nursing-2022

[137] Feeney, A. (2024). The U.S. Nursing Shortage: A State-by-State Breakdown. *NurseJournal*. nursejournal.org/articles/the-us-nursing-shortage-state-by-state-breakdown

According to a 2020 report from the Connecticut Governor's Workforce Council, the estimated need for new RNs is approximately 3,000 per year.[138] However, universities across the state are only equipped to graduate 1,900 per year. Key challenges include a shortage of teaching faculty and supervisory nurses to accommodate enrollment demands, resulting in 77% of qualified applicants being turned away from Connecticut nursing programs in 2019. [139] These challenges underscore the necessity for Connecticut to reinvest in resources and policies for nursing education and workforce development, like the Connecticut Health Horizons initiative. The Connecticut Health Horizons initiative is a three year $35 million partnership between Connecticut state colleges and universities, the state's Office of Workforce Strategy, the University of Connecticut, the Connecticut Conference of Independent Colleges, multiple state agencies, and the Connecticut Hospital Association as well as health care provider partners to grow and diversify the next generation of nurses and social workers.[140]

2.2.5 Health Professional Shortage Areas

One hundred and six areas within the state have been identified as Health Professional Shortage Areas (HPSAs) by HRSA. These areas lack sufficient primary medical care, dental, or mental health providers and are categorized based on geographic, demographic, or facility-specific criteria.[141] As of September 2023, the state has 52 Primary Medical Care, 59 Dental, and 47 Mental Health shortage areas.[142] As of 2020, Connecticut had 11,092 active patient care physicians across all specialties, with 311.1 physicians per 1,000 people in the state, compared to 3,414 active patient care primary care physicians, with 95.8 primary care physicians per 100,000 people.[143, 144, 145] This disparate distribution of providers highlights the challenges that residents in HPSAs face with accessing primary, dental, and metal health care in the state.

Addressing primary care needs in shortage areas extends beyond traditional providers to include retail pharmacies and advanced practice registered nurses (APRNs) such as nurse practitioners. Nationally, 56% of community pharmacies are located within current Medically Underserved Areas/Populations

[138] Governor's Workforce Council Connecticut. (2022). *Workforce strategic plan*. portal.ct.gov/-/media/office-of-the-governor/news/20201028-governors-workforce-council-strategic-plan.pdf
[139] Carella, A. (2022, June 17). Connecticut faces 'unprecedented' nursing shortage, national trend. *CT Examiner*. ctexaminer.com/2022/06/17/connecticut-faces-unprecedented-nursing-shortage-national-trend
[140] CSCU. (2023, March 1). *CT health horizons: Making an impact on statewide workforce shortage in nursing & social work*. CSCU. ct.edu/newsroom/ct-health-horizons-making-an-impact-on-statewide-workforce-shortage-in-nurs
[141] Further information on Health Professional Shortage Areas can be found at the U.S. Department of Health and Human Services HRSA Website: bhw.hrsa.gov/workforce-shortage-areas/shortage-designation
[142] Health Resources and Services Administration. (2023, September 30). Designated Health Professional Shortage Areas Statistics - Fourth Quarter of Fiscal Year 2023 Designated HPSA Quarterly Summary As of September 30, 2023. data.hrsa.gov/Default/GenerateHPSAQuarterlyReport
[143] AAMC. (2022). *Connecticut Physician Workforce Profile*. aamc.org/media/58146/download
[144] AAMC. (2022, January). *2021 State Physician Workforce Data Report.* store.aamc.org/downloadable/download/sample/sample_id/506
[145] The Connecticut Academy of Physician Assistants Legislative Committee. (2022, August 15). *ConnAPA Scope of Practice Review Request*. portal.ct.gov/-/media/Departments-and-Agencies/DPH/dph/practitioner_licensing_and_investigations/Scope-of-Practice-2022/PhysicianAssistant.pdf

(MUAs/MUPs) or HPSAs.[146] Additionally, Connecticut's 5,382 APRNs, predominantly nurse practitioners with full practice authority after three years of collaborative practice, play a pivotal role in delivering primary care. [147] Physician assistants (PAs) also contribute, although only 14.4% of certified PAs in Connecticut practice in primary care as of 2021.[148]

DPH's ARPA-funded student loan repayment program targets those working in HPSAs, with the goals of closing gaps in provider gaps in areas of greatest need across the state.[149]

2.2.6 National and State Policy Landscape

Policy measures aimed at strengthening the health care workforce encompass various strategies, including expanding educational opportunities, reimagining licensure processes, utilizing state and federal funding to enhance representation, and addressing low compensation to improve recruitment and retention in the direct care sector.

The state passed during the 2024 legislative session PA 24-83[150] which adopts the nurse licensure compact allowing Connecticut to join the forty-one other states already participating to expand the provider network and reduce interstate barriers to telehealth.[151]

Connecticut may also consider examining opportunities to tap into the state's existing workforce through alternative staffing models that utilize community health workers, medical assistants, and licensed vocational and practical nurses. Many states have passed legislation to address the anticipated demand for direct care workers, some which authorize reimbursement to be paid to family members who provide services or utilizing demonstration funding to develop training opportunities for home care aides.[152] OHS and other related state agencies may have unique insight and have a role in identifying the most effective ways to address the health care professional workforce.

2.3 Innovation and Health Technology

The health sector is leaning into innovations in the delivery of health care, focusing on primary care, care coordination, and chronic disease management discussed in more detail in the section below. These innovations have the potential to change how and where certain health care services are

[146] Murphy, E. M., West, L., & Jindal, N. (2021 August 26). Pharmacist provider status: Geoprocessing analysis of pharmacy locations, medically underserved areas, populations, and health professional shortage areas. *Journal of the American Pharmacists Association,* 61(6), 651-660. doi.org/10.1016/j.japh.2021.08.021

[147] Hamm, S. (2019, February 11). Filling The Primary Care Gap: Nurse Practitioners. *Connecticut Health Investigative Team*. c-hit.org/2019/02/11/filling-the-primary-care-gap-nurse-practitioners

[148] The Connecticut Academy of Physician Assistants Legislative Committee. (2022, August 15). *ConnAPA Scope of Practice Review Request*. portal.ct.gov/-/media/Departments-and-Agencies/DPH/dph/practitioner_licensing_and_investigations/Scope-of-Practice-2022/PhysicianAssistant.pdf

[149] Connecticut Student Loan Repayment Program. (2024). About CT Student Loan Repayment Program. ctslrp.org/about

[150] Connecticut General Assembly, H.B. 5058, Public Act No. 24-83. cga.ct.gov/2024/act/pa/pdf/2024PA-00083-R00HB-05058-PA.pdf

[151] An Act Adopting the Nurse Licensure Compact, H.B. No. 5058. (2024). cga.ct.gov/asp/cgabillstatus/cgabillstatus.asp

[152] Ward, H., Ralls, M., Roman, C., & Crumley, D. (2021). *Strengthening the Direct Care Workforce: Scan of State Strategies*. Center for Health Care Strategies. chcs.org/media/Strengthening-the-Direct-Care-Workforce-Scan-of-State-Strategies.pdf

delivered, the facilities and inputs needed to provide that care, the availability of care for patients, and the overall cost of care. Technological factors currently impacting the way health care is delivered (and with the potential to continue impacting future care) include:

- Utilization of telemedicine
- Health information technology improvements, including the use of artificial intelligence
- Health information interoperability
- Novel obesity medications

2.3.1 Telemedicine

During the COVID-19 pandemic, telehealth use increased, from 5,361 unique patients in the year preceding the onset of the COVID-19 pandemic, to over 273,000 from March 2020 – March 2021, covering over 620,000 claims. Telehealth use continued from March 2021 – March 2022, with over 184,000 unique patients and nearly 400,000 claims.[153]

Across Connecticut, the share of patients using telehealth was comparable to the share using all medical services, except for the Hartford region, which had a lower percentage of patients using telehealth, and the Stamford, Norwalk, Danbury region, which had a greater share of patients using telehealth. Patients who used telehealth were much more likely than those who did not use telehealth to have more total health care visits and more ER visits and hospitalizations. When assessing telehealth use with seven different health conditions, telehealth use was greater with anxiety and mood disorders, while COVID-19, acute upper respiratory infections, hypertensive diseases, diabetes mellitus and substance use disorders had greater in-office care. Most patients used telehealth to see health care providers whom they also saw in person; only 7.5% of patients used a telehealth provider whom they never saw in person.[154]

During the pandemic, both federal and state telehealth regulations were temporarily relaxed to enable greater access to care. The temporary requirements expanded the types of health providers authorized to provide telehealth services and service delivery methods; establish requirements for telehealth providers seeking payment from patients who are uninsured or underinsured; temporarily allow out-of-state behavioral health providers to practice telehealth in Connecticut, while applying for an in-state license; and generally provide health insurance service and payment parity for telehealth. Additionally, the state permanently codified the ability of certain out-of-state mental or behavioral health providers to practice telehealth in Connecticut with a license and expansions to Connecticut Medical Assistance Program (CMAP) telehealth coverage, including payment parity for providers and

[153] Connecticut Office of Health Strategy. (2023, March 15). *2022 Telehealth Analysis Report*. portal.ct.gov/-/media/OHS/Cost-Growth-Benchmark/Reports-and-Updates/Telehealth-Analysis-Report.pdf

[154] FAIR Health. (2023, September 7). *Telehealth in Connecticut: An Analysis of Private Health care Claims Focusing on Areas with Greater Minority Populations*. s3.amazonaws.com/media2.fairhealth.org/whitepaper/asset/Telehealth in Connecticut - A FAIR Health White Paper.pdf

coverage for audio-only services under certain conditions.[155] Licensed out-of-state providers of *mental or behavioral health* care are able to provide care remotely (provided they have applied for an in-state license),[156] which the state has facilitated by joining the Psychology Interjurisdictional Compact and Interstate Medical Licensure Compact.[157]

Pending the expiration, extension, or modification of federal telehealth waivers, telehealth laws in Connecticut will revert to the pre-existing state statute. Connecticut state Medicaid reimburses for live video visits and audio-only visits and does not reimburse for remote patient monitoring and store-and-forward service.[158] Federally Qualified Health Centers allow various origination sites (e.g., patients having telehealth visits at home) for live video visits and collect prospective payment system rates for telehealth, but do not reimburse for store and forward services or audio-only visits.

Despite its merits, barriers like lack of broadband capability inhibit the widespread adoption of telehealth in rural settings. Furthermore, licensure requirements preventing providers from treating patients in states where they are not licensed can undermine the goal of increasing access to specialists, regardless of geographic location.[159] Patients may face additional barriers to telehealth, including technical literacy, financial barriers, language barriers, and privacy concerns.[160]

2.3.2 Health Information Technology and Exchange and Interoperability

Health Information Technology and Exchange (HITE) makes it possible for health care providers to better manage patient care through secure use and sharing of health information. A key component of HITE is the use of electronic health records (EHRs) instead of paper medical records. The federal government first incentivized EHRs through the Health Information Technology for Economic and Clinical Health (HITECH) provisions in the 2009 American Recovery and Reinvestment Act (ARRA), including the Meaningful Use of Health Information Exchange program, which accelerated adoption of EHRs by providing financial incentives for providers to adopt and meaningfully use certified EHR technology. The focus later shifted from EHR adoption toward Health Information Exchange (HIE) and interoperability, and the Meaningful Use program was overhauled and renamed the Medicare and Medicaid Promoting Interoperability Program in 2018.[161,162] Interoperability is the ability to view

[155] Dube, N. (2023, August 14). *Recent Changes to Connecticut's Telehealth Laws*. Office of Legislative Research. cga.ct.gov/2023/rpt/pdf/2023-R-0173.pdf
[156] Golvala, K. (2023, June 20). Connecticut's public health emergency ended. What about telehealth? *CT Mirror.* wshu.org/connecticut-news/2023-06-20/connecticuts-public-health-emergency-ended-what-about-telehealth
[157] Center for Connected Health Policy. *Professional Requirements: Licensure Compacts*. cchpca.org/topic/licensure-compacts
[158] Center for Connected Health Policy. (2024, January 1). *Connecticut State Telehealth Laws*. cchpca.org/connecticut
[159] Healthcare Value Hub. (n.d.). *Telehealth*. health carevaluehub.org/improving-value/browse-strategy/telehealth
[160] Connecticut Office of Health Strategy. (2023, March 15). *2022 Telehealth Analysis Report*. portal.ct.gov/-/media/OHS/Cost-Growth-Benchmark/Reports-and-Updates/Telehealth-Analysis-Report.pdf
[161] Johnston, E. M., Clark, A., Zemaitis, P., Bentley, P. M., Lamb, A. T., Horn, A., McGeorge, M., & Sinnarajah, B. (2022). *HITECH Program Retrospective Analysis Close Out Report.* Urban Institute. urban.org/research/publication/hitech-program-retrospective-analysis-close-out-report
[162] Charles, M., & DelVecchio, A. (n.d.). *What is Meaningful Use?* TechTarget. techtarget.com/searchhealthit/definition/meaningful-use

health information from a variety of sources all in one place, with different health care providers able to view patient health records as they move between different health care systems.[163]

2.3.3 Connecticut Statewide Health Information Exchange

Connecticut established the state's Health Information Exchange, "Connie," in 2021 after multiple attempts, including the Health Information Technology Exchange CT (HITE-CT) active from 2011 to 2014 established using federal HITECH funds.[164] The Connecticut Lieutenant Governor and later the Office of Health Strategy established the HIE with input from a variety of entities including: the Health IT Advisory Council; the Connie board in a fiduciary role and made up of stakeholders including providers, payers and consumers; and an operations advisory committee made up of end users. PA 24-19[165] established a stakeholder workgroup to provide recommendations on procedures and regulations concerning the HIE. There are also plans to establish an additional advisory body predominantly comprising physicians and nurses.[166] The state established Connie as a separate nonprofit legal entity authorized pursuant to C.G.S. § 17b-59d, and all providers with an electronic health record system were required begin the process of connecting to Connie by May 2023.[167,168] In addition to establishing a workgroup, the act also specifies when providers are or are not liable for certain actions related to data security and circumstances under which providers are not required to share information with the exchange, and specifies that the exchange's goals must be in line with federal regulations on information blocking.[169] The network allows health practitioners to get fuller patient medical histories across providers and health systems, gathering data from physician practices, laboratories, hospitals, radiology offices, and community organizations.[170] More than 273 health care organizations have signed on to Connie and committed to contributing data,[171] with roughly 20,000 individual providers participating as of 2023,[172] and the system is being integrated into provider infrastructure[173] and used to improve care delivery in state programs.[174] Connie's influence

[163] Sumner, A. (2022, May 2). *What Is Health care Interoperability? Understanding FHIR and TEFCA*. GoodRx. goodrx.com/hcp/providers/interoperability-tefca-fhir

[164] Connie Communications Department. (2021, May 3). *After delays, CT launches its long-anticipated health information exchange*. Connie. conniect.org/after-delays-ct-launches-its-long-anticipated-health-information-exchange

[165] Connecticut General Assembly. Substitute S. Bill No 1, Public Act No 24-19 (2024). cga.ct.gov/2024/ACT/PA/PDF/2024PA-00019-R00SB-00001-PA.pdf

[166] UCONN Health. (2020, June 24). *The State of Health Information Exchange (HIE) - Today and Tomorrow: Three New England Examples.* health.uconn.edu/health-interoperability-learning/health-it-for-clinicians/the-state-of-health-information-exchange

[167] Castricone, D. M. (2022, December 14). *Connie: CT's Health Information Exchange and Providers' Obligations to Participate*. DMC Law, LLC. dmclawllc.com/2022/12/14/connie-cts-health-information-exchange-and-providers-obligations-to-participate

[168] Office of Health Strategy. (2023, September 6). *Health Information Alliance.* portal.ct.gov/OHS/HIT-Work-Groups/Health-Information-Alliance

[169] Kaminski Leduc, J. (2024). 2024 Acts affecting insurance*. Office of Legislative Research*. 2024 Acts Affecting Insurance

[170] Connie Communications Department. (2021, May 3). *After delays, CT launches its long-anticipated health information exchange*. conniect.org/after-delays-ct-launches-its-long-anticipated-health-information-exchange

[171] Connie. (n.d.-a). *All About Data: Connie by the Numbers*. conniect.org/all-about-data-connie-by-the-numbers

[172] UCONN Health. (2022, April 28). *CT eHealth Podcast Series: Health Interoperability, Innovation and Learning - Episode 1: Introducing the Executive Director of Connie, Connecticut's Official Health Information Exchange*. health.uconn.edu/health-interoperability-learning/ct-ehealth-podcast-series

[173] Raths, D. (2023, August 11). *Behavioral Provider Sees Value of ADTs from Conn. HIE*. Healthcare Innovation. hcinnovationgroup.com/interoperability-hie/interoperability/article/53068970/behavioral-provider-sees-value-of-adts-from-conn-hie

[174] Connie. (2023, August). *Connie's State Agency Newsletter - August 2023*. myemail.constantcontact.com/Connie-s-State-Agency-Newsletter---Aug-2023.html?soid=1136360132440&aid=HC09azBYVTc

on interoperability and care coordination within and between providers will likely continue to grow as more providers contribute data and explore new opportunities for leveraging the network.

The health care system's infrastructure in Connecticut ranges from a one-physician office to 1,000+ bed hospitals, with the scope of health care services expanding this range exponentially. While more than 273 health care organizations have signed on to Connie and committed to contributing data[175] and some providers have successfully integrated HIE into their infrastructure,[176] the system is still developing. It will require ongoing coordination to ensure that the diverse and extensive components of Connecticut's health care system can share health information in a secure, efficient, and timely manner.

Beyond the establishment of Connie, Connecticut is also monitoring and disseminating information about federal efforts to improve interoperability at the individual provider level. The Connecticut Department of Public Health has outlined reporting requirements for eligible clinicians (ECs) participating in the Merit-based Incentive Payment System (MIPS) and eligible hospitals (EHs) and critical access hospitals (CAHs) participating in Promoting Interoperability Program (PIP) following the changes initiated in 2024 discussed above.[177] As Connecticut's HIE and national interoperability standards develop, providers and facilities will need to continue investing resources in improving EHR systems, actively participate in health information exchange, and adhere to current and future interoperability standards.

2.3.4 Artificial Intelligence in Health Care

There is growth in the exploration of using Artificial Intelligence (AI) in the delivery of health care, including clinical risk assessment, disease detection, diagnosis, and prognosis by analyzing large quantities of patient data to identify patterns. Artificial intelligence encompasses a variety of sub-fields, including Machine Learning, Natural Language Processing, and robotics. While current use and adoption of AI in clinical practice remains limited and many products are still at the design/development stage, AI has been incorporated successfully into decision support systems for diagnosis such as detecting diabetic vision loss, detecting pneumonia on radiology scans, classifying skin lesions, detecting breast cancer, and diagnosing heart attacks, with AI meeting or exceeding the performance of human clinicians in some cases.[178,179] AI also has potential as a decision support tool for clinicians, including finding and summarizing clinical data for more complex diagnostic

[175] Connie. (n.d.-a). *All About Data: Connie by the Numbers*. conniect.org/all-about-data-connie-by-the-numbers
[176] Raths, D. (2023, August 11). *Behavioral Provider Sees Value of ADTs from Conn. HIE.* Healthcare Innovation. hcinnovationgroup.com/interoperability-hie/interoperability/article/53068970/behavioral-provider-sees-value-of-adts-from-conn-hie
[177] Connecticut State Department of Public Health. (n.d.). *CMS Promoting Interoperability and Merit-based Incentive Payment System*. portal.ct.gov/DPH/Planning/Health-Information-Technology-and-Exchange/Promoting-Interoperability
[178] Bajwa J., Munir U., Nori A., & Williams B. (2021). Artificial intelligence in healthcare: transforming the practice of medicine. *Future Healthcare Journal*, 8(2), 188-194. doi.org/10.7861/fhj.2021-0095
[179] Poalelungi D. G., Musat, C. L., Fulga, A., Neagu, M., Neagu, A. I., Piraianu, A. I., & Fulga, I. (2023). Advancing Patient Care: How Artificial Intelligence Is Transforming Health care. *Journal of Personalized Medicine, 13*(8), 1214. doi.org/10.3390/jpm13081214

capabilities,[180] as well as detecting and preventing medical errors.[181] Natural Language Processing technology has also demonstrated potential to automate administrative tasks such as documenting patient visits in electronic health records, optimizing workflows, and enabling clinicians to focus more time on caring for patients. [182]

It is also important to acknowledge that AI presents certain risks, such as clinicians becoming over-reliant on AI-enabled decision supports systems[183] and algorithms replicating existing racial and gender biases in diagnosis and treatment.[184] As AI capabilities develop, health care providers will need to carefully weigh the risks and benefits of AI integration in terms of digital infrastructural demands, clinician training and practices, and patient experience and outcomes.

2.3.5 Novel Obesity-Treatment Medications

In recent years, innovative GLP-1 (glucagon-like peptide-1 agonists) drugs have proven effective for Type 2 diabetes and weight loss.[185] For patients with Type 2 diabetes these drugs could reduce cardiovascular encounters, including lowering blood pressure, promote weight loss, improve glucose control, and potentially reduce kidney disease.[186] For obese and overweight patients these drugs could reduce weight and ultimately impact health by lowering blood sugar levels, lowering blood pressure, reducing heart disease, lowering the risk of cancer, improving knee osteoarthritis, reducing sleep apnea, and promoting an increase in health related quality of life.[187] It is uncertain how the utilization of GLP-1 drugs may impact traditional treatment options for Type 2 Diabetes and obesity, such as bariatric surgery. Studies shows a positive impact of GLP-1 as a treatment for weight regain after bariatric surgery.[188, 189] While drugs for chronic weight loss are not covered by Medicaid in all states (in Connecticut they are), the utilization of GLP-1 for type 2 diabetes have widespread Medicaid coverage, with varying degrees of prior authorization requirements.[190] Current law prohibits Medicare

[180] Gliadkovskaya, A. (2024, March 1). *Elsevier Health, Partners Unveil Conversational AI Decision Support Tool*. Fierce Healthcare. fiercehealthcare.com/ai-and-machine-learning/elsevier-health-unveils-ai-driven-clinical-decision-support-tool
[181] Choudhury, A., & Asan, O. (2020) Role of Artificial Intelligence in Patient Safety Outcomes: Systematic Literature Review. *JMIR Medical Informatics, 8*(7). doi.org/10.2196/18599
[182] Bajwa J., Munir U., Nori A., & Williams B. (2021). Artificial intelligence in healthcare: transforming the practice of medicine. *Future Healthcare Journal*, 8(2), 188-194. doi.org/10.7861/fhj.2021-0095
[183] Magrabi, F., Ammenwerth, E., McNair, J. B., De Keizer, N.F., Hyppönen, H., Nykänen, P., Rigby, M., Scott, P. J., Vehko, T., Wong, Z. S., & Georgiou, A. (2019). Artificial Intelligence in Clinical Decision Support: Challenges for Evaluating AI and Practical Implications. *Yearbook of Medical Informatics, 28*(1), 128-134. doi.org/10.1055/s-0039-1677903
[184] National Institute for Health Care Management (NIHCM). (2021, September 30). *Racial Bias in Health Care Artificial Intelligence*. NIHCM. nihcm.org/publications/artificial-intelligences-racial-bias-in-health-care
[185] Collins, L. & Costello, R. (2023). Glucagon-like peptide-1 receptor agonists. *Stat Pearls*. ncbi.nlm.nih.gov/books/NBK551568
[186] Michos, E., Bakris, G., Rodbard, H., & Tuttle, K. (2023). Glucagon-like peptide -1 receptor agonists in diabetic kidney disease: A review of their kidney and heart protection. *Am J Prev Cardiol*, 14, 100592. pubmed.ncbi.nlm.nih.gov/37313358
[187] Tahrani, A., & Morton, J. (2022). Benefits of weight loss of 10% or more in patients with overweight or obesity: A review. *Obesity, 30*(4), 802-840. onlinelibrary.wiley.com/doi/abs/10.1002/oby.23371
[188] Boisen Jensen, A., Renstrom, F., Aczel, S., Folie, Pl, Biraima-Steinemann, M., Beuschlein, F., & Bilz, S. (2023). Efficacy of the glucagon-like peptide-1 receptor agonists liraglutide and semaglutide for the treatment of weight regain after bariatric surgery: A retrospective observational study. *Obes Surg, 33*(4), 1017-1025. ncbi.nlm.nih.gov/pmc/articles/PMC9918402
[189] Kramer, C., Retnakaran, M., & Viana, L. (2024). Effect of glucagon-like peptide-1 receptor agonists (GLP-1A) on weight loss following bariatric treatment. *J Clin Endo Met*. doi.org/10.1210/clinem/dgae176
[190] Niakan, K., & Schock, B. (2024, January). *GLP-1 agonists in Medicaid: Utilization, growth and management*. Milliman. milliman.com/-/media/milliman/pdfs/2024-articles/1-18-24_glp1-agonists-in-medicaid-utilization-growth-and-management.ashx

from covering drugs for weight loss, but Medicare Part D plans can cover GLP-1s to treat diabetes and most recently for patients at risk for cardiovascular disease.[191]

2.4 Oversight, Accountability, and Transparency in Health Care

The oversight, accountability, and transparency of the health care system to the community it serves is another key trend in health care facilities and services. Providing community benefit, offering financial assistance, understanding how the shift in site of care delivery is impacting the community, and providing open and transparent information on cost, utilization, and disease rates such as infection control and preventable hospitalizations.

The policy landscape on national and state policies includes establishing oversight entities and health care spending benchmarks; as well as establishing accessible All Payers/Multi-Payers Claims Databases for reporting.

2.4.1 Community Benefit

One example of increased oversight and transparency includes monitoring of the non-profit status of hospitals. Nonprofit hospitals in Connecticut are exempt from federal, state, and local taxes. In return, these facilities must meet a series of community benefit requirements to maintain their tax-exempt status. The ACA expanded these conditions, introducing obligations which require nonprofit hospitals conduct a community health needs assessment every three years; adopt implementation strategies to meet the identified community health needs; develop written financial assistance policies and billing and collection polices that protect consumers; and submit audited financial statements to the Internal Revenue Service (IRS) as demonstration of the community benefit.

More than 90% of hospitals in Connecticut are 501(c)(3) tax-exempt nonprofit entities which are required to complete an individual community health needs assessment (CHNA) every three years.[192] Once completed, these reports become a valuable resource for hospital planning and may be used to assist the state in identifying community health needs and establishing priorities for addressing them. Vulnerable populations and their needs may vary substantially from one community to another, and through the implementation of its Statewide Health Care Facilities and Services Plan, OHS and other related state agencies may have the opportunity to play a role in identifying the most effective ways to channel community benefit efforts appropriately.

Beyond conducting a community health needs assessment every three-years and developing implementation strategies to address identified community needs, hospitals must also provide financial assistance to qualifying patients. However, federal regulations do not require a minimum amount of community benefit spending and hospitals' community benefit spending as a percentage of total operating expenses has remained constant over time, even as cash reserve balances have

[191] Cubanksi, J., & Neumann, T. (2024, March 22). *Medicare spending on Ozempic and other GLP-1s is skyrocketing*. Kaiser Family Foundation. kff.org/policy-watch/medicare-spending-on-ozempic-and-other-glp-1s-is-skyrocketing

[192] Connecticut Office of Health Strategy. (2021). *State of Connecticut community benefit report*. OHS. portal.ct.gov/-/media/OHS/SIM/Work-Stream-Updates/Community-Benefit-Report_Connecticut-Hospitals_2020_Final.pdf

increased.[193] Expanding Medicaid has led to declines in uncompensated charity care for hospitals[194] and research suggests that a number of tax-exempt hospitals updated their charity care policies mostly with positive changes since the COVID-19 pandemic, but there are still restrictions and unclear eligibility criteria that exist.[195] With approximately 184,112 people who are uninsured across Connecticut, providing financial assistance in the form of charity care has the potential to ease financial burdens following services for a proportion of the state's low income residents.[196] However, the law does not base federal tax exemption on a nonprofit hospital's provision of community benefits at any specific quantitative level and, as a result, hospitals are given the authority to set their own charity care policies.[197]

Community benefit as a whole has gradually declined in Connecticut. Between 2016 and 2022, community benefit as a percentage of total hospital expenses decreased by 4%.[198] During that period, the proportion of community benefit going towards charity care also decreased by 25.7%.[199] One contributing factor was the expansion of Medicaid coverage due to emergency rules during the COVID-19 pandemic, so people who might have traditionally received charity care used Medicaid coverage to pay for services. In filing year 2022, the highest proportion of community benefit dollars in the state, as reported by hospitals, was allocated to covering unreimbursed costs from Medicaid.[200]

2.4.2 Financial Assistance Policy

Nonprofit hospitals are required to adopt, implement, and widely publicize a written financial assistance policy to maintain their tax-exempt status.[201] This policy must include the eligibility criteria for financial assistance and whether it includes free or discounted care, the basis for calculating patient charges and the process for applying for financial assistance. Each hospital must also adopt and implement a policy to provide emergency medical treatment, without discrimination to individuals, regardless of financial assistance eligibility. Many nonprofit hospitals across the country bill patients whose incomes are low enough to qualify for charity care, totaling over $2 billion dollars

[193] Leider, J. P., Tung, G. J., Lindrooth, R. C., Johnson, E. K., Hardy, R., & Castrucci, B. C. (2017). Establishing a baseline: Community benefit spending by not-for-profit hospitals prior to implementation of the Affordable Care Act. *Journal of Public Health Management and Practice*, 23(6), e1–e9. doi.org/10.1097/phh.0000000000000493
[194] Camilleri, S. (2017). The ACA Medicaid expansion, disproportionate share hospitals, and uncompensated care. *Health Services Research*, 53(3), 1562-1580. hpmc.ncbi.nlm.nih.gov/articles/PMC5980407
[195] Goodman, C., Flanigan, A., Probst, J., & Bai, G. (2022). Comparison of US hospital charity care policies before vs after onset of the COVID-19 pandemic. *JAMA Netw Open*, 5(9). jamanetwork.com/journals/jamanetworkopen/fullarticle/2796731
[196] U.S. Census Bureau. (2022). *Selected characteristics of health insurance coverage in the United States. American community survey, ACS 5-year estimates subject tables,* ***table*** *S2701*. data.census.gov/table/ACSST5Y2022.S2701?q=employer sponsored coverage
[197] KFF (2022). *Hospitals by ownership type*. Kaiser Family Foundation. kff.org/other/state-indicator/hospitals-by-ownership
[198] Connecticut Office of Health Strategy. (2024, April 1). *State of Connecticut draft community benefit report*. portal.ct.gov/-/media/ohs/community-benefits/community-benefit-summary-and-analysis-report_2022_draft.pdf
[199] Connecticut Office of Health Strategy. (2024, April 1). *State of Connecticut draft community benefit report*. portal.ct.gov/-/media/ohs/community-benefits/community-benefit-summary-and-analysis-report_2022_draft.pdf
[200] Connecticut Office of Health Strategy. (2024, April 1). *State of Connecticut draft community benefit report*. portal.ct.gov/-/media/ohs/community-benefits/community-benefit-summary-and-analysis-report_2022_draft.pdf
[201] Internal Revenue Service. (n.d.). *Financial assistance policy and emergency medical care policy – Section 501(r)(4).* Internal Revenue Service). irs.gov/charities-non-profits/financial-assistance-policy-and-emergency-medical-care-policy-section-501r4

in 2017.[202] Connecticut mandates that all hospitals screen for eligibility for financial assistance, but only requires discounted care for uninsured patients who do not qualify for Medicaid, Medicare, or other coverage and whose income is at or below 250% of the FPL.[203]

2.4.3 Changing Site of Care Delivery

Nationwide, outpatient hospital revenue per calendar day increased by 43% between December 2020 and December 2023, surpassing the 15% increase in inpatient hospital revenue per calendar day during the same period.[204] Similar shifts have been observed in Connecticut, where hospitals experienced a 33% increase in per person spending for outpatient services between 2020 and 2021, exceeding the 20% increase in per person spending for hospital inpatient services over the same period.[205]

The shift towards outpatient care has a variety of benefits, including convenience for consumers, however it may also lead to a higher incidence of vertical consolidation between hospitals and ambulatory surgery centers, private practices, and freestanding imaging and laboratory facilities.[206] In an effort to minimize integration that negatively impacts affordability, Connecticut has implemented legislation which requires notice of all transactions between health entities.[207]

In addition to the growth of hospital outpatient procedures, Connecticut should also be prepared for the anticipated growth in the number of ambulatory surgery centers and home and community-based services provided across the state.[208] Streamlining the applications for, and ensuring the efficacy of, programs such as the federal Money Follows the Person and Community First Choice has the potential to increase the number of residents aging in place. The Strategic Rebalancing Plan developed by the state Department of Social Services provides recommendations for expanding the long-term services and supports system to align with "the principals of choice, autonomy and dignity."[209] Further details on outpatient clinics, retail clinics, and access can be found in Chapter 7.

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[202] Rau, Jordan. (2019, October 14). *Patients eligible for charity care instead get big bills*. KFF Health News. kffhealthnews.org/news/patients-eligible-for-charity-care-instead-get-big-bills

[203] Bopp Stark, A., Bosco, J., & Haynes, B. (2023, August). *An Ounce of Prevention: A Review of Hospital Financial Assistance Policies in the States*. National Consumer Law Center. nclc.org/wp-content/uploads/2023/08/202310_Report_An-Ounce-of-Prevention.pdf

[204] Poziemski, J., Swanson, E. (2023, December). *National Hospital Flash Report*. KaufmanHall. kaufmanhall.com/sites/default/files/2024-01/KH-NHFR_2023-12.pdf

[205] State of Connecticut Office of Health Strategy. (2023, September). *Annual Report on the Financial Status of Connecticut's Short Term Acute Care Hospitals for Fiscal Year 2022*. portal.ct.gov/-/media/OHS/HSP/OHS_Financial-Stability-Report_FY-2022.pdf

[206] Hargraves, J., & Reiff, J. (2019, April). Shifting Care from Office to Outpatient Settings: Services are Increasingly Performed in Outpatient Settings with Higher Prices. Health Care Cost Institute. healthcostinstitute.org/hcci-originals-dropdown/all-hcci-reports/shifting-care-office-to-outpatient

[207] Hughes, S., & Murphy, N. (2023, February). *Empowering State Attorneys General to Fight Health Care Consolidation*. Center for American Progress. americanprogress.org/article/empowering-state-attorneys-general-to-fight-health-care-consolidation

[208] Gelbaugh, C., Orr, E., & Seegobin, V. (2023, April). *Services at Risk of Shifting from the Hospital Setting*. Advisory Board. advisory.com/content/dam/advisory/en/secure/ABResearch/Topics/Strategy/Quantitative-Analysis/2022/Q1/services-at-risk-of-shifting-from-the-hospital-setting.pdf

[209] State of Connecticut Department of Social Services. (2020, January). *Strategic Rebalancing Plan: A Plan to Rebalance Long Term Services and Supports – 2020*. portal.ct.gov/-/media/Departments-and-Agencies/DSS/Health-and-Home-Care/Medicaid-Long-Term-Care-Demand-Projections/strategic_rebalancing_plan-2020.pdf

Section 2

Section 2 Chapter 3
ACUTE CARE

3.0 Acute Care

Acute care is a branch of health care where a patient is treated for a severe injury or episode of illness, an urgent medical condition, or during recovery from surgery and is typically of a short duration. Acute care may require an emergency department visit, a hospital stay or treatment in an ambulatory surgery center, diagnostic services, surgery, or follow-up outpatient community care.

3.1 Acute Care Hospitals

According to C.G.S. § 19a-490(b), "hospital" means an establishment for the lodging, care and treatment of persons suffering from disease or other abnormal physical or mental conditions and includes inpatient psychiatric services in general hospitals. According to Connecticut Public Health Code (PHC) that regulates hospitals, a General Hospital is defined as a short-term hospital that has facilities, medical staff and all necessary personnel to provide diagnosis, care and treatment of a wide range of acute conditions, including injuries (C.G.S. § 19-13-D1(b)(1)(A)); a Children's General Hospital is a short-term hospital having facilities, medical staff and all necessary personnel to provide diagnosis, care and treatment of a wide range of acute conditions among children, including injuries (C.G.S. § 19-13-D1(b)(1)(A)); and a Hospice is a short-term hospital having facilities, medical staff and necessary personnel to provide medical, palliative, psychological, spiritual, and supportive care and treatment for the terminally ill and their families including outpatient care and services, home based care and services and bereavement service (C.G.S. § 19-13-D1(b)(1)(C)).

3.1.1 Connecticut Hospital Landscape Overview

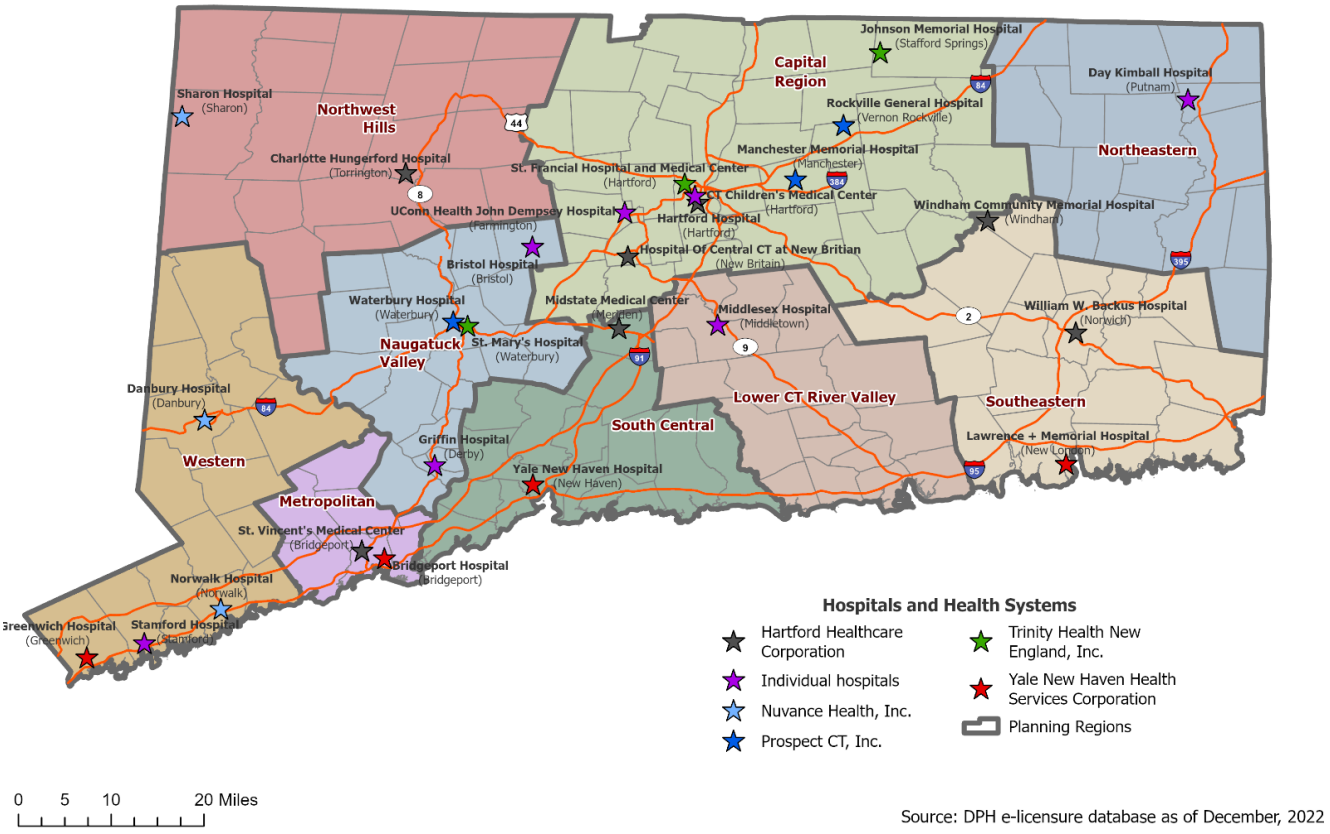
There are 27 hospitals operating within the State of Connecticut, 26 licensed as "General Hospitals," one, *Connecticut Children's Medical Center*, licensed as a "Children's General Hospital" and one, *Connecticut Hospice*, is a "Hospice" **(Figure 3.1).** The plan will often refer to the subset of 27 "acute care" hospitals operating in Connecticut, that include the 26 "General Hospitals" and the one "Children's General Hospital." Connecticut hospitals span across all counties and planning regions, with the majority of facility locations in the central and southwestern portions of the state. Data in the Facility and Services Plan may also at times include information on satellite locations of the hospitals, which operate under the same license as an existing hospital, to assess service availability and capacity in different regions across the state. These satellite locations are often the campuses of previously acquired, independent hospitals.

As of the most current data in FY 2023, the combined state capacity of licensed inpatient acute care hospital beds is 8,917 with a 61.2% average overall occupancy of available beds **(Table 3.1).** Average occupancy is determined by the total number of patient days, from the Connecticut Hospital Discharge Database, at each location within the year, divided by the number of days in the year, and compared as portion of the total licensed beds at each facility, formula:

Average Hospital Occupancy Rate = (FY2023 Total Patient Days / 365) / Total Licensed Beds

This available bed occupancy ranged from a low of 2.3% average occupancy at the hospital with the smallest rate (Rockville Hospital) to 89.0% % average occupancy at Hartford Hospital.

Figure 3.1 Connecticut Acute Care and Children's Hospitals by Health System*



Source: DPH e-licensure database as of December, 2022

***Data Source:** DPH e-licensure database as of December, 2022*

Table 3.1 List of Connecticut Hospitals, Licensed Beds, and FY 2023 Patient Days*

Connecticut Planning Region	Connecticut County	Hospital	System	Licensed Beds	FY 2023 Patient Days	Average Occupancy Rate
Capitol	Hartford	CT Children's Medical Center	Independent	187	49,236	72.1%
Capitol	Hartford	Hartford	Hartford HealthCare	837	271,791	89.0%
Capitol	Hartford	The Hospital of Central CT	Hartford HealthCare	426	84,073	54.1%
Capitol	Hartford	John Dempsey	Independent	224	50,092	61.3%
Capitol	Hartford	Manchester	Prospect	249	45,122	49.6%
Capitol	Hartford	Saint Francis	Trinity Health	656	108,486	45.3%
Capitol	Tolland	Johnson Memorial	Trinity Health	101	8,445	22.9%
Capitol	Tolland	Rockville	Prospect	118	986	2.3%
Lower CT River Valley	Middlesex	Middlesex	Independent	274	51,678	51.7%
Metropolitan	Fairfield	Bridgeport	Yale New Haven Health	480	126,434	72.2%
Metropolitan	Fairfield	Saint Vincent's	Hartford HealthCare	497	92,407	50.9%
Naugatuck Valley	Hartford	Bristol	Independent	134	24,937	51.0%
Naugatuck Valley	New Haven	Griffin	Independent	160	30,561	52.3%
Naugatuck Valley	New Haven	Saint Mary's	Trinity Health	358	32,449	24.8%
Naugatuck Valley	New Haven	Waterbury	Prospect	371	55,593	41.1%
Northeastern	Windham	Day Kimball	Independent	104	12,485	32.9%
Northwest Hills	Litchfield	Charlotte Hungerford	Hartford HealthCare	109	26,767	67.3%
Northwest Hills	Litchfield	Sharon	Nuvance	86	7,865	25.1%
South Central	New Haven	MidState Medical Center	Hartford HealthCare	144	43,383	82.5%

Connecticut Planning Region	Connecticut County	Hospital	System	Licensed Beds	FY 2023 Patient Days	Average Occupancy Rate
South Central	New Haven	Yale New Haven	Yale New Haven Health	1,486	473,328	87.3%
Southeastern	New London	Backus	Hartford HealthCare	215	54,504	69.5%
Southeastern	New London	Lawrence + Memorial	Yale New Haven Health	299	68,293	62.6%
Southeastern	Windham	Windham	Hartford HealthCare	135	7,612	15.4%
Western	Fairfield	Danbury	Nuvance	430	92,797	59.1%
Western	Fairfield	Greenwich	Yale New Haven Health	186	50,718	74.7%
Western	Fairfield	Norwalk	Nuvance	346	43,761	34.7%
Western	Fairfield	Stamford	Independent	305	79,285	71.2%
Total	-	-	-	**8,917**	**1,993,088**	**61.2%**

***Data Source:** Connecticut OHS Hospital Discharge Database and OHS Licensure Data*

3.1.2 Acute Care Hospital Utilization

In FY 2023, there were 372,718 total hospital discharges in the state (measured based on discharges in the Connecticut Hospital Discharge Database) and 2,037,269 total hospital patient days. **Tables 3.2 and 3.3** detail this utilization by service line and trends in the use of hospital services between 2018 and 2023. Over this period overall acute care hospital discharges were down 5%, while the total number of patient days in the state were up 6%, indicating that the average length of stay per visit increased over this period. Based on total discharges, acute care hospital use for General Medicine, Women's Health, Newborn, and Cardiac Care were the most common service lines, while General Medicine, Psychiatry, Respiratory, and Cardiac Care had the greatest number of patient days. The average length of stay, by service line, was longest for Psychiatry visits (10.8 days on average), while it was shortest for Women's Health (2.8 days).

Trends among the use of different service lines between FY 2018 and FY 2023 varied significantly, although it is likely some of these trends were impacted by the COVID-19 pandemic that altered the patterns in the use of care in FY 2020 and FY 2021. For example, orthopedics discharges were down 40% between 2016 and 2021, likely indicating temporary pauses in these often-elective procedures as a result of the pandemic pressures on the hospital systems and a decreased demand for care that could be postponed. Alternatively, visits and patient days for Respiratory care were up 5%, while total patient days for Respiratory needs were up 33%, likely driven by visits for treatment of COVID-19.

As a share of total patient days, the most common acute care hospital bed service categories in FY 2023 were General Medicine (22%), Cardiac Care (14%), and Psychiatry (12%). The categories with the fastest growing share of patient days between 2018 and 2023 were Neurological (both medical and surgical) and Respiratory, increasing by over 0.9 and 0.7 percentage points, respectively, as a share of total patient days across the state. The categories of care with the largest decline in the share of total days were Surgical Orthopedics (-1.6%), Newborn care (-0.8%), and Women's Health (-0.6%). Some of these trends are likely impacted by the COVID-19 pandemic in the FY 2020 and FY 2021 data, that likely increased the need for Respiratory care, while temporary declines in elective care (e.g., Orthopedics) also occurred over this period.

Table 3.2 Statewide Hospital Discharges (2018-2023), by Service Line, Alphabetically*

Service Line	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	Change, 2018 to 2023
Cancer Care (Medical)	7,478	7,538	6,824	6,931	6,830	7,046	-6%
Cancer Care (Surgical)	1,908	2,047	1,846	2,004	1,816	1,874	-2%
Cardiac Care (Medical)	32,972	33,539	29,625	30,807	30,738	31,638	-4%
Cardiac Care (Surgical)	13,315	13,619	11,856	12,596	12,552	13,059	-2%
Dental	348	329	288	262	325	327	-6%
General Surgery	19,348	18,825	17,077	18,936	19,200	18,864	-3%
Medicine	89,618	90,048	83,455	84,257	82,561	85,832	-4%
Miscellaneous	10	521	365	309	226	90	800%
Neurological (Medical)	16,849	17,314	16,155	16,838	16,621	17,464	4%
Neurological (Surgical)	8,865	9,205	8,635	9,429	9,479	9,419	6%
Newborn	37,549	37,588	36,831	36,972	37,679	37,275	-1%
Ophthalmology	458	495	434	464	488	585	28%
Orthopedics (Medical)	3,649	3,546	3,259	4,654	4,815	4,754	30%
Orthopedics (Surgical)	25,064	24,293	19,279	14,646	11,490	10,194	-59%
Other Surgery	10,042	11,097	10,167	10,693	9,971	10,647	6%
Psychiatry	23,651	23,793	22,265	21,241	20,657	21,224	-10%
Renal/Urology (Medical)	16,099	15,136	13,308	13,493	13,645	14,720	-9%
Renal/Urology (Surgical)	3,250	3,961	3,777	3,978	3,954	3,942	21%
Respiratory	30,364	29,280	29,795	32,574	32,617	31,853	5%
Substance Abuse	7,510	7,564	7,453	7,995	7,231	7,047	-6%
Trauma (Medical)	3,675	3,511	3,307	3,294	3,424	3,434	-7%
Trauma (Surgical)	1,610	1,544	1,646	1,718	1,739	1,738	8%
Women's Health	40,153	39,716	38,833	39,363	39,522	39,692	-1%
Total (excluding Newborn)	**356,236**	**356,921**	**329,649**	**336,482**	**329,901**	**335,443**	**-6%**
Total	**393,785**	**394,509**	**366,480**	**373,454**	**367,580**	**372,718**	**-5%**

***Data Source:** Connecticut OHS Hospital Discharge Database*

***Notes:** All services are defined using Diagnosis-Related Group (DRG) codes. Therefore, the definition of newborn stays in this table differs slightly from the bed need calculations, in which newborns are defined based on patient age. Miscellaneous discharges indicate services not captured in other categories.*

Table 3.3 Statewide Hospital Patient Days (2018–2023), by Service Line, Alphabetically*

Service Line	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	Change, 2018 to 2023
Cancer Care (Medical)	47,301	48,958	43,874	45,787	47,521	49,180	4%
Cancer Care (Surgical)	12,399	13,518	12,194	14,126	12,656	11,915	-4%
Cardiac Care (Medical)	145,745	150,511	135,789	142,294	150,058	152,151	4%
Cardiac Care (Surgical)	73,691	78,961	70,446	77,718	79,315	78,503	7%
Dental	1,288	1,249	1,019	1,054	1,375	1,193	-7%
General Surgery	105,513	105,976	95,427	103,314	109,045	109,440	4%
Medicine	411,678	416,498	411,552	426,833	436,143	440,013	7%
Miscellaneous	25	1,214	772	648	833	253	912%
Neurological (Medical)	85,401	90,381	87,069	94,338	99,880	108,610	27%
Neurological (Surgical)	65,583	69,790	77,682	87,593	94,907	87,045	33%
Newborn	143,413	140,607	130,623	136,027	135,866	136,065	-5%
Ophthalmology	1,583	1,755	1,543	1,845	1,743	2,135	35%
Orthopedics (Medical)	17,396	18,431	18,030	26,710	28,259	27,032	55%
Orthopedics (Surgical)	74,893	72,982	62,118	52,501	52,699	47,166	-37%
Other Surgery	92,363	99,084	94,224	96,086	98,244	105,790	15%
Psychiatry	235,867	246,759	234,281	237,138	238,517	247,617	5%
Renal/Urology (Medical)	70,311	66,074	60,549	62,294	67,608	69,968	0%
Renal/Urology (Surgical)	15,789	20,777	18,169	19,474	20,889	21,387	35%
Respiratory	137,605	132,129	161,693	186,759	173,741	161,034	17%
Substance Abuse	36,323	37,170	36,394	41,082	38,993	35,756	-2%
Trauma (Medical)	14,313	14,285	13,072	14,190	17,084	16,849	18%
Trauma (Surgical)	13,553	13,079	14,307	15,220	16,007	16,949	25%
Women's Health	117,226	116,680	107,768	108,814	110,424	111,218	-5%
Total (excluding Newborn)	**1,775,846**	**1,816,261**	**1,757,972**	**1,855,818**	**1,895,941**	**1,901,204**	**7%**
Total	**1,919,259**	**1,956,868**	**1,888,595**	**1,991,845**	**2,031,807**	**2,037,269**	**6%**

***Data Source:** Connecticut OHS Hospital Discharge Database*

***Notes:** All services are defined using Diagnosis-Related Group (DRG) codes. Therefore, the definition of newborn stays in this table differs slightly from the bed need calculations, in which newborns are defined based on patient age. Miscellaneous discharges indicate services not captured in other categories.*

The rate of acute care hospital discharges per subpopulation by race and ethnicity is shown in **Table A1** and details differences in the use of acute care for Hispanic or Latine, Non-Hispanic Black or African American, Non-Hispanic White, and Other race or ethnicity subpopulations. In general, these results show that for most acute care service line categories, Non-Hispanic Black or African American and Non-Hispanic White Connecticut residents have a greater rate of discharges compared to people who are Hispanic Latine or another race/ethnicity. This is particularly true for some of the broad service line categories such as General Medicine and Psychiatry. Contributing factors to greater use of care by Non-Hispanic White and Non-Hispanic Black or African American could be combinations of

greater need for care from these populations and/or better access to care compared to Hispanic or Latine and Other race/ethnicity subpopulations. Lower rates of use for people of color in Connecticut could signal a need for additional capacity or efforts to address barriers to care among these populations in certain parts of the state (even when overall utilization rates of existing capacity are below the "target thresholds").

Alternatively, use of acute care services for "Women's Health" and "Newborn" services are greater among Hispanic or Latine and Non-Hispanic Black or African American, while Non-Hispanic White Connecticut residents have lower rates of use. This is likely due to a greater number of births, relative to overall population share among Hispanic or Latine and Non-Hispanic Black or African American Connecticut residents.[210]

Lastly of note shown in the appendix **(Table A1)** are the differences between utilization of "Medical" vs. "Surgical" acute care services between Non-Hispanic White and other Non-White Connecticut residents.[211] In looking across the service lines that have both a "Medical" and "Surgical" component (e.g. Cardiac Care, Cancer Care, and Orthopedics), Non-Hispanic White Connecticut residents typically have comparatively higher use of "Surgical" acute care bed use, while persons of color have higher relative use of "Medical" acute care. This finding calls for further evaluation of the availability of "Surgical" beds and practice patterns to evaluate if lower rates among persons of color could be driven by lack of access, lack of insurance coverage, lack of financial resources, or undersupply of available acute care capacity.

Across the three major primary payer types for Connecticut acute care needs—Commercial (Private) Insurance, Medicaid, and Medicare—there is much greater use of acute care among Medicare patients **(Table A2)** likely due to the age of those covered by Medicare and their greater health care needs. An exception to this trend is "Women's Health" and "Newborn" acute care that are more prevalent among Medicaid and Commercial patients. The trend observed in possible disparities in "Medical" versus "Surgical" acute care is again apparent across insurance types, with Commercial patients typically using a greater relative share of Surgical (versus Medical) care for most disease service lines compared to Medicaid and Medicare.

Tables A3 and **A4** detail rates of discharges and patient days per 1,000 Connecticut residents in each category by race/ethnicity and insurance type, detailing possible disparities in the use of acute care services in different regions of the State. The overall trends of greater use by Non-Hispanic Black or African American, Non-Hispanic White, and Medicare subpopulation are similar across regions; yet it is also clear that there is greater disparity in the rates between state regions of discharges/patient days rates for persons of color and among Medicaid beneficiaries. For example, total discharges per 1,000 population range from 81 to 118 for non-Hispanic White populations across planning regions,

[210] March of Dimes. (n.d.) *Percentage of births by race/ethnicity: Connecticut, 2020-2022 Average*. marchofdimes.org/peristats/data

[211] Medical discharges do not involve invasive surgery or surgical units of a hospital, while surgical discharges involve the use of this care. As an example, for Cardiac Care, an example of a Medical visit could be one that involves the treatment or monitoring of a Cardiac condition in an inpatient setting, while a Surgical visit includes care such as cardiac valve replacements or coronary artery bypass surgeries.

the ranges for Hispanic/Latine (85 to 148) and non-Hispanic Black and African American (49 to 159) populations are much greater. As a result, concerns about access to care and the adequacy of acute care capacity should be considered with greater scrutiny in regions with lower discharge/patient day rates for persons of color and those with Medicaid, even in cases when overall Bed Need calculations show adequate capacity in Section 3.2.4 of the Plan.

3.2 Bed Need

3.2.1 Relationship to Certificate of Need

C.G.S. § 19a-638(a)(12) specifies that a CON is required for an increase in the licensed bed capacity of a health care facility, with a temporary exemption until 2026 allowing increases in the licensed bed capacity of mental health facilities if the facility meets certain criteria as outlined in § 19a-638(b)(23).[212] Connecticut hospitals seeking authorization for additional licensed beds are required to demonstrate that they meet clear public need as well as other criteria set forth in C.G.S. § 19a-639.

OHS also considers other factors in the certificate of need process, like care quality and patient safety issues. These other considerations are listed below in Section 3.2.6.

3.2.2 Bed Need Methodology

In coordination with the development of the 2012 version of the Plan, the Acute Care and Ambulatory Surgery Subcommittee determined that a standardized method of calculating Acute Care Bed Need would enhance the state's ability to evaluate 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.[213]

This Bed Need methodology incorporates data on patient use of acute care hospital beds and the number of licensed beds at each hospital to compute hospital-level and regional-level occupancy rates. To establish need, these rates are compared to independently determined "Target Occupancy" thresholds which are provided by the Acute Care/Ambulatory Surgery Subcommittee[214] and then population growth data are applied for 2025 and 2030 to estimate need for acute care beds in future years. A final comparison of current licensed beds to future need is calculated to determine the number of excess or the deficit in current licensed beds compared to expected need (Excess (+) & Deficit (-)). This calculation of excess (deficit) beds is shown for the 2030 population and average daily census estimates. The use of target occupancy in the bed need methodology is similar to other neighboring states.

[212] National Conference of State Legislatures. (2024). *Certificate of need state laws*. ncsl.org/health/certificate-of-need-state-laws
[213] Department of Public Health, Office of Health Care Access, & Carney, B. A. (n.d.). *Acute care hospital bed need*. portal.ct.gov/-/media/ohs/ohca/hc_facilities_advisory_body/acutecarehospitalbedneedpdf.pdf
[214] OHS. (2012). Facilities and Services Plan. *Office of Health Strategy*. ohcastatewidefacilitiesandservicespdf.pdf

As well as bed need calculations, the model is evaluated at the Planning Region level for the purposes of planning and estimating projected excess or deficit of beds. When applied to a CON application, the Model uses the applicant's PSA to determine whether there is a need for additional beds in the PSA.

Summary of Acute Care Bed Need Methodology

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1. *Bed utilization is based on patient days and is calculated using data from three consecutive Federal Fiscal Years (FFYs) (October 1 through September 30). Patient days are broken down by Connecticut planning regions, hospital, service category (Medical/Surgical, Maternity, Psychiatric, Rehabilitation and Pediatric) and age group (0-14, 15-44, 45-64, 65+) – the Pediatric category uses different age groups (0-19, 20+) to better utilize population estimate age ranges.*

2. *Patient days are divided by 365 (days) to calculate Average Daily Census (ADC) for each year of the three years.*

3. *A Weighted ADC is calculated, giving the greatest weight to the most current year and the least weight to the oldest year. Weighted average daily census = (Year1 + Year2 x 2 + Year3 x 3)/6*

4. *The Weighted ADC is multiplied by a population growth/attrition factor for each region (based on projected population estimates for 2025 and 2030, provided by the Connecticut State Data Center) to produce the Projected Average Daily Census in 2030.*

5. *The Projected ADC is divided by the Target Occupancy factors to determine the number of beds needed. Target Occupancy factors have been maintained from the subcommittee recommendations in 2012.*

6. *"Beds Needed" is summed by service/age category and totaled by individual hospital.*

7. *The sum of "Beds Needed" is compared to a hospital's total number of licensed beds (excluding bassinets) to determine if the current licensed beds are in Excess (+) of the number of beds required in 2030 or in Deficit (-), requiring additional beds based on the modeled results.*

8. *Individual hospital utilization and licensed bed data can be summed by the region in which hospitals are located to produce regional results. Statewide capacity is calculated using data from all 27 acute care hospitals.*

3.2.3 Bed Need Planning Area(s)

OHS's acute care bed need planning uses the Primary Services Areas for Acute Care Hospitals as a factor of the Bed Need Calculation Model and aggregates findings in this report at the Hospital Planning Region geographies. Importantly, if additional demand from outside the Primary Service Area exists and results in a higher demand for services, the Primary Services Area will be updated to reflect that population. The Primary Services Area includes towns that make up the top 75% of a

hospital's discharges.[215] Total patient days by service line are transformed into an average daily census (ADC), by dividing by 365.

3.2.4 Acute Care Bed Need Model Results

The following tables 3.4 through 3.12 detail the bed need model results for each Connecticut Planning Region to illustrate differences in capacity across the state. Patient days are categorized by age, hospital unit, or primary diagnosis based on Diagnosis-Related Groups (DRGs). Patient days fall into one of the following five service lines:

- *Psychiatric* days include any stays with diagnosis of a mental disease or disorder (DRG 880–887) or a hospital unit identifier indicating the stay was in a psychiatric unit.
- *Rehabilitation* days are categorized based on diagnosis (DRG 945–946) or a hospital unit identifier indicating the stay was in a rehabilitation unit.
- *Maternity* days include any stays related with pregnancy, childbirth, and the weeks after birth when the parent's body returns to its prepregnant state (DRG 765–770, 774–782, 783–788, 796–798, 805–807, 817–819, 831–833).
- *Pediatric* days include stays for patients ages 29 days to 19 years that are classified as psychiatric, rehabilitation, or maternity.
- *Medical/surgical* days include all other patient stays.

Patient days for newborns under three days old are excluded from these tables, and bassinets are excluded from the total number of licensed beds. Final calculations for each planning region indicate whether there is a projected excess of beds in 2030 with a positive value (+), or a deficit of beds in that region, indicated by a negative value (-).

Of note, license beds are not displayed by service line because beds are not currently licensed by service line. Therefore, licensed beds is only displayed for total beds and the excess/deficit column only calculated for total beds. Individual hospitals have the ability to use beds as needed and can change the designation of a service line bed without a CON or change in licensure.

[215] Connecticut Department of Public Health, Mullen, J., Brancifort, J. M., & Lewis, K. K. (2015). Statewide Health Care Facilities and Services Plan 2014 Supplement. In K. Martone & Health Resources in Action (Eds.), *Statewide Health Care Facilities and Services Plan 2014 Supplement* [Report]. Connecticut Department of Public Health. portal.ct.gov/-/media/ohs/ohca/publications/2014/final2014facilitiesplan22415pdf.pdf

Table 3.4 Acute Care Hospital Bed Need, Capitol Region*

Region	Services [1]	FY 2021 patient days	FY 2022 patient days	FY 2023 patient days	FY 2021 ADC	FY 2022 ADC	FY 2023 ADC	Weighted ADC	Pop chg 2020 to 2030	Projected ADC	Target Occupancy	Beds Needed 2030	Licensed Beds [3]	Excess (+) or Deficit (-)
Capitol Region	Medical/Surgical													
	0-14	0	0	0	0.0	0.0	0.0	0.0	102%	0.0	0.80	0		
	15 - 44	49,249	51,087	48,588	134.9	140.0	133.1	135.7	105%	142.4	0.80	178		
	45 - 64	126,226	125,065	123,881	345.8	342.6	339.4	341.6	93%	317.7	0.80	397		
	65+	227,295	240,497	244,302	622.7	658.9	669.3	658.1	111%	730.9	0.80	914		
	Sub Total	**402,770**	**416,649**	**416,771**	**1,103.5**	**1,141.5**	**1,141.8**	**1135.3**	102%	**1,191.0**		**1,489**		
	Maternity													
	0-14	0	5	0	0.0	0.0	0.0	0.0	102%	0.0	0.50	0		
	15 - 44	30,669	32,175	31,498	84.0	88.2	86.3	86.5	105%	90.8	0.50	182		
	45 - 64	154	150	175	0.4	0.4	0.5	0.4	93%	0.4	0.50	1		
	65+	0	0	0	0.0	0.0	0.0	0.0	111%	0.0	0.50	0		
	Sub Total	**30,823**	**32,330**	**31,673**	**84.4**	**88.6**	**86.8**	**87.0**	102%	**91.2**		**182**		
	Psychiatric													
	0-14	8,513	8,802	8,912	23.3	24.1	24.4	24.1	102%	24.6	0.80	31		
	15 - 44	43,938	47,356	46,498	120.4	129.7	127.4	127.0	105%	133.2	0.80	167		
	45 - 64	24,635	23,867	25,247	67.5	65.4	69.2	67.6	93%	62.9	0.80	79		
	65+	14,763	13,252	15,825	40.4	36.3	43.4	40.5	111%	45.0	0.80	56		
	Sub Total	**91,849**	**93,277**	**96,482**	**251.6**	**255.6**	**264.3**	**259.3**	102%	**265.8**		**332**		
	Rehabilitation													
	0-14	0	0	0	0.0	0.0	0.0	0.0	102%	0.0	0.80	0		
	15 - 44	897	1,320	1,118	2.5	3.6	3.1	3.1	105%	3.3	0.80	4		
	45 - 64	2,608	2,740	3,099	7.1	7.5	8.5	7.9	93%	7.4	0.80	9		
	65+	5,207	4,710	4,435	14.3	12.9	12.2	12.8	111%	14.2	0.80	18		
	Sub Total	**8,712**	**8,770**	**8,652**	**23.9**	**24.0**	**23.7**	**23.8**	102%	**24.9**		**31**		
	Pediatric													
	0-19	58,895	62,326	64,653	161.4	170.8	177.1	172.4	101%	173.7	0.80	217		
	20+	0	0	0	0.0	0.0	0.0	0.0	103%	0.0	0.80	0		
	Sub Total	**58,895**	**62,326**	**64,653**	**161.4**	**170.8**	**177.1**	**172.4**		**173.7**		**217**		
Total		**593,049**	**613,352**	**618,231**	**1,625**	**1,680**	**1,694**	**1,678**		**1,747**		**2,252**	**2,798**	**+546**

***Data Sources:** Connecticut OHS Hospital Discharge Database and Connecticut State Data Center Population Projections*

***Note:** Patient Days, ADC, and Acute Beds exclude bassinets and care for newborns under three days old.*

Table 3.5 Acute Care Hospital Bed Need, Lower Connecticut River Valley Region*

Region	Services [1]	FY 2021 patient days	FY 2022 patient days	FY 2023 patient days	FY 2021 ADC	FY 2022 ADC	FY 2023 ADC	Weighted ADC	Pop chg 2020 to 2030	Projected ADC	Target Occupancy	Beds Needed 2030	Licensed Beds	Excess (+) or Deficit (-)
Lower CT River Valley	Medical/Surgical													
	0-14	0	0	0	0.0	0.0	0.0	0.0	99%	0.0	0.80	0		
	15 - 44	3,385	3,145	2,885	9.3	8.6	7.9	8.4	102%	8.5	0.80	11		
	45 - 64	11,623	11,384	9,972	31.8	31.2	27.3	29.4	87%	25.6	0.80	32		
	65+	28,463	28,866	28,677	78.0	79.1	78.6	78.6	115%	90.1	0.80	113		
	Sub Total	**43,471**	**43,395**	**41,534**	**119.1**	**118.9**	**113.8**	**116.4**		**124.3**		**155**		
	Maternity													
	0-14	3	0	0	0.0	0.0	0.0	0.0	99%	0.0	0.50	0		
	15 - 44	2,392	2,327	2,156	6.6	6.4	5.9	6.2	102%	6.3	0.50	13		
	45 - 64	8	2	7	0.0	0.0	0.0	0.0	87%	0.0	0.50	0		
	65+	0	0	0	0.0	0.0	0.0	0.0	115%	0.0	0.50	0		
	Sub Total	**2,403**	**2,329**	**2,163**	**6.6**	**6.4**	**5.9**	**6.2**		**6.3**		**13**		
	Psychiatric													
	0-14	0	0	0	0.0	0.0	0.0	0.0	99%	0.0	0.80	0		
	15 - 44	3,854	3,809	3,729	10.6	10.4	10.2	10.3	102%	10.5	0.80	13		
	45 - 64	1,755	2,282	2,262	4.8	6.3	6.2	6.0	87%	5.2	0.80	7		
	65+	807	761	1,022	2.2	2.1	2.8	2.5	115%	2.8	0.80	4		
	Sub Total	**6,416**	**6,852**	**7,013**	**17.6**	**18.8**	**19.2**	**18.8**		**18.6**		**23**		
	Rehabilitation													
	0-14	0	0	0	0.0	0.0	0.0	0.0	99%	0.0	0.80	0		
	15 - 44	0	0	0	0.0	0.0	0.0	0.0	102%	0.0	0.80	0		
	45 - 64	0	0	0	0.0	0.0	0.0	0.0	87%	0.0	0.80	0		
	65+	0	0	0	0.0	0.0	0.0	0.0	115%	0.0	0.80	0		
	Sub Total	**0**	**0**	**0**	**0.0**	**0.0**	**0.0**	**0.0**		**0.0**		**0**		
	Pediatric													
	0-19	1,036	1,106	968	2.8	3.0	2.7	2.8	95%	2.7	0.80	3		
	20+	0	0	0	0.0	0.0	0.0	0.0	101%	0.0	0.80	0		
	Sub Total	**1,036**	**1,106**	**968**	**2.8**	**3.0**	**2.7**	**2.8**		**2.7**		**3**		
Total		**53,326**	**53,682**	**51,678**	**146**	**147**	**142**	**144**		**152**		**194**	**274**	**+80**

***Data Sources:** Connecticut OHS Hospital Discharge Database and Connecticut State Data Center Population Projections*

***Note:** Patient Days, ADC, and Acute Beds exclude bassinets and care for newborns under three days old.*

Table 3.6 Acute Care Hospital Bed Need, Metropolitan Region*

Region	Services [1]	FY 2021 patient days	FY 2022 patient days	FY 2023 patient days	FY 2021 ADC	FY 2022 ADC	FY 2023 ADC	Weighted ADC	Pop chg 2020 to 2030	Projected ADC	Target Occupancy	Beds Needed 2030	Licensed Beds	Excess (+) or Deficit (-)
Metropolitan Region	Medical/Surgical													
	0-14	0	0	0	0.0	0.0	0.0	0.0	101%	0.0	0.80	0		
	15 - 44	15,881	15,392	13,720	43.5	42.2	37.6	40.1	103%	41.2	0.80	52		
	45 - 64	48,295	47,747	43,585	132.3	130.8	119.4	125.4	94%	117.5	0.80	147		
	65+	96,083	99,937	102,511	263.2	273.8	280.9	275.6	109%	299.5	0.80	374		
	Sub Total	**160,259**	**163,076**	**159,816**	**439.1**	**446.8**	**437.9**	**441.0**		**458.2**		**573**		
	Maternity													
	0-14	7	4	6	0.0	0.0	0.0	0.0	101%	0.0	0.50	0		
	15 - 44	9,519	11,262	11,623	26.1	30.9	31.8	30.6	103%	31.4	0.50	63		
	45 - 64	51	53	87	0.1	0.1	0.2	0.2	94%	0.2	0.50	0		
	65+	0	0	0	0.0	0.0	0.0	0.0	109%	0.0	0.50	0		
	Sub Total	**9,577**	**11,319**	**11,716**	**26.2**	**31.0**	**32.1**	**30.8**		**31.6**		**63**		
	Psychiatric													
	0-14	1,825	1,993	1,777	5.0	5.5	4.9	5.1	101%	5.1	0.80	6		
	15 - 44	19,108	17,372	20,367	52.4	47.6	55.8	52.5	103%	53.9	0.80	67		
	45 - 64	10,235	10,346	11,169	28.0	28.3	30.6	29.4	94%	27.6	0.80	34		
	65+	6,509	6,216	5,849	17.8	17.0	16.0	16.7	109%	18.1	0.80	23		
	Sub Total	**37,677**	**35,927**	**39,162**	**103.2**	**98.4**	**107.3**	**103.7**		**104.7**		**131**		
	Rehabilitation													
	0-14	0	0	0	0.0	0.0	0.0	0.0	101%	0.0	0.80	0		
	15 - 44	160	93	152	0.4	0.3	0.4	0.4	103%	0.4	0.80	0		
	45 - 64	687	736	903	1.9	2.0	2.5	2.2	94%	2.1	0.80	3		
	65+	2,068	2,335	1,831	5.7	6.4	5.0	5.6	109%	6.1	0.80	8		
	Sub Total	**2,915**	**3,164**	**2,886**	**8.0**	**8.7**	**7.9**	**8.2**		**8.5**		**11**		
	Pediatric													
	0-19	4,943	4,753	5,261	13.5	13.0	14.4	13.8	98%	13.6	0.80	17		
	20+	0	0	0	0.0	0.0	0.0	0.0	102%	0.0	0.80	0		
	Sub Total	**4,943**	**4,753**	**5,261**	**13.5**	**13.0**	**14.4**	**13.8**		**13.6**		**17**		
Total		**215,371**	**218,239**	**218,841**	**590**	**598**	**600**	**597**		**617**		**795**	**977**	**+182**

***Data Sources:** *Connecticut OHS Hospital Discharge Database and Connecticut State Data Center Population Projections*

***Note:** Patient Days, ADC, and Acute Beds exclude bassinets and care for newborns under three days old.*

Table 3.7 Acute Care Hospital Bed Need, Naugatuck Valley Region*

Region	Services [1]	FY 2021 patient days	FY 2022 patient days	FY 2023 patient days	FY 2021 ADC	FY 2022 ADC	FY 2023 ADC	Weighted ADC	Pop chg 2020 to 2030	Projected ADC	Target Occupancy	Beds Needed 2030	Licensed Beds	Excess (+) or Deficit (-)
Naugatuck Valley	Medical/Surgical													
	0-14	0	0	0	0.0	0.0	0.0	0.0	100%	0.0	0.80	0		
	15 - 44	11,515	10,113	10,903	31.5	27.7	29.9	29.4	101%	29.8	0.80	37		
	45 - 64	34,327	31,023	30,379	94.0	85.0	83.2	85.6	90%	77.3	0.80	97		
	65+	63,296	67,999	63,757	173.4	186.3	174.7	178.3	116%	207.3	0.80	259		
	Sub Total	**109,138**	**109,135**	**105,039**	**299.0**	**299.0**	**287.8**	**293.4**		**314.3**		**393**		
	Maternity													
	0-14	4	1	0	0.0	0.0	0.0	0.0	100%	0.0	0.50	0		
	15 - 44	6,354	5,940	7,162	17.4	16.3	19.6	18.1	101%	18.3	0.50	37		
	45 - 64	17	9	16	0.0	0.0	0.0	0.0	90%	0.0	0.50	0		
	65+	0	0	0	0.0	0.0	0.0	0.0	116%	0.0	0.50	0		
	Sub Total	**6,375**	**5,950**	**7,178**	**17.5**	**16.3**	**19.7**	**18.2**		**18.4**		**37**		
	Psychiatric													
	0-14	0	0	0	0.0	0.0	0.0	0.0	100%	0.0	0.80	0		
	15 - 44	13,845	13,245	13,309	37.9	36.3	36.5	36.6	101%	37.1	0.80	46		
	45 - 64	8,834	9,148	7,895	24.2	25.1	21.6	23.2	90%	21.0	0.80	26		
	65+	5,130	5,311	6,268	14.1	14.6	17.2	15.8	116%	18.3	0.80	23		
	Sub Total	**27,809**	**27,704**	**27,472**	**76.2**	**75.9**	**75.3**	**75.6**		**76.4**		**95**		
	Rehabilitation													
	0-14	0	0	0	0.0	0.0	0.0	0.0	100%	0.0	0.80	0		
	15 - 44	0	0	0	0.0	0.0	0.0	0.0	101%	0.0	0.80	0		
	45 - 64	0	0	0	0.0	0.0	0.0	0.0	90%	0.0	0.80	0		
	65+	0	0	0	0.0	0.0	0.0	0.0	116%	0.0	0.80	0		
	Sub Total	**0**	**0**	**0**	**0.0**	**0.0**	**0.0**	**0.0**		**0.0**		**0**		
	Pediatric													
	0-19	3,090	2,828	3,851	8.5	7.7	10.6	9.3	98%	9.0	0.80	11		
	20+	0	0	0	0.0	0.0	0.0	0.0	101%	0.0	0.80	0		
	Sub Total	**3,090**	**2,828**	**3,851**	**8.5**	**7.7**	**10.6**	**9.3**		**9.0**		**11**		
Total		**146,412**	**145,617**	**143,540**	**401**	**399**	**393**	**396**		**418**		**536**	**1,023**	**+487**

***Data Sources:** Connecticut OHS Hospital Discharge Database and Connecticut State Data Center Population Projections*

***Note:** Patient Days, ADC, and Acute Beds exclude bassinets and care for newborns under three days old.*

Table 3.8 Acute Care Hospital Bed Need, Northeastern Region*

Region	Services [1]	FY 2021 patient days	FY 2022 patient days	FY 2023 patient days	FY 2021 ADC	FY 2022 ADC	FY 2023 ADC	Weighted ADC	Pop chg 2020 to 2030	Projected ADC	Target Occupancy	Beds Needed 2030	Licensed Beds	Excess (+) or Deficit (-)
North-eastern	Medical/Surgical													
	0-14	0	0	0	0.0	0.0	0.0	0.0	97%	0.0	0.80	0		
	15 - 44	571	484	506	1.6	1.3	1.4	1.4	99%	1.4	0.80	2		
	45 - 64	2,243	2,130	2,125	6.1	5.8	5.8	5.9	94%	5.5	0.80	7		
	65+	5,994	5,852	5,917	16.4	16.0	16.2	16.2	124%	20.0	0.80	25		
	Sub Total	**8,808**	**8,466**	**8,548**	**24.1**	**23.2**	**23.4**	**23.5**		**27.0**		**34**		
	Maternity													
	0-14	0	0	0	0.0	0.0	0.0	0.0	97%	0.0	0.50	0		
	15 - 44	1,167	1,087	961	3.2	3.0	2.6	2.8	99%	2.8	0.50	6		
	45 - 64	3	3	0	0.0	0.0	0.0	0.0	94%	0.0	0.50	0		
	65+	0	0	0	0.0	0.0	0.0	0.0	124%	0.0	0.50	0		
	Sub Total	**1,170**	**1,090**	**961**	**3.2**	**3.0**	**2.6**	**2.8**		**2.8**		**6**		
	Psychiatric													
	0-14	0	0	0	0.0	0.0	0.0	0.0	97%	0.0	0.80	0		
	15 - 44	1,682	1,545	1,524	4.6	4.2	4.2	4.3	99%	4.2	0.80	5		
	45 - 64	1,161	929	877	3.2	2.5	2.4	2.6	94%	2.4	0.80	3		
	65+	92	350	285	0.3	1.0	0.8	0.8	124%	0.9	0.80	1		
	Sub Total	**2,935**	**2,824**	**2,686**	**8.0**	**7.7**	**7.4**	**7.6**		**7.6**		**9**		
	Rehabilitation													
	0-14	0	0	0	0.0	0.0	0.0	0.0	97%	0.0	0.80	0		
	15 - 44	0	0	0	0.0	0.0	0.0	0.0	99%	0.0	0.80	0		
	45 - 64	0	0	0	0.0	0.0	0.0	0.0	94%	0.0	0.80	0		
	65+	0	0	0	0.0	0.0	0.0	0.0	124%	0.0	0.80	0		
	Sub Total	**0**	**0**	**0**	**0.0**	**0.0**	**0.0**	**0.0**		**0.0**		**0**		
	Pediatric													
	0-19	348	392	290	1.0	1.1	0.8	0.9	97%	0.9	0.80	1		
	20+	0	0	0	0.0	0.0	0.0	0.0	102%	0.0	0.80	0		
	Sub Total	**348**	**392**	**290**	**1.0**	**1.1**	**0.8**	**0.9**		**0.9**		**1**		
Total		**13,261**	**12,772**	**12,485**	**36**	**35**	**34**	**35**		**38**		**50**	**104**	**+54**

***Data Sources:** Connecticut OHS Hospital Discharge Database and Connecticut State Data Center Population Projections*

***Note:** Patient Days, ADC, and Acute Beds exclude bassinets and care for newborns under three days old.*

Table 3.9 Acute Care Hospital Bed Need, Northwest Hills Region*

Region	Services [1]	FY 2021 patient days	FY 2022 patient days	FY 2023 patient days	FY 2021 ADC	FY 2022 ADC	FY 2023 ADC	Weighted ADC	Pop chg 2020 to 2030	Projected ADC	Target Occupancy	Beds Needed 2030	Licensed Beds	Excess (+) or Deficit (-)
Northwest Hills	Medical/Surgical													
	0-14	0	0	0	0.0	0.0	0.0	0.0	98%	0.0	0.80	0		
	15 - 44	2,339	1,977	1,812	6.4	5.4	5.0	5.4	97%	5.2	0.80	7		
	45 - 64	7,766	7,336	6,366	21.3	20.1	17.4	19.0	85%	16.2	0.80	20		
	65+	16,760	17,734	15,837	45.9	48.6	43.4	45.5	117%	53.2	0.80	66		
	Sub Total	**26,865**	**27,047**	**24,015**	**73.6**	**74.1**	**65.8**	**69.9**		**74.6**		**93**		
	Maternity													
	0-14	0	0	2	0.0	0.0	0.0	0.0	98%	0.0	0.50	0		
	15 - 44	1,207	1,350	1,447	3.3	3.7	4.0	3.8	97%	3.7	0.50	7		
	45 - 64	4	4	14	0.0	0.0	0.0	0.0	85%	0.0	0.50	0		
	65+	0	0	0	0.0	0.0	0.0	0.0	117%	0.0	0.50	0		
	Sub Total	**1,211**	**1,354**	**1,463**	**3.3**	**3.7**	**4.0**	**3.8**		**3.7**		**7**		
	Psychiatric													
	0-14	0	0	0	0.0	0.0	0.0	0.0	98%	0.0	0.80	0		
	15 - 44	2,494	2,599	2,901	6.8	7.1	7.9	7.5	97%	7.3	0.80	9		
	45 - 64	2,674	2,639	2,350	7.3	7.2	6.4	6.9	85%	5.8	0.80	7		
	65+	3,788	3,591	3,417	10.4	9.8	9.4	9.7	117%	11.3	0.80	14		
	Sub Total	**8,956**	**8,829**	**8,668**	**24.5**	**24.2**	**23.7**	**24.0**		**24.4**		**31**		
	Rehabilitation													
	0-14	0	0	0	0.0	0.0	0.0	0.0	98%	0.0	0.80	0		
	15 - 44	0	0	0	0.0	0.0	0.0	0.0	97%	0.0	0.80	0		
	45 - 64	0	0	0	0.0	0.0	0.0	0.0	85%	0.0	0.80	0		
	65+	0	0	0	0.0	0.0	0.0	0.0	117%	0.0	0.80	0		
	Sub Total	**0**	**0**	**0**	**0.0**	**0.0**	**0.0**	**0.0**		**0.0**		**0**		
	Pediatric													
	0-19	462	409	486	1.3	1.1	1.3	1.3	94%	1.2	0.80	1		
	20+	0	0	0	0.0	0.0	0.0	0.0	99%	0.0	0.80	0		
	Sub Total	**462**	**409**	**486**	**1.3**	**1.1**	**1.3**	**1.3**		**1.2**		**1**		
Total		**37,494**	**37,639**	**34,632**	**103**	**103**	**95**	**99**		**104**		**133**	**195**	**+62**

***Data Sources:** Connecticut OHS Hospital Discharge Database and Connecticut State Data Center Population Projections*

***Note:** Patient Days, ADC, and Acute Beds exclude bassinets and care for newborns under three days old.*

Table 3.10 Acute Care Hospital Bed Need, South Central Region*

Region	Services [1]	FY 2021 patient days	FY 2022 patient days	FY 2023 patient days	FY 2021 ADC	FY 2022 ADC	FY 2023 ADC	Weighted ADC	Pop chg 2020 to 2030	Projected ADC	Target Occupancy	Beds Needed 2030	Licensed Beds	Excess (+) or Deficit (-)
South Central	Medical/Surgical													
	0-14	0	0	0	0.0	0.0	0.0	0.0	106%	0.0	0.80	0		
	15 - 44	48,711	48,280	48,945	133.5	132.3	134.1	133.4	103%	138.0	0.80	173		
	45 - 64	126,762	123,083	123,278	347.3	337.2	337.7	339.2	94%	318.3	0.80	398		
	65+	201,748	212,029	214,345	552.7	580.9	587.2	579.4	109%	631.3	0.80	789		
	Sub Total	**377,221**	**383,392**	**386,568**	**1,033.5**	**1,050.4**	**1,059.1**	**1051.9**		**1087.7**		**1,360**		
	Maternity													
	0-14	7	18	12	0.0	0.0	0.0	0.0	106%	0.0	0.50	0		
	15 - 44	21,381	20,779	20,703	58.6	56.9	56.7	57.1	103%	59.1	0.50	118		
	45 - 64	142	211	152	0.4	0.6	0.4	0.5	94%	0.4	0.50	1		
	65+	0	0	0	0.0	0.0	0.0	0.0	109%	0.0	0.50	0		
	Sub Total	**21,530**	**21,008**	**20,867**	**59.0**	**57.6**	**57.2**	**57.6**		**59.6**		**119**		
	Psychiatric													
	0-14	7,975	6,447	6,549	21.8	17.7	17.9	18.5	106%	19.5	0.80	24		
	15 - 44	27,464	26,930	26,734	75.2	73.8	73.2	73.8	103%	76.3	0.80	95		
	45 - 64	9,828	10,061	10,823	26.9	27.6	29.7	28.5	94%	26.8	0.80	33		
	65+	8,073	7,831	8,647	22.1	21.5	23.7	22.7	109%	24.7	0.80	31		
	Sub Total	**53,340**	**51,269**	**52,753**	**146.1**	**140.5**	**144.5**	**143.4**		**147.3**		**184**		
	Rehabilitation													
	0-14	0	0	0	0.0	0.0	0.0	0.0	106%	0.0	0.80	0		
	15 - 44	592	582	452	1.6	1.6	1.2	1.4	103%	1.5	0.80	2		
	45 - 64	2,131	2,444	2,287	5.8	6.7	6.3	6.3	94%	5.9	0.80	7		
	65+	4,025	3,940	3,861	11.0	10.8	10.6	10.7	109%	11.7	0.80	15		
	Sub Total	**6,748**	**6,966**	**6,600**	**18.5**	**19.1**	**18.1**	**18.5**		**19.1**		**24**		
	Pediatric													
	0-19	48,158	49,099	49,923	131.9	134.5	136.8	135.2	103%	139.3	0.80	174		
	20+	0	0	0	0.0	0.0	0.0	0.0	102%	0.0	0.80	0		
	Sub Total	**48,158**	**49,099**	**49,923**	**131.9**	**134.5**	**136.8**	**135.2**		**139.3**		**174**		
Total		**506,997**	**511,734**	**516,711**	**1,389**	**1,402**	**1,416**	**1,407**		**1,453**		**1,861**	**1,630**	**-231**

***Data Sources:** Connecticut OHS Hospital Discharge Database and Connecticut State Data Center Population Projections*

***Note:** Patient Days, ADC, and Acute Beds exclude bassinets and care for newborns under three days old.*

Table 3.11 Acute Care Hospital Bed Need, Southeastern Region*

Region	Services [1]	FY 2021 patient days	FY 2022 patient days	FY 2023 patient days	FY 2021 ADC	FY 2022 ADC	FY 2023 ADC	Weighted ADC	Pop chg 2020 to 2030	Projected ADC	Target Occupancy	Beds Needed 2030	Licensed Beds	Excess (+) or Deficit (-)
South-eastern	Medical/Surgical													
	0-14	0	0	0	0.0	0.0	0.0	0.0	102%	0.0	0.80	0		
	15 - 44	10,289	11,130	9,917	28.2	30.5	27.2	28.4	104%	29.5	0.80	37		
	45 - 64	31,871	31,638	29,360	87.3	86.7	80.4	83.7	92%	76.7	0.80	96		
	65+	66,061	68,567	67,533	181.0	187.9	185.0	185.3	118%	219.2	0.80	274		
	Sub Total	**108,221**	**111,335**	**106,810**	**296.5**	**305.0**	**292.6**	**297.4**		**325.4**		**407**		
	Maternity													
	0-14	0	8	1	0.0	0.0	0.0	0.0	102%	0.0	0.50	0		
	15 - 44	5,951	5,373	5,927	16.3	14.7	16.2	15.7	104%	16.3	0.50	33		
	45 - 64	17	108	22	0.0	0.3	0.1	0.1	92%	0.1	0.50	0		
	65+	0	152	0	0.0	0.4	0.0	0.1	118%	0.2	0.50	0		
	Sub Total	**5,968**	**5,641**	**5,950**	**16.4**	**15.5**	**16.3**	**16.0**		**16.6**		**33**		
	Psychiatric													
	0-14	14	18	1	0.0	0.0	0.0	0.0	102%	0.0	0.80	0		
	15 - 44	6,619	6,442	6,563	18.1	17.6	18.0	17.9	104%	18.6	0.80	23		
	45 - 64	3,849	4,379	3,673	10.5	12.0	10.1	10.8	92%	9.9	0.80	12		
	65+	1,221	1,645	970	3.3	4.5	2.7	3.4	118%	4.0	0.80	5		
	Sub Total	**11,703**	**12,484**	**11,207**	**32.1**	**34.2**	**30.7**	**32.1**		**32.5**		**41**		
	Rehabilitation													
	0-14	0	0	0	0.0	0.0	0.0	0.0	102%	0.0	0.80	0		
	15 - 44	369	354	137	1.0	1.0	0.4	0.7	104%	0.7	0.80	1		
	45 - 64	1,179	669	816	3.2	1.8	2.2	2.3	92%	2.1	0.80	3		
	65+	2,515	2,418	2,116	6.9	6.6	5.8	6.3	118%	7.4	0.80	9		
	Sub Total	**4,063**	**3,441**	**3,069**	**11.1**	**9.4**	**8.4**	**9.2**		**10.2**		**13**		
	Pediatric													
	0-19	4,015	3,988	3,373	11.0	10.9	9.2	10.1	101%	10.2	0.80	13		
	20+	0	0	0	0.0	0.0	0.0	0.0	103%	0.0	0.80	0		
	Sub Total	**4,015**	**3,988**	**3,373**	**11.0**	**10.9**	**9.2**	**10.1**		**10.2**		**13**		
Total		**133,970**	**136,889**	**130,409**	**367**	**375**	**357**	**365**		**395**		**506**	**649**	**+143**

***Data Sources:** Connecticut OHS Hospital Discharge Database and Connecticut State Data Center Population Projections*

***Note:** Patient Days, ADC, and Acute Beds exclude bassinets and care for newborns under three days old.*

Table 3.12 Acute Care Hospital Bed Need, Western Region*

Region	Services [1]	FY 2021 patient days	FY 2022 patient days	FY 2023 patient days	FY 2021 ADC	FY 2022 ADC	FY 2023 ADC	Weighted ADC	Pop chg 2020 to 2030	Projected ADC	Target Occupancy	Beds Needed 2030	Licensed Beds	Excess (+) or Deficit (-)
Western Region	Medical/Surgical													
	0-14	0	0	0	0.0	0.0	0.0	0.0	99%	0.0	0.80	0		
	15 - 44	18,216	17,532	18,355	49.9	48.0	50.3	49.5	102%	50.6	0.80	63		
	45 - 64	48,201	44,780	43,623	132.1	122.7	119.5	122.7	86%	105.4	0.80	132		
	65+	124,856	129,413	138,336	342.1	354.6	379.0	364.7	108%	393.9	0.80	492		
	Sub Total	**191,273**	**191,725**	**200,314**	**524.0**	**525.3**	**548.8**	**536.8**		**550.0**		**687**		
	Maternity													
	0-14	0	14	4	0.0	0.0	0.0	0.0	99%	0.0	0.50	0		
	15 - 44	24,506	24,416	24,226	67.1	66.9	66.4	66.7	102%	68.2	0.50	136		
	45 - 64	263	291	301	0.7	0.8	0.8	0.8	86%	0.7	0.50	1		
	65+	0	0	0	0.0	0.0	0.0	0.0	108%	0.0	0.50	0		
	Sub Total	**24,769**	**24,721**	**24,531**	**67.9**	**67.7**	**67.2**	**67.5**		**68.9**		**138**		
	Psychiatric													
	0-14	0	0	0	0.0	0.0	0.0	0.0	99%	0.0	0.80	0		
	15 - 44	7,249	7,781	8,439	19.9	21.3	23.1	22.0	102%	22.5	0.80	28		
	45 - 64	4,628	4,242	5,175	12.7	11.6	14.2	13.1	86%	11.2	0.80	14		
	65+	1,967	2,307	1,971	5.4	6.3	5.4	5.7	108%	6.2	0.80	8		
	Sub Total	**13,844**	**14,330**	**15,585**	**37.9**	**39.3**	**42.7**	**40.8**		**39.9**		**50**		
	Rehabilitation													
	0-14	0	0	0	0.0	0.0	0.0	0.0	99%	0.0	0.80	0		
	15 - 44	308	481	349	0.8	1.3	1.0	1.1	102%	1.1	0.80	1		
	45 - 64	1,821	1,854	1,619	5.0	5.1	4.4	4.7	86%	4.1	0.80	5		
	65+	7,045	6,958	6,504	19.3	19.1	17.8	18.5	108%	20.0	0.80	25		
	Sub Total	**9,174**	**9,293**	**8,472**	**25.1**	**25.5**	**23.2**	**24.3**		**25.1**		**31**		
	Pediatric													
	0-19	17,806	17,391	17,659	48.8	47.6	48.4	48.2	96%	46.3	0.80	58		
	20+	0	0	0	0.0	0.0	0.0	0.0	98%	0.0	0.80	0		
	Sub Total	**17,806**	**17,391**	**17,659**	**48.8**	**47.6**	**48.4**	**48.2**		**46.3**		**58**		
Total		**256,866**	**257,460**	**266,561**	**704**	**705**	**730**	**718**		**730**		**964**	**1,267**	**+303**

***Data Sources:** *Connecticut OHS Hospital Discharge Database and Connecticut State Data Center Population Projections*

***Note:** *Patient Days, ADC, and Acute Beds exclude bassinets and care for newborns under three days old.*

3.2.5 Inpatient Bed Capacity

Results of the inpatient Bed Need modeling show that, overall, the State of Connecticut is projected to have an adequate supply of beds in 2030. For eight of the nine regional planning geographies, there is an estimated excess of current bed capacity, ranging from 558 excess beds in the Capitol region to 55 excess beds in the Northeastern region. The only region with a deficit of beds based on the Bed Need Model is the South Central region, that is projected to need an additional 177 inpatient beds by 2030. This shortage occurs as a result of a current, high utilization of beds at the general hospitals in this region—Yale-New Haven (89%) and Midstate Medical Center (80%)—and an expected increase in population in the region between 2020 and 2030. These additional beds are needed even after considering the continued projection of the observed decline in inpatient bed use trends over time.

Evaluations of the available capacity of specific bed service lines (medical/surgical, maternity, psychiatry, rehabilitation, pediatric) are not assessed in the Bed Need modeling because: (1) generally, licensed acute care hospital beds are fungible across service lines over time as population needs change and (2) OHS certificates of need (and DPH licensure) is based on the allowance for any acute care bed, not a particular service line.

However, it important to note that an overall surplus of acute care beds doesn't necessarily mean all service lines are being equally and adequately covered across the state. In the short-term a misallocation of a hospital or region's acute care beds, by service line, could occur and even in the long-term, differences in average reimbursement per-stay could incentivize hospitals to over-allocate hospital bed capacity to more profitable service lines at the expense of other types of care. Of particular concern for the under-allocation of acute care beds for psychiatric and maternity/delivery service lines.[216, 217]

3.2.6 Other Considerations for Acute Care Bed CON Standards and Guidelines

In order to incorporate the nuance of determining bed needs, other factors that may be considered at the agency's discretion when conducting CON review of acute care bed need applications may require applicants to provide data and evidence regarding:

1. The number of observation beds and/or observation days at a facility and how this impacts the need for acute care beds.
2. Evidence of Emergency Department boarding and how this impacts the need for acute care beds.

[216] Substance Abuse and Mental Health Services Administration. (2023). National Substance Use and Mental Health Services Survey (N-SUMHSS) 2022: Data on Substance use and Mental Health Treatment Facilities. In *National Substance Use and Mental Health Services Survey (N-SUMHSS) 2022* [Report]. Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration. samhsa.gov/data/sites/default/files/reports/rpt42711/2022-nsumhss-annual-report.pdf

[217] American Hospital Association. (2020). U.S. rural hospitals. In *Based on AHA Annual Survey Databases* [Report]. aha.org/system/files/media/file/2022/04/Infographic-rural-health-obstetrics-15ap22.pdf

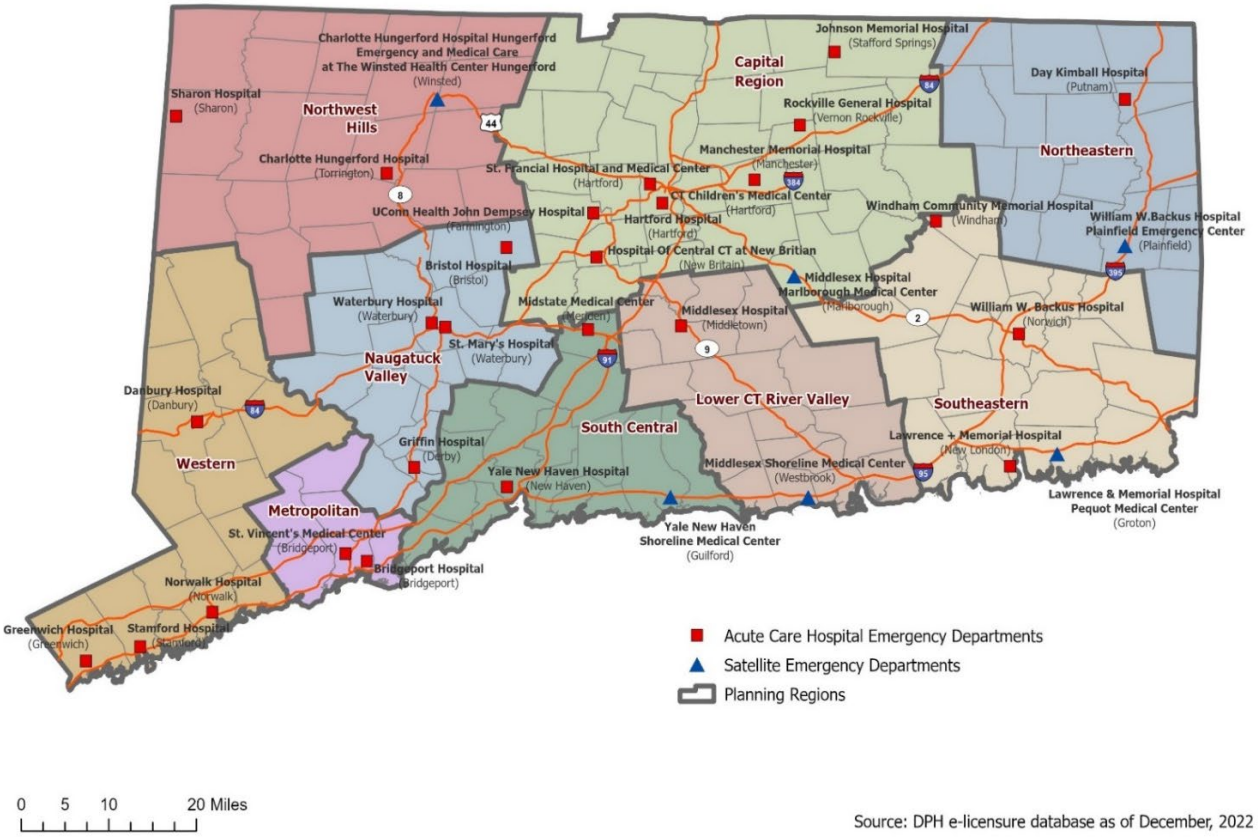
3. Differences between the total number of licensed beds and staffed beds, and how workforce shortages and long-term staffing patterns within the PSA may impact the need for and utilization of additional licensed beds.
4. Changes in patterns in the use of inpatient versus outpatient settings for care.
5. Impacts of discharge delays impacting the timing of discharges and average length of hospital stays, including prior authorization as a contributing factor to these timings.
6. The number of elective admissions and surgeries as contributing factors to bed need.
7. Particular innovations, changes in care delivery models or modalities, resources (including physical resources and building facilities) needed to treat specific diseases or conditions.
8. Special case-loads with a disproportionate share of time intensive procedures.
9. The number of beds in locked units—meaning beds in wards, wings, or rooms that are designated as a protective environment and are secured in a manner that prevents a resident from leaving the unit at will. A physical restraint applied to the body is not a locked unit, nor is a unit locked for purposes of security where patients may exit at will. Locked units include those beds contracted with, and designated for, the Department of Corrections.
10. Other quality or patient safety concerns, including considerations of impacts on readmission rates or rates of adverse complications.
11. The outcomes of CON application decisions made after the publication of this document; particularly, accepted applications that may have changed the service capacity of a particular primary service area or overall region, but whose effects are not shown in the data provided in this plan document.

3.3 Emergency Departments

Connecticut has emergency departments in each of its 27 acute care hospitals **(Figure 3.2)** The emergency department (ED) provides initial treatment to patients with a broad range of illnesses and injuries; some may be life-threatening. Upon arrival at the ED, people typically undergo a brief triage to evaluate the nature of the illness or injury. Individuals with more serious illnesses are examined by a physician sooner than patients with less severe symptoms or injuries. After treatment in the ED, patients are typically discharged, held for observation, admitted to the hospital, or stabilized and transferred to another hospital. Most EDs operate 24 hours and 7 days a week, with staffing levels usually lower at night. A freestanding ED is a licensed facility that is structurally separate and distinct from a hospital and provides emergency care.[218] Freestanding EDs are not licensed separately from hospitals in Connecticut. OHS regulates the establishment of these facilities (Sec. 19a-630-(10)(C)). Connecticut's freestanding EDs are shown in **Figure 3.2** and additional information is provided about them in **Table 3.13.**

[218] "Freestanding Emergency Departments." American College of Emergency Physicians, Apr. 2020, acep.org/patient-care/policy-statements/freestanding-emergency-departments

Figure 3.2 Acute Care Hospital and Satellite Emergency Departments*



***Data Source:** DPH e-licensure database as of December, 2022*

Table 3.13 Freestanding Emergency Departments*

Hospital	ED Site	Location	Description
Backus Hospital	Plainfield Emergency Care Center	Plainfield	Emergency services provided 24 hours per day, 7 days a week. Services are supported by onsite diagnostic imaging and laboratory services.
Charlotte Hungerford Hospital	Hartford HealthCare Health Center - Winsted	Winsted	Emergency Room with a LIFESTAR landing pad and a wide range of Primary and Specialty Care services.
Lawrence and Memorial Hospital	Pequot Health Center	Groton	Emergency Department, same-day surgery, laboratory services, diagnostic imaging, outpatient rehabilitation and occupational health services.
Middlesex Hospital	Marlborough Medical Center	Marlborough	Comprehensive outpatient, emergency, radiology, laboratory and rehabilitation services
Middlesex Hospital	Shoreline Medical Center	Westbrook	Emergency, primary and specialty care services.
Yale New Haven Hospital	Shoreline Medical Center - Guilford	Guilford	Emergency services provided 24 hours per day, 7 days a week. Services are supported by onsite diagnostic radiology and laboratory medicine.

***Data Source:** DPH e-licensure database as of December, 2022*

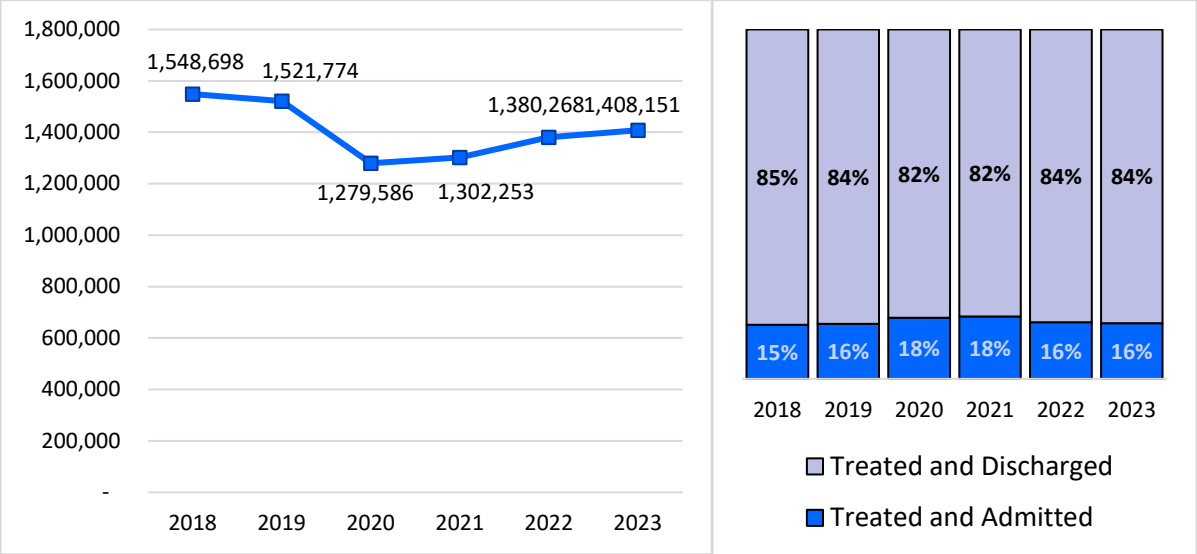
3.3.1 Relationship to Certificate of Need

C.G.S. § 19a-638(a)(4) and § 19a-638(a)(8) specify that a CON is required for the establishment of a free-standing emergency department or the termination of an emergency department by a short-term acute care general hospital. Connecticut hospitals seeking authorization to establish a free-standing emergency department are required to demonstrate that they meet clear public need as well as other criteria set forth in C.G.S. § 19a-639.

3.3.2 ED Utilization Trends

Overall, ED utilization had been on a slight decline in Connecticut prior to the COVID-19 pandemic and then fell significantly in 2020 and 2021 **(Figure 3.3).** The 2021 count of statewide ED visits fell from nearly 1.6 million in 2016 to 1.3 million in 2021 (an 18.4% decline). At the same time, the share of ED visits that led to an inpatient admission, increased from 15% in 2016 to 18% in 2021. This is indicative of smaller share of the visits coming from less severe needs, because of individuals not seeking out ED treatment for certain conditions during the peak of the COVID-19 pandemic, a trend that was seen nationwide.[219] Since 2020, ED use has crept back up, with visits growing by 10% from 2020 to 2023. The share of patients being treated and discharged has also increased.

Figure 3.3 Statewide ED Visits, FY 2018 to 2023*



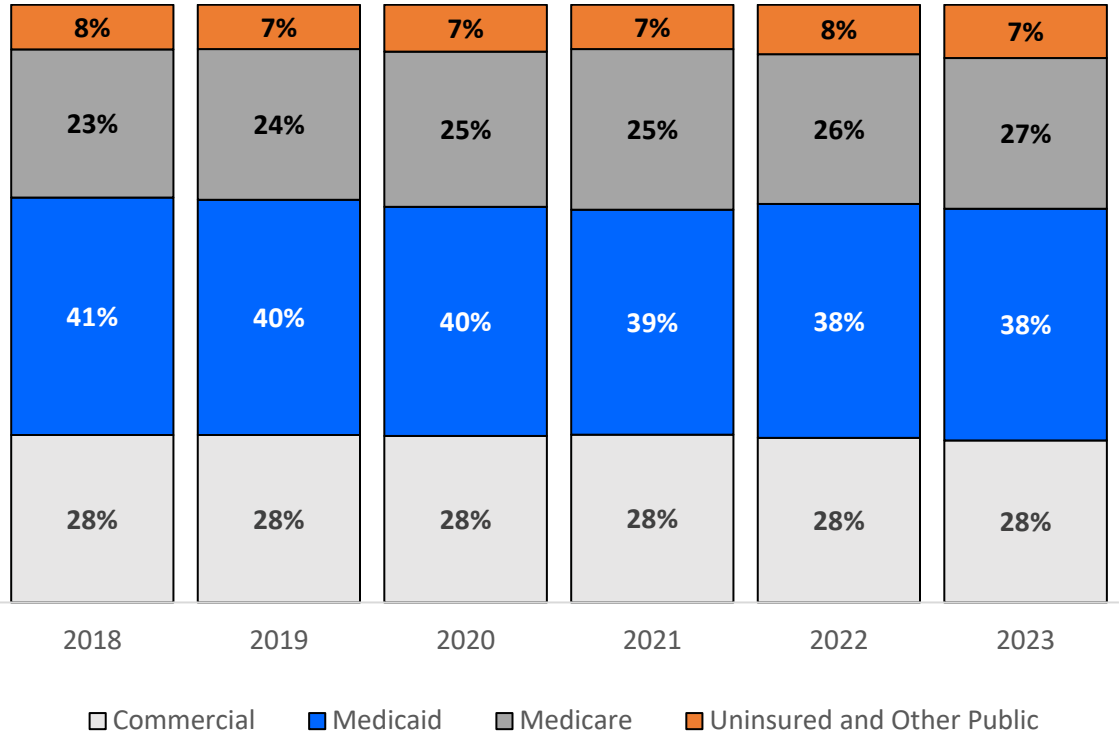
***Data Source:** OHS Emergency Department Visits Dashboard data (FY 2018–2023)*

Most ED visits were paid for by public programs in 2023, with 38% of visits covered by Medicaid and 27% covered by Medicare, as shown in **Figure 3.4.** The share of visits paid for by Medicare grew from 23% in 2018 to 27% in 2023. Over that same period, the share of Medicaid-funded visits shrank slightly, from 41% to 38%. This shift was likely partly driven by the aging population in Connecticut,

[219] Smith, A. R., DeVies, J., Carey, K., Sheppard, M., Radhakrishnan, L., Njai, R., Ajani, U. A., Soetebier, K., Hartnett, K., & Adjemian, J. (2023). COVID-19 pandemic-associated changes in overall emergency department visits by age group, race, and ethnicity - United States, January 2019-April 2022. *The American journal of emergency medicine*, *69*, 121–126.

which generally becomes eligible for Medicare at age 65. Another potential cause for this change was the COVID-19 pandemic, as older people on Medicare may have sought emergency care due to complications from the virus. Younger people on Medicaid, on the other hand, may have opted to forgo care or receive non-emergent care through telehealth and urgent care centers instead of EDs.[220,221] In 2023, 28% of ED visits were covered by commercial private insurance, a share that has held steady since 2018.

Figure 3.4 Share of ED Visits by Primary Payer, 2018-2023*



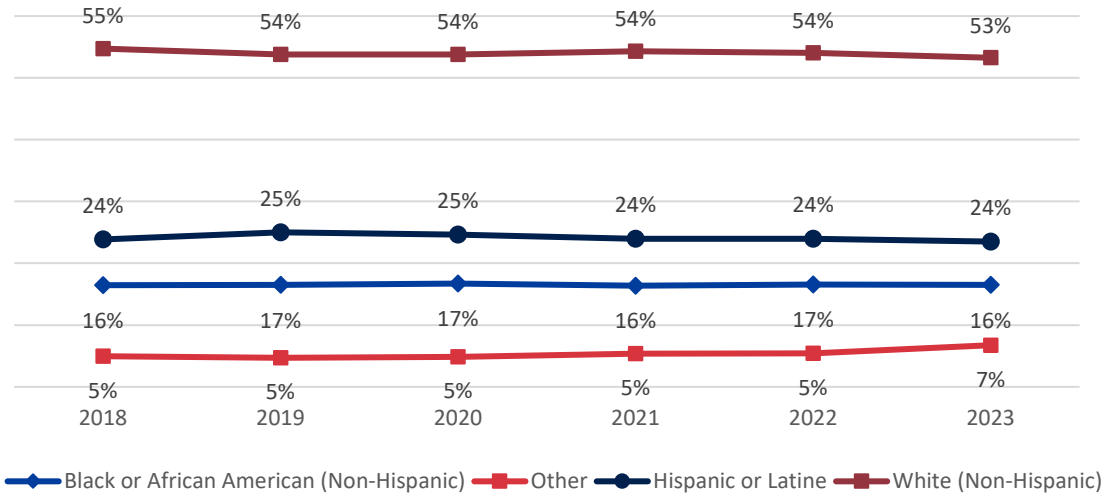
***Data Source:** OHS Emergency Department Visits Dashboard data (FY 2018–2023)*

Regarding race and ethnicity, while roughly 37% of the general population in Connecticut are people of color, nearly half of ED users were people of color in 2023 (47%), including 24% who were Hispanic or Latine, 16% who were Black or African American, and 7% who were another race or ethnicity. This left 53% who were non-Hispanic White. The share of ED users who were people of color increased slightly from 45% in 2018 to 47% in 2023.

[220] Lowe, J., Brown, I., Duriseti, R., Gallegos, M., Ribeira, R., Pirrotta, E., & Wang, N. E. (2021). Emergency Department Access During COVID-19: Disparities in Utilization by Race/Ethnicity, Insurance, and Income. The western journal of emergency medicine, 22(3), 552–560. doi.org/10.5811/westjem.2021.1.49279

[221] Gottlieb, M., Schipfer, R., Shah, S., McKinney, D., Casey, P., Stein, B., & Thompson, D. (2023). Cross-sectional analysis of avoidable emergency department visits before and during the COVID-19 pandemic. *The American journal of emergency medicine*, *66*, 111–117. doi.org/10.1016/j.ajem.2023.01.044

Figure 3.5 Share of ED Visits by Race and Ethnicity, 2018-2023*



***Data Source:** OHS Emergency Department Visits Dashboard data (FY 2016–2021)*

In 2023, the most common reason people visited the ED was chest pain, as shown in **Table 3.14.** The other reasons in the top 10 reasons for ED visits in 2023 related COVID-19 and various other forms of pain (e.g., chest pain) and infections (e.g., COVID-19). The diagnoses in the top ten constitute just 10% of all reasons for ED visits, underlining the diverse emergent and nonemergent reasons people seek care in these settings.

Table 3.14 Most Common Primary Reasons for ED Visits, FY 2023*

ICD10 Code	ICD 10 Code Description	# of Visits	Percent of Total Visits
R0789	Other chest pain	17,051	2%
U071	COVID-19	13,784	1%
R519	Headache, unspecified	11,834	1%
J069	Acute upper respiratory infection	11,170	1%
S0990XA	Unspecified injury of head, initial encounter	10,896	1%
M545	Low back pain	10,780	1%
R079	Chest pain, unspecified	10,608	1%
R109	Unspecified abdominal pain	9,863	1%
R112	Nausea with vomiting, unspecified	9,588	1%
B349	Viral infection, unspecified	9,498	1%
-	**Total Top Ten Primary Reasons**	**115,072**	**10.1%**
-	**Statewide ED Visits**	**1,140,036**	**-**

***Data Source:** OHS Emergency Department Visits Dashboard data (FY 2016–2021)*

***Note:** The 10th revision of the International Statistical Classification of Diseases and Related Health Problems (ICD-10) is a diagnostic and precure coding system developed by the World Health Organization. It is used for billing purposes, tracking health trends, and other purposes.*

While utilization of EDs is trending upward in Connecticut following the peak of the COVID-19 pandemic, residents in some areas of the state may face barriers to accessing this care. One measure of ED capacity is the typical time it takes to receive ED care, from when patients arrive to when they are discharged. Nationally, this typically takes 160 minutes, or 2 hours and 40 minutes.[222] Wait times in 7 out of 9 planning regions exceed that figure **(Table 3.15).** Wait times were longest in the South Central Region, where ED visits typically took 215 minutes, or 3 hours and 35 minutes. Wait times for people in need of psychiatric care were even longer. These figures exclude patients who left before they were seen, who usually account for less than 5% of visitors to the ED.

Table 3.15 ED Department Volume and Median Wait Times, 2022*

Planning Region and Hospitals	ED Volume**	% Left Before Being Seen	Median Hours: Minutes before Leaving ED	Median Hours: Minutes before Leaving ED (Psychiatric Patients)
Capitol	-	-	**3:33**	**4:54**
Hartford Hospital	Very High	1%	-	-
John Dempsey Hospital	High	1%	-	-
Johnson Memorial Hospital	Low	1%	-	-
Manchester Memorial Hospital	Medium	6%	-	-
Rockville General Hospital	Low	2%	-	-
St Francis Hospital & Medical Center	Very High	4%	-	-
The Hospital of Central Connecticut	Very High	2%	-	-
Lower CT River Valley	-	-	**2:42**	**n/a**
Middlesex Hospital	Very High	1%	-	-
Metropolitan	-	-	**2:46**	**2:54**
Bridgeport Hospital	Very High	3%	-	-
St Vincent's Medical Center	Very High	2%	-	-
Naugatuck Valley	-	-	**3:31**	**5:54**
Bristol Hospital	Medium	1%	-	-
Griffin Hospital	Medium	4%	-	-
Saint Mary's Hospital	High	3%	-	-
Waterbury Hospital	High	8%	-	-
Northwest Hills	-	-	**2:21**	**2:47**
Charlotte Hungerford Hospital	Medium	0%	-	-
Sharon Hospital	High	0%	-	-
South Central	-	-	**3:35**	**4:26**
Midstate Medical Center	Low	2%	-	-
Yale-New Haven Hospital	High	2%	-	-

[222] Fitzpatrick, A. (2023, September 15). *ER visits are getting longer amid hospital staffing shortages* [Review of *ER visits are getting longer amid hospital staffing shortages*]. Axios. axios.com/2023/09/15/hospital-er-visit-time-length

Planning Region and Hospitals	ED Volume**	% Left Before Being Seen	Median Hours: Minutes before Leaving ED	Median Hours: Minutes before Leaving ED (Psychiatric Patients)
Southeastern	-	-	**2:10**	**3:32**
Lawrence & Memorial Hospital	Very High	1%	-	-
William W. Backus Hospital	Very High	1%	-	-
Windham Community Memorial Hospital	Very High	0%	-	-
Western	-	-	**3:22**	**5:01**
Danbury Hospital	Medium	4%	-	-
Greenwich Hospital Association	Very High	2%	-	-
Norwalk Hospital	High	3%	-	-
Stamford Hospital	High	2%	-	-
Northeastern	-	-	**3:02**	**6:43**
Day Kimball Hospital	Very High	0%	-	-

***Data Source:** CMS Provider Data Catalog, Hospital Care Compare Measures*

****Note:** The EDV measure categorizes hospitals based on patient volume during a calendar year spanning January to December. "Very High" indicates 60,000 or more patients annually, "High" ranges from 40,000 to 59,999, "Medium" from 20,000 to 39,999, and "Low" represents 19,999 or fewer patients per year. The total volume figure is used as the denominator for the percentage of hospital patients who left without being seen in the CMS quality reporting program for hospitals.*

Various factors can increase the length of stay in the ED.[223] First, people with poor health or more severe conditions might require more tests or admission to the hospital, which can increase the time they spend in the ED.[224] Second, EDs are often under-prepared to meet the needs of individuals with behavioral health issues, and there is a limited number of inpatient psychiatric hospital beds, which can extend transfer times.[225] Another factor that can increase the length of stay is recent staffing shortages in EDs, which reduce their capacity and contribute to overcrowding.[226]

3.3.3 Emergency Department Planning

The American College of Emergency Physicians (ACEP) Policy Statement (April 2021) on ED planning and resource guidelines[227] is a useful resource for services in hospital-based or free-standing EDs that are open 24 hours a day. OHS encourages adherence to the ACEP Policy Statement which states:

[223] Kusumawati, Happy & Rasmussen, Philippa & Magarey, Judy. (2020). Factors associated with length of stay in the emergency department: a narrative review. *The Philippine journal of nursing*. 90. 41-50.
[224] Kreindler, S. A., Cui, Y., Metge, C. J., & Raynard, M. (2016, March 1). *Patient characteristics associated with longer emergency department stay: A rapid review*. Emergency Medicine Journal. emj.bmj.com/content/33/3/194
[225] Nordstrom, K., Berlin, J. S., Nash, S. S., Shah, S. B., Schmelzer, N. A., & Worley, L. L. M. (2023). Boarding of Mentally Ill Patients in Emergency Departments: American Psychiatric Association Resource Document. *FOCUS*, *21*(1), 74–79. doi.org/10.1176/appi.focus.23022001
[226] Fitzpatrick, A. (2023, September 15). *ER visits are getting longer amid hospital staffing shortages* [Review of *ER visits are getting longer amid hospital staffing shortages*]. Axios. axios.com/2023/09/15/hospital-er-visit-time-length
[227] *Policy Statement Emergency Department Planning and Resource Guidelines*. (2021). acep.org/siteassets/new-pdfs/policy-statements/emergency-department-planning-and-resource-guidelines.pdf

- Access to emergency medical and nursing care should be unrestricted and available to all members of the public.
- EDs must have adequate resources to accommodate the evaluation, management, treatment, and disposition of all patients presenting at an ED in an appropriate and expedient manner.
- EDs should maintain appropriate levels of qualified staff, 24 hours a day, due to the unscheduled and episodic nature of health emergencies and acute illnesses. ED personnel, led by an emergency physician, must establish effective working relationships with emergency medical services (EMS) professionals, ancillary hospital staff, physicians, and other health care and social service resources to ensure the continuity of ED patient care.
- Effective policies and plans should be in place to ensure that administration, staffing, design of facility, equipment, medication, and all other ancillary services are sufficiently addressed and cohesively work together to provide quality health care for patients experiencing serious health emergencies and for those with non-emergent health needs but for whom the ED may represent the only accessible or timely entry point into the broader health care system.

3.3.4 Implications of Emergency Department Use for Determination of Other Health Care Needs

3.3.4.1 Primary Care and Avoidable ED Visits

ED utilization can indicate an unmet need for appropriate care in other settings, like outpatient primary care services. This can be measured by examining avoidable ED visits. There are several types of avoidable ED visits. People may seek medical care in EDs for conditions that do not require urgent medical care or seek this care for an emergent condition that could have been treated in a primary care setting. Finally, some ED visits require emergency level of care that could have been avoided if patients received timely and effective outpatient care sooner.

The percentage of avoidable ED visits (those that could have been avoided if timely, effective care had been received sooner) steadily decreased from 39% in 2018 to 27% in 2023, as indicated in **Figure 3.6.** This decline may have been caused by people avoiding the ED beginning in the COVID-19 pandemic, opting instead to receive telehealth, visit an urgent care center, or forgo care altogether.

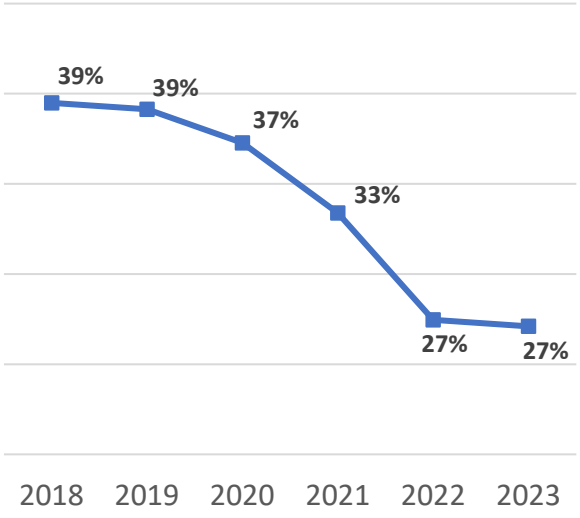
In 2023, avoidable ED use varied by insurance payer, race and ethnicity, and age group. Avoidable ED visits made up 41% of visits covered by Medicaid, 37% of those covered by other public insurance (e.g., Tricare), 35% of those covered by private insurance, and 26% of those covered by Medicare.

People of color were more likely to have avoidable visits, with 42% of all emergency room visits being avoidable for Hispanic or Latine patients, 38% for Black or African American patients, and 35% for patients with another race or ethnicity. In contrast, only 31% of visits by non-Hispanic White patients were avoidable. Younger people were also more likely to receive avoidable ED care, with 44% of visits by children under age 18 being avoidable, followed by 38% of visits by adults ages 18 to 44, 34% of visits by adults ages 45 to 64, and 25% of visits by older adults ages 65 and over. These data indicate

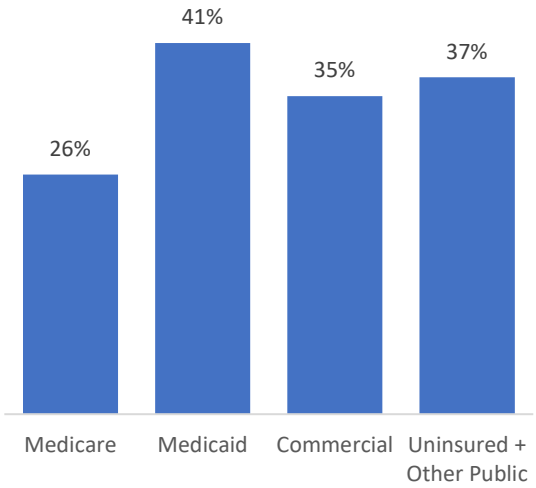
that patients who are younger, people of color, are uninsured, or have Medicaid insurance may seek ED care because they lack high-quality, accessible primary care services. These outpatient services are described further in Chapter 8 of this plan.

Figure 3.6 Percent of Statewide ED Visits that are Avoidable, Trends (2018-2023) and Rate by Primary Payer, Age Group, and Race (2023)*

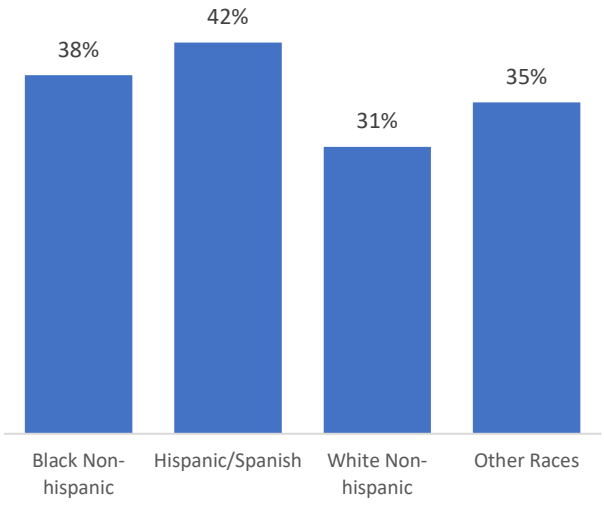
Avoidable Visits, percent of Statewide



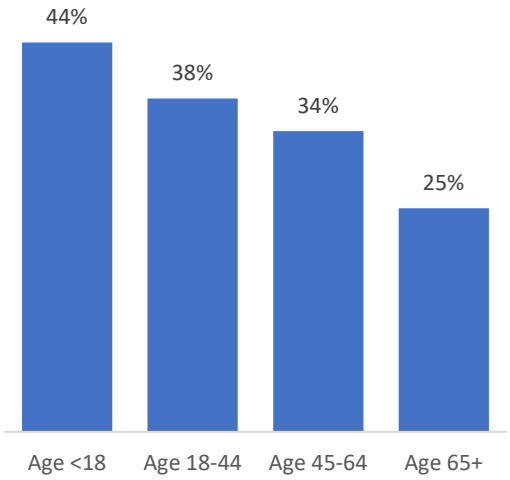
% of ED Visits that are Avoidable, by Coverage Type



% of ED Visits Avoidable, by Race/Ethnicity



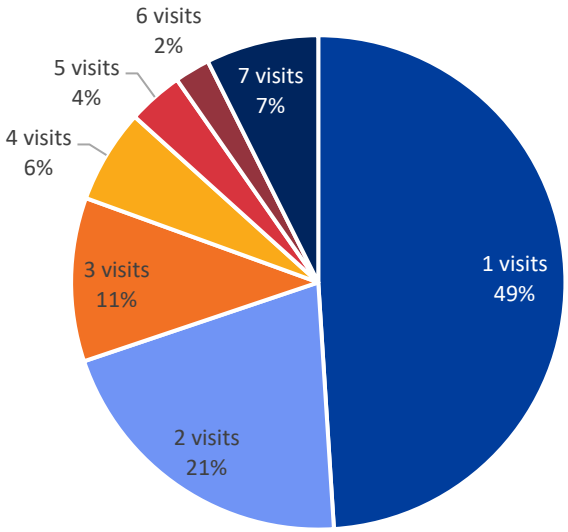
% of ED Visits Avoidable, by Age



****Data Source:** OHS Emergency Department Database*

Another indicator of unmet need for outpatient care are ED "super-utilizers" who visit the ED four or more times in a year.[228] These users are important to payers and policymakers because these repeat visits are often avoidable and always costly. Super-utilizers (using four or more visits in 2021) accounted for approximately 19% of all ED users in 2021, as shown in **Figure 3.7.** Another 32% of ED users have either two or three visits in the year. Fewer than half of ED visitors (49%) were patients visiting the ED only one time in 2021.

Figure 3.7 Share of ED Visitors by the Number of ED Visits in the Year, 2021*



***Data Source:** OHS Emergency Department Database*

3.3.4.2 Behavioral Health Care in Emergency Departments

From 2017 through 2019, 52.9 per 1,000 adults with mental health disorders visited the ED across the United States.[229] Between 2007 and 2016, about 8.4 million (8.3%) of 100.9 million ED visits nationwide were for psychiatric or substance use-related diagnoses,[230] and from 2019 to 2021, the mean proportion of mental health-related ED visits ranged from 7% to 9% of all ED visits.[231]

[228] McConville, S., Raven, M. C., Sabbagh, S. H., & Hsia, R. Y. (2018). Frequent Emergency Department Users: A Statewide Comparison Before And After Affordable Care Act Implementation. *Health Affairs*, *37*(6), 881–889. doi.org/10.1377/hlthaff.2017.0784

[229] Santo, L., Peters, Z., & Defrances, C. (2017). *Key findings*. cdc.gov/nchs/data/databriefs/db426.pdf

[230] Theriault, K. M., Rosenheck, R. A., & Rhee, T. G. (2020). Increasing Emergency Department Visits for Mental Health Conditions in the United States. *The Journal of Clinical Psychiatry*, *81*(5). doi.org/10.4088/jcp.20m13241

[231] Villas-Boas, S., Kaplan, S., White, J. S., & Hsia, R. Y. (2023). Patterns of US Mental Health–Related Emergency Department Visits During the COVID-19 Pandemic. *JAMA Network Open*, *6*(7), e2322720. doi.org/10.1001/jamanetworkopen.2023.22720

Connecticut is one of eight states with mean ED mental health visit rates among Medicaid enrollees above the national 75th percentile.[232, 233] Connecticut's mental health/substance use disorder ED visits increased from 229,907 in 2009 to 282,094 in 2018, a 22.7% increase.[234] The rate of mental health emergency department visits in Connecticut was 2,819 per 100,000 in 2017, and frequent behavioral health related ED visitors account for 16% of all behavioral health ED visits statewide.[235]

Following passage of the ACA, Connecticut leveraged Medicaid State Plan Amendments to establish the Behavioral Health Home Initiative in 2015.[236] These programs coordinate the medical and behavioral health care of residents with chronic conditions, including schizophrenia, mood disorders, and PTSD, and are intended to reduce unnecessary hospital admissions and re-admissions.[237]

Looking at specific populations, the use of EDs in Connecticut by Medicaid-covered children and youth with behavioral health conditions increased significantly in recent years, including a 20% increase in the number of ED visits from 2014 to 2016.[238] More recently in 2022, 15–20% of Yale New Haven Children's Hospital's emergency department patient volume was related to behavioral health, with substantial increases in the number of children awaiting inpatient beds for psychiatric care during the pandemic.[239] Connecticut's long-standing youth Mobile Crisis Intervention Service has shown results in reducing ED visits among youth,[240, 241, 242] and the state has recently expanded outpatient crisis centers for youth and their families.[243, 244] The state also passed PA 22–47[245] which temporarily

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[232] Firth, S. (2023, February 9). *ED Visits for Mental Health Among Medicaid Enrollees Varied Widely by Region*. Medpagetoday.com; MedpageToday. medpagetoday.com/publichealthpolicy/medicaid/103027

[233] McConnell, K. J., Watson, K., Choo, E., & Zhu, J. M. (2023). Geographical Variations In Emergency Department Visits For Mental Health Conditions For Medicaid Beneficiaries. *Health affairs (Project Hope)*, *42*(2), 172–181. doi.org/10.1377/hlthaff.2022.00796

[234] Trends in the Utilization of Emergency Department Services, 2009-2018. U.S. Department of Health and Human Services Office of the Assistant Secretary for Planning and Evaluation. (2021, March 2). aspe.hhs.gov/sites/default/files/private/pdf/265086/ED-report-to-Congress.pdf

[235] *MHMentalHealthDisorders - CT Environmental Public Health Tracking Portal*. (n.d.). Stateofhealth.ct.gov. Retrieved May 14, 2024, from stateofhealth.ct.gov/HCT2020/MHMentalHealthDisorders

[236] Becker, A. L. (2015, September 9). *Mental health agencies take on larger role coordinating all care*. CT Mirror. ctmirror.org/2015/09/09/mental-health-agencies-take-on-larger-role-coordinating-all-care

[237] Company, O. (2021, June 17). *Behavioral Health Homes | MyPlaceCT*. myplacect.org/services-and-supports/mental-health-services/behavioral-health-homes

[238] Hoge, M. A., Vanderploeg, J., Plant, R., & Graham, S. (2018). Emergency Department Use by Connecticut Children and Youth with Behavioral Health Conditions: Improving Care and Promoting Alternatives. Farmington, CT: The Child Health and Development Institute.

[239] Children with psychiatric needs are overwhelming hospital emergency departments in CT. (2021, May 25). *The Connecticut Mirror*. ctmirror.org/2021/05/25/children-with-psychiatric-needs-are-overwhelming-hospital-emergency-departments-in-ct

[240] Hoge, M. A., Vanderploeg, J., Plant, R., & Graham, S. (2018).

[241] Fendrich, M., Kurz, B., Ives, M., & Becker, J. (2018). Evaluation of Connecticut's Mobile Crisis Intervention Services: Impact on Behavioral Health Emergency Department Use and Provider Perspectives on Strengths and Challenges. Farmington, CT: Child Health and Development Institute of Connecticut, Inc.

[242] Fendrich, M., Kurz, B., Ives, M., & Becker, J. (2018). Evaluation of Connecticut's Mobile Crisis Intervention Services: Impact on Behavioral Health Emergency Department Use and Provider Perspectives on Strengths and Challenges. Farmington, CT: Child Health and Development Institute of Connecticut, Inc.

[243] Connecticut Public. (2023, July 21). *New mental health care models in Connecticut offer ER alternative to children in crisis*. ctpublic.org/news/2023-07-21/new-mental-health-care-models-in-connecticut-offer-er-alternative-to-children-in-crisis

[244] Connecticut General Assembly. (2024). *CGA Daily Records*. cga.ct.gov/asp/cgabillstatus/cgabillstatus.asp

[245] Connecticut General Assembly, Substitute H.B. 5001, Public Act No. 22-47. (2022). cga.ct.gov/2022/act/pa/pdf/2022PA-00047-R00HB-05001-PA.pdf

exempts increases in the licensed bed capacity of mental health facilities from the CON process if the facility meets certain criteria.[246, 247] Regarding seniors, Connecticut has expanded a Nursing Home Diversion and Transition Program intended to reduce inappropriate admissions to nursing homes.[248]

3.3.4.3 Boarding in Emergency Departments

Boarding in Emergency Departments refers to holding admitted patients in the ED while waiting for an inpatient bed to become available. The practice of boarding can be a safety risk, creating the opportunity for downstream harms which may include increased medical errors, patient privacy concerns, and other adverse events.[249] The Joint Commission has indicated that patients being admitted should not spend more than 4 hours in the ED waiting for a hospital room, and studies have shown that when hospital occupancy exceeds 85% to 90% it is more likely that boarding patients in the ED is occurring.[250]

It is important to note, at the time of this report there is not state-level data on patients boarding in the ED. However a workgroup has been convening, and beginning in 2025 Connecticut will begin collecting this information under Public Act No. 24-4[251] along with data that will be important to fully understand emergency department utilization trends.[252]

3.3.5 Trauma

A trauma center is a hospital equipped to provide comprehensive emergency medical services to patients who require complex and multi-disciplinary treatment following traumatic injuries. According to the public health code, the terms “Trauma” and “Trauma Center” are specifically defined in the Connecticut Agency Regulations (C.A.G.) § 19a-177-1 as follows:

- “Trauma” means a wound or injury to the body caused by accident, violence, shock or pressure, excluding poisoning, drug overdose, smoke inhalation, and drowning (C.A.G. § 19a-177-1(6)).
- “Trauma facility” means a hospital that has met the requirements as prescribed in C.A.G. § 19a-177-4 of the Regulations of Connecticut State Agencies and has received such designation from the Office of Emergency Medical Services (OEMS) in accordance with section C.A.G. 19a-177-3 of the Regulations of Connecticut State Agencies (19a-177-1(8)).

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[246] Connecticut General Assembly. (2024). *CGA Daily Records*. cga.ct.gov/asp/cgabillstatus/cgabillstatus.asp

[247] National Conference of State Legislatures. (2021, December 20). *Certificate of need state laws*. NCSL.org. ncsl.org/health/certificate-of-need-state-laws

[248] *Nursing Home Diversion*. (n.d.). *Department of Mental Health and Addiction Services.* CT.gov - Connecticut’s Official State Website. portal.ct.gov/DMHAS/Programs-and-Services/Older-Adult-Services/Nursing-Home-Diversion

[249] Laam, L., Wary.A., Strony, R., Fitzpatrick, M., & Kraus, C. (2021). Quantifying the impact of patient boarding on emergency department length of stay: All admitted patients are negatively affected by boarding. *J Am Coll Emerg Physicians Open*. ncbi.nlm.nih.gov/pmc/articles/PMC7926013

[250] Janke, A., Melnick, E., & Venkatesh, A. (2022). Hospital occupancy and emergency department boarding during the COVID-19 pandemic. *JAMA Netw Open*. ncbi.nlm.nih.gov/pmc/articles/PMC9526134

[251] Connecticut General Assembly, Substitute Senate Bill No. 181, Public Act No. 24-4. (2024). cga.ct.gov/2024/act/pa/pdf/2024PA-00004-R00SB-00181-PA.pdf

[252] CT Dept. Public Health (n.d.). *The Emergency Department Boarding and Crowding Workgroup*. portal.ct.gov/dph/working-groups/ed-working-group

The American College of Surgeons provides a voluntary verification that designates the specific capabilities and identifies trauma centers by "Level" designation.[253] Hospitals seeking designation as a Level I, Level II or Level III trauma facility must apply to and be approved by the OEMS.

As of January 2024, Connecticut has fourteen hospitals designated as either Level I, Level II, or Level III trauma centers. Connecticut trauma centers, their current trauma level designations and definitions of each level are given in **Table 3.16.**[254]

Table 3.16 Connecticut Trauma Centers*

Connecticut Designated Trauma Centers	City	Level
Bridgeport Hospital	Bridgeport	Level II (Adult)
Connecticut Children's Medical Center	Hartford	Level I (Pediatric)
Danbury Hospital	Danbury	Level II (Adult)
Greenwich Hospital	Greenwich	Level III (Adult)
Hartford Hospital	Hartford	Level I (Adult)
Norwalk Hospital	Norwalk	Level II (Adult)
Saint Francis Hospital	Hartford	Level I (Adult)
Saint Mary's Hospital	Waterbury	Level II (Adult)
St. Vincent's Medical Center	Bridgeport	Level II (Adult)
Stamford Hospital	Stamford	Level II (Adult)
The Hospital of Central Connecticut	New Britain	Level III (Adult)
Waterbury Hospital	Waterbury	Level II (Adult)
William W. Backus Hospital	Norwich	Level III (Adult)
Yale-New Haven Hospital	New Haven	Level I (Adult and Pediatric)

***Data Source:** ACS Hospital and Facilities database*

LEVEL I: Provide comprehensive trauma care for all injuries. Many Level I trauma centers serve as the lead hospitals in the area and are often university-based due to resources required for patient care, education, and research. In addition to acute care responsibilities, Level I trauma centers provide system leadership in local trauma system development, regional disaster planning, increasing capacity, and advancing trauma care through research.

LEVEL II: Expected to provide initial definitive trauma care for a wide range of injuries and injury severity, regardless of the severity of injury and may take on additional responsibilities in the region related to education, system leadership, and disaster planning.

LEVEL III: Typically serve (often rural and/or remote) communities that do not have immediate access to a Level I or II trauma center and can provide definitive care to patients with mild to moderate injuries. These centers also have processes in place for the prompt evaluation, initial management, and transfer of patients whose needs might exceed the resources available.

[253] ACS. (n.d.). *Resources for Optimal Care of the Injured Patient*. American College of Surgeons. facs.org/quality-programs/trauma/quality/verification-review-and-consultation-program/standards

[254] ACS. (n.d.). *Hospital and Facilities*. American College of Surgeons. facs.org/hospital-and-facilities

3.3.6 Emergency Medical Services (EMS)

Emergency Medical Services (EMS) is a system that responds to emergencies in need of highly skilled pre-hospital clinicians. People call EMS when they have had an accident or are experiencing a medical emergency. EMS may provide both basic and advanced medical care at the scene of an emergency and enroute to a hospital. The organizational structure of EMS, including service providers and financing, varies from community to community. The essential components of an EMS system include agencies and organizations, life-saving data, communication and transportation networks, centers and facilities, and highly trained personnel.

3.3.7 Office of Emergency Medical Services (OEMS)

The Office of Emergency Medical Services, located within the Department of Public Health is responsible for strategic planning, regulatory and statutory oversight, as well as programmatic implementation of the EMS system in Connecticut.[255] For EMS providers, this includes development of the educational framework for training EMS providers, application, and licensing of over 20,000 EMS providers, inspections of over 900 EMS vehicles and investigation of complaints against EMS providers for standard of care or other regulatory violations. For EMS organizations, this includes coordination of the overall EMS system via review and consideration of new EMS organizations and requested changes in services provided of current EMS organizations, oversight and analysis of EMS Data, as well as investigation of complaints against EMS organizations for regulatory violations that put the public's health at risk. There is no CON statute relevant to EMS.

3.3.8 LIFE STAR

LIFE STAR is a critical care helicopter service which responds to and provides air transport for a variety of patients who require care at a tertiary care facility. LIFE STAR has relationships with tertiary care physicians from the EMS/Trauma department at Hartford Hospital, as well as specialty physicians at receiving facilities. The LIFE STAR program began operation in 1985. Today, the service operates two helicopters 24 hours a day, seven days per week, transporting more than 1,200 patients annually. One aircraft is based at Midstate Medical Center in Meriden, Connecticut. The other is based at The William W. Backus Hospital in Norwich, Connecticut. The LIFE STAR service also operates one helicopter based out of Westfield Barnes Airport in Westfield, MA. The LIFE STAR crew consists of a flight nurse, flight respiratory therapist, pilot, mechanic, and communication specialist.

3.4 Cardiac Services

3.4.1 Relationship to Certificate of Need

C.G.S. § 19a-638(a)(9) specifies that a CON is required for the establishment of cardiac services, including inpatient and outpatient cardiac catheterization, interventional cardiology, and cardiovascular surgery. Connecticut hospitals seeking authorization to establish a cardiac program

[255] CT DPH. (n.d.). Office of Emergency Medical Services. *Department of Public Health*. portal.ct.gov/dph/emergency-medical-services/ems/office-of-emergency-medical-services-homepage

are required to demonstrate that they meet clear public need as well as other criteria set forth in C.G.S. § 19a-639.

According to state regulations, "interventional cardiology" is defined as non-surgical procedures performed in the cardiac catheterization laboratory for the treatment of coronary artery and peripheral vascular disease (C.A.G. § 19a-630-1(5)). Procedures include, but are not limited to, angioplasty, valvuloplasty, cardiac ablation, coronary thrombectomy, and congenital heart defect correction. Only those procedures authorized pursuant to CON may be performed by a health care facility or provider. Multiple cardiac services may be authorized under one CON decision. A facility that is authorized to provide open heart surgery is also authorized to provide the full range of cardiac procedures mentioned above (C.A.G. § 19a-638-2).

3.4.2 Cardiac Catheterization

Cardiac catheterization is defined as a medical procedure requiring the passage of a catheter into one or more cardiac chambers of the left and right heart, with or without coronary arteriograms, for the purpose of diagnosing congenital or acquired cardiovascular disease, or for determining measurement of blood pressure flow.

3.4.3 Percutaneous Coronary Intervention (PCI)

Percutaneous Coronary Intervention (PCI) or Coronary Angioplasty (PCA) is an interventional procedure performed in a catheterization lab whereby a catheter inserted into an artery in the arm, wrist, or groin is threaded through the circulatory system to a previously diagnosed blockage in the heart. An expandable balloon is passed to this spot and inflated several times, thereby flattening the blockage-causing plaque, potentially widening the artery, and thus improving blood flow.

PCI is often combined with the permanent placement of a small wire mesh tube called a stent to help prop the artery open and decrease the chance of it narrowing again. Stents are usually coated with medication to help keep the artery open (drug-eluting stents), though some are not (bare-metal stents).[256, 257] PCI is considered elective when the patient's cardiac function has been stable in the days or weeks leading up to the intervention and could be deferred without increased risk of

[256] MedlinePlus. (n.d.). *Angioplasty*. National Library of Medicine. medlineplus.gov/angioplasty.html
[257] MedlinePlus. (n.d.). *Angioplasty and stent placement - heart: MedlinePlus Medical Encyclopedia*. National Library of Medicine medlineplus.gov/ency/article/007473.htm

compromise to cardiac outcome. Primary, or emergent, PCI is performed on an ad hoc basis to minimize further clinical deterioration.[258]

3.4.3.1 PCI without Surgical Backup

Authorization for Connecticut hospitals to perform elective catheter-based interventions for coronary artery disease has been limited in the past to hospitals with the ability to perform cardiac surgery on-site. However, increasing operator experience, improvements in surgical technique and major advances in technology and pharmacology have contributed to a progressive trend to allow PCI without on-site surgical backup.[259] New evidence supports the positive effects that these medical advances have contributed to the significant reduction in emergency surgery following PCI.

In 2011, the American College of Cardiology Foundation/American Health Association/Society for Cardiovascular Angiography and Interventions (ACCF/AHA/SCAI) Practice Guideline for Percutaneous Coronary Intervention without on-site surgical backup was modified from a class III (not recommended, no benefit) to a class IIb (benefit is either equal to or greater than the risk) recommendation. In 2023, the SCAI expert consensus statement on Percutaneous Coronary Intervention without on-site surgical (SOS) backup produced updated research and data which revealed that there were few complications and similar outcomes amongst PCIs in settings without surgical backup as compared to those performed in settings with surgical backup. The society noted:

> *"Several new studies in the United States and abroad have demonstrated that PCIs performed at non-SOS centers have very low rates of complications and similar outcomes to PCIs performed at surgical centers."*[260]

The 2023 statement further notes:

> *"The economic benefits of PCI without SOS have driven and will continue to drive payers toward the migration of PCI to the ambulatory setting. This expert consensus statement summarizes the evidence supporting PCI without SOS and provides the community with the guidance necessary for this transition."*

[258] Lawton, J. S., Tamis-Holland, J. E., Bangalore, S., Bates, E. R., Beckie, T. M., Bischoff, J. M., Bittl, J. A., Cohen, M. G., DiMaio, J. M., Don, C. W., Fremes, S. E., Gaudino, M. F., Goldberger, Z. D., Grant, M. C., Jaswal, J. B., Kurlansky, P. A., Mehran, R., Metkus, T. S., Nnacheta, L. C., & Rao, S. V. (2021). 2021 ACC/AHA/SCAI Guideline for Coronary Artery Revascularization. *Journal of the American College of Cardiology*, *79*(2). doi.org/10.1016/j.jacc.2021.09.006

[259] Dehmer, G. J. (2023). Percutaneous Coronary Intervention Without On-Site Surgical Backup—The Times They Are A-Changin'. Journal of the Society for Cardiovascular Angiography & Interventions, 2(2). doi.org/10.1016/j.jscai.2022.100572

[260] Grines, C. L., Box, L. C., Mamas, M. A., J. Dawn Abbott, Blankenship, J. C., Carr, J. G., Curzen, N., Kent, W., Khatib, Y., Matteau, A., Rymer, J., Schreiber, T. L., Poonam Velagapudi, Vidovich, M. I., Waldo, S. W., & Seto, A. H. (2023). SCAI Expert Consensus Statement on Percutaneous Coronary Intervention Without On-Site Surgical Backup. *JACC: Cardiovascular Interventions*, *16*(7), 847–860. doi.org/10.1016/j.jcin.2022.12.016

The 2023 statement outlines the types of cases that can be performed without surgical backup, and discusses characteristics in this appropriateness decision including patients' clinical and lesion risk, operator experience, and the experience and rescue capabilities of the site.

Connecticut hospitals seeking authorization to initiate an Elective PCI program without on-site cardiac surgery capabilities will be required to meet updated conditions outlined in the PCI guideline recommendations, and to follow updated SCAI guidelines for staffing, equipment and supplies, patient/case selection criteria, transfer agreements, and other quality standards. [261] Additionally, applications must demonstrate a clear public need for the program.

3.4.3.2 Appropriate Use Criteria for Elective PCI in Patients with Stable Ischemic Heart Disease

Percutaneous Coronary Intervention is a critical intervention for patients with unstable coronary artery disease (CAD) and those who are post-myocardial infarction. In these patients, alongside those who have non-ST-segment-elevation acute coronary syndrome, PCI has been shown to reduce all-cause mortality, cardiac deaths, and future heart attacks. [262] However, while beneficial for patients with unstable CAD, in low-risk patients with stable CAD, new studies have shown little to no evidence of any benefit on these same outcomes, [263] and in fact the procedure has frequently been cited as an example of "overuse" in health care. [264, 265] As such, care should be taken by cardiac centers to follow all up-to-date appropriate use guidelines for PCI and related revascularization procedures [266] to prevent an overuse of these procedures in instances that have not been shown to provide positive patient benefits. American College of Cardiology/American Heart Association/Society for Cardiovascular Angiography (ACC/AHA/SCAI) guidelines for coronary artery revascularization note a recommendation to use "multidisciplinary Heart Teams" and patient shared decision-making in

[261] Grines, C. L., Box, L. C., Mamas, M. A., J. Dawn Abbott, Blankenship, J. C., Carr, J. G., Curzen, N., Kent, W., Khatib, Y., Matteau, A., Rymer, J., Schreiber, T. L., Poonam Velagapudi, Vidovich, M. I., Waldo, S. W., & Seto, A. H. (2023). SCAI Expert Consensus Statement on Percutaneous Coronary Intervention Without On-Site Surgical Backup. *JACC: Cardiovascular Interventions*, *16*(7), 847–860. doi.org/10.1016/j.jcin.2022.12.016

[262] Chacko, L., P. Howard, J., Rajkumar, C., Nowbar, A. N., Kane, C., Mahdi, D., Foley, M., Shun-Shin, M., Cole, G., Sen, S., Al-Lamee, R., Francis, D. P., & Ahmad, Y. (2020). Effects of Percutaneous Coronary Intervention on Death and Myocardial Infarction Stratified by Stable and Unstable Coronary Artery Disease. *Circulation: Cardiovascular Quality and Outcomes*, *13*(2). doi.org/10.1161/circoutcomes.119.006363

[263] Chacko, L., P. Howard, J., Rajkumar, C., Nowbar, A. N., Kane, C., Mahdi, D., Foley, M., Shun-Shin, M., Cole, G., Sen, S., Al-Lamee, R., Francis, D. P., & Ahmad, Y. (2020). Effects of Percutaneous Coronary Intervention on Death and Myocardial Infarction Stratified by Stable and Unstable Coronary Artery Disease. *Circulation: Cardiovascular Quality and Outcomes*, *13*(2). doi.org/10.1161/circoutcomes.119.006363

[264] Behnke, L. M., Solis, A., Shulman, S. A., & Skoufalos, A. (2013). A Targeted Approach to Reducing Overutilization: Use of Percutaneous Coronary Intervention in Stable Coronary Artery Disease. *Population Health Management*, *16*(3), 164–168. doi.org/10.1089/pop.2012.0019

[265] Lown Institute. (n.d.). *Avoiding Overuse: Coronary Stents*. Lown Institute Hospital Index. lownhospitalsindex.org/avoiding-coronary-stent-overuse

[266] Patel, M. R., Calhoon, J. H., Dehmer, G. J., Grantham, J. A., Maddox, T. M., Maron, D. J., & Smith, P. K. (2017). ACC/AATS/AHA/ASE/ASNC/SCAI/SCCT/STS 2017 Appropriate Use Criteria for Coronary Revascularization in Patients With Stable Ischemic Heart Disease. *Journal of Nuclear Cardiology*, *24*(5), 1759–1792. doi.org/10.1007/s12350-017-0917-9

deciding on the appropriateness of cardiac revascularization and that decisions "should be based on clinical indications, regardless of sex, race, or ethnicity." [267]

In submitting CON applications for the establishment or expansion of cardiac services, applicants should commit to following all up-to-date quality, procedural, and appropriateness guidelines for the use of cardiac procedures, including PCI/cardiac revascularization.

3.4.3.3 Minimum Volumes for Primary and Elective PCI at Cardiac Centers

In the standards and guidelines detailed in the 2012 Plan for both Primary and Elective PCIs, many components of those guidelines set minimum-expected or "ideal" values for the number of PCIs to be performed within a year at a facility performing these procedures and the number of procedures performed by each physician to ensure they were completed by "experienced providers". These volume recommendations were based on a 2011 American College of Cardiology Foundation/American Heart Association/Society for Cardiovascular Angiography and Interventions (ACCF/AHA/SCAI) Practice Guideline for Percutaneous Coronary Intervention that were replaced/retired as a result of the publication of the updated 2021 ACC/AHA/SCAI. [268]

In this updated Plan, many of these "minimum-value" components have not been carried over into the new Standards and Guidelines, as updated 2021 ACC/AHA/SCAI clinical practice guidelines no longer contain many of these recommendations. Furthermore, as noted in Yoon, (2020):

"[M]uch has changed driven by innovative development and evidences from randomized controlled trials. Drug-eluting stents incredibly improved PCI's efficacy and decreased periprocedural and long-term complications. Interventional cardiology training programs in collaboration with the many academic societies have played a pivotal role in spreading the learning experience and have standardized techniques of PCI. Therefore, PCI of left main disease is no longer specialized skill [and] the necessity of cardiac surgery onsite for back-up plan of PCI is not emphasized any more in these days [and] it is questionable that the operator and institutional volumes still remain as a key aspect of quality assessment in PCI in determining competency and quality."

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[267] Lawton, J. S., Tamis-Holland, J. E., Bangalore, S., Bates, E. R., Beckie, T. M., Bischoff, J. M., Bittl, J. A., Cohen, M. G., DiMaio, J. M., Don, C. W., Fremes, S. E., Gaudino, M. F., Goldberger, Z. D., Grant, M. C., Jaswal, J. B., Kurlansky, P. A., Mehran, R., Metkus, T. S., Nnacheta, L. C., & Rao, S. V. (2022). 2021 ACC/AHA/SCAI Guideline for Coronary Artery Revascularization: a Report of the American College of Cardiology/American Heart Association Joint Committee on Clinical Practice Guidelines. *Circulation*, *145*(3). doi.org/10.1161/cir.0000000000001038

[268] Lawton, J. S., Tamis-Holland, J. E., Bangalore, S., Bates, E. R., Beckie, T. M., Bischoff, J. M., Bittl, J. A., Cohen, M. G., DiMaio, J. M., Don, C. W., Fremes, S. E., Gaudino, M. F., Goldberger, Z. D., Grant, M. C., Jaswal, J. B., Kurlansky, P. A., Mehran, R., Metkus, T. S., Nnacheta, L. C., & Rao, S. V. (2022). 2021 ACC/AHA/SCAI Guideline for Coronary Artery Revascularization: a Report of the American College of Cardiology/American Heart Association Joint Committee on Clinical Practice Guidelines. *Circulation*, *145*(3). doi.org/10.1161/cir.0000000000001038

Some recommendations for operational size and minimum professional experience requirements remain in the 2023 Expert Consensus on PCI without On-Site Surgical Backup,[269] and these recommendations should be followed by applicants for the establishment of new services in this category.

As such, updated Plan Standards and Guidelines for the establishment of new or expanded cardiac PCI services highlight quality and appropriateness components of the new ACC/AHA/SCAI guidelines.[270] CON applications for PCI services should be able to demonstrate need for the service based on population characteristics as well as the ability to provide high quality and appropriate services based on the most up-to-date professional guidelines and measures of quality and appropriate use.

3.4.4 Open Heart Surgery

Open heart surgery refers to a therapeutic operative procedure performed on the heart and/or its coronary arteries to correct anomalous conditions (for example, coronary artery bypass surgery, heart valve replacement), often using a heart-lung bypass machine to perform the functions of circulation during surgery.

3.4.5 Current Service Locations

Table 3.17 Hospitals With Any Adult Cardiac Services in Connecticut*

Hospital	Cardiac Angioplasty - Inpatient (Primary)	Cardiac Angioplasty - Outpatient (Elective)	Diagnostic Cardiac Catheterization - Inpatient & Outpatient	Open Heart Surgery
William W. Backus	-	-	X	-
Bridgeport	X	X	X	X
Danbury	X	X	X	X
Dempsey	X	X	X	X
Greenwich	X		X	-
Hartford	X	X	X	X
Hospital of Central Connecticut	X	-	X	-
Lawrence & Memorial	X	X	X	-
Middlesex	-	-	X	-
Norwalk	X	-	X	-

[269] Grines, C. L., Box, L. C., Mamas, M. A., J. Dawn Abbott, Blankenship, J. C., Carr, J. G., Curzen, N., Kent, W., Khatib, Y., Matteau, A., Rymer, J., Schreiber, T. L., Poonam Velagapudi, Vidovich, M. I., Waldo, S. W., & Seto, A. H. (2023). SCAI Expert Consensus Statement on Percutaneous Coronary Intervention Without On-Site Surgical Backup. *JACC: Cardiovascular Interventions*, *16*(7), 847–860. doi.org/10.1016/j.jcin.2022.12.016

[270] Lawton, J. S., Tamis-Holland, J. E., Bangalore, S., Bates, E. R., Beckie, T. M., Bischoff, J. M., Bittl, J. A., Cohen, M. G., DiMaio, J. M., Don, C. W., Fremes, S. E., Gaudino, M. F., Goldberger, Z. D., Grant, M. C., Jaswal, J. B., Kurlansky, P. A., Mehran, R., Metkus, T. S., Nnacheta, L. C., & Rao, S. V. (2022). 2021 ACC/AHA/SCAI Guideline for Coronary Artery Revascularization: a Report of the American College of Cardiology/American Heart Association Joint Committee on Clinical Practice Guidelines. *Circulation*, *145*(3). doi.org/10.1161/cir.0000000000001038

Hospital	Cardiac Angioplasty - Inpatient (Primary)	Cardiac Angioplasty - Outpatient (Elective)	Diagnostic Cardiac Catheterization - Inpatient & Outpatient	Open Heart Surgery
St. Francis	X	X	X	X
St. Mary's	X	X	X	X
St. Vincent's	X	X	X	X
Stamford	X	X	X	X
Waterbury	X	X	X	X
Yale New Haven	X	X	X	X

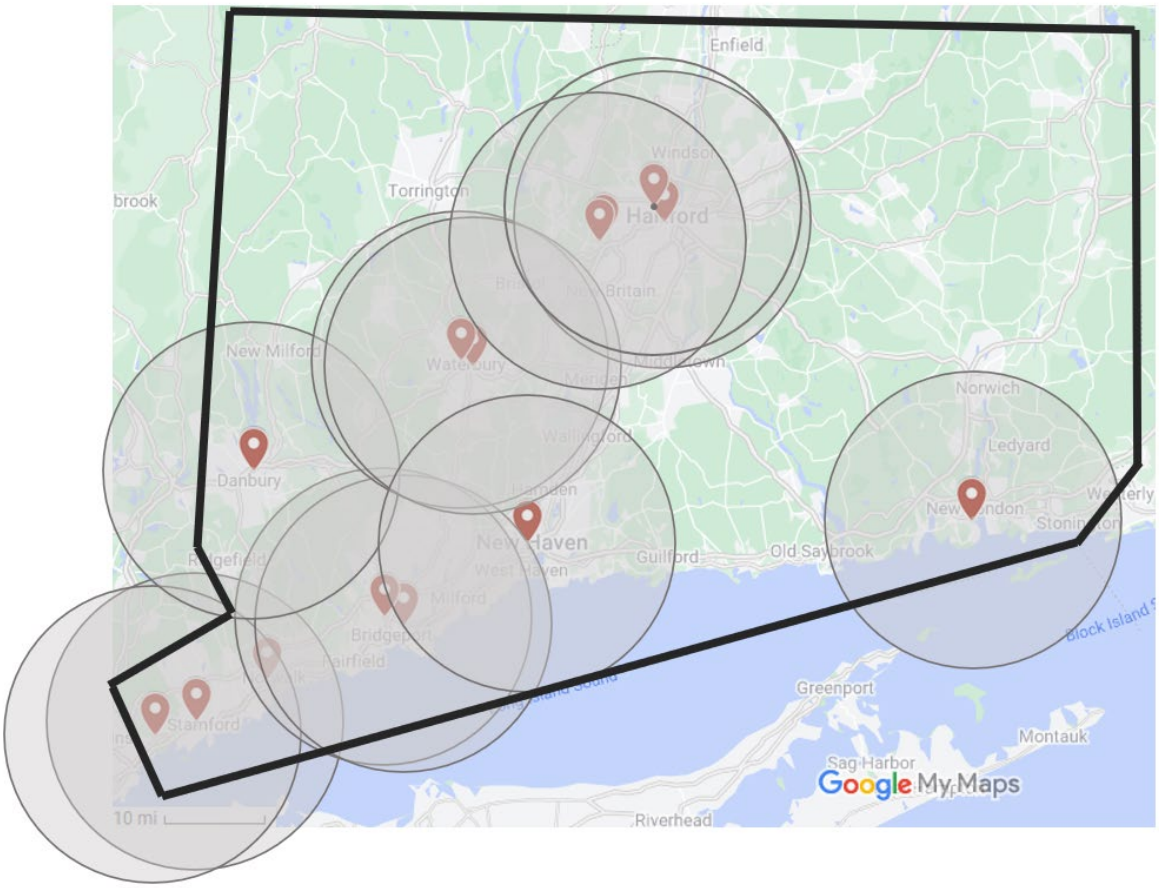
***Data Source:** CT OHS Inventory Data*

The majority of the hospitals with a primary cardiac angioplasty service line are located in the southwestern and central parts of the state. **Figure 3.8** shows a map of the current primary PCI locations and a surrounding 15 mile radius from each location, demonstrating that there are significant portions of the state outside of these zones. While an exact threshold of a maximum recommended distance to a hospital capable of providing primary PCI services is not currently in use, data from previous studies has found that outcomes for those needing cardiac angioplasty for acute myocardial infarction are better when angioplasty is provided sooner. Receiving treatment within 60 minutes of arriving at a hospital, for example, has a statistically significantly lower rate of mortality compared to receiving treatment later than 2 hours from arrival[271] and subsequent work has also found a correlation between faster treatment and better outcomes.[272]

[271] Cannon, C. P., Gibson, C. M., Lambrew, C. T., Shoultz, D. A., Levy, D., French, W. J., Gore, J. M., Weaver, W. D., Rogers, W. J., & Tiefenbrunn, A. J. (2000). Relationship of symptom-onset-to-balloon time and door-to-balloon time with mortality in patients undergoing angioplasty for acute myocardial infarction. JAMA, 283(22), 2941–2947. doi.org/10.1001/jama.283.22.2941

[272] De Luca, G., Suryapranata, H., Ottervanger, J. P., & Antman, E. M. (2004). Time delay to treatment and mortality in primary angioplasty for acute myocardial infarction: every minute of delay counts. Circulation, 109(10), 1223–1225. doi.org/10.1161/01.CIR.0000121424.76486.20

Figure 3.8 Location of Hospitals Providing Primary Cardiac Angioplasty Services and Surrounding 15-mile Radius from Each Location*



***Data Source:** CT OHS Inventory Data*

3.4.6 Standards/Guidelines

OHS has historically utilized professional societies and organizations held to be the experts for establishing standards and guidelines for cardiac care and will continue to make appropriate use of their recommendations in the review and determination of CON applications.

Examples of expert sources to be used in determining standards and guidelines include: the American College of Cardiology, the Society for Cardiovascular Angiography and Interventions, the American Heart Association, and the Advisory Council for Cardiothoracic Surgery.

3.4.6.1 Percutaneous Coronary Intervention (PCI)

In establishing new cardiac services conducting PCI procedures, applicants must show that they will follow up-to-date guidelines for providing cardiac care, based on professional society clinical practice guidelines. Specifically, at the time of publication of the Plan, this includes:

1. The 2021 ACC/AHA/SCAI Guideline for Coronary Artery Revascularization and the following recommendations:
    a. a commitment to making treatment decisions regarding coronary revascularization in patients with coronary artery disease based on clinical indications, regardless of sex, race, or ethnicity
    b. use of a multidisciplinary Heart Team approach and patient shared decision-making when patients are being considered for coronary revascularization and the optimal treatment strategy is unclear
    c. consideration of disease complexity, technical feasibility of treatment, and a Heart Team discussion in patients with stable ischemic heart disease
    d. participation in clinical data registries with the intent to review and continuously improve patient outcomes and comparison of outcomes through the use of national databases allows individual- and program-level assessment of the care provided and the opportunity to enhance care with quality improvement initiatives
    e. for smaller-volume coronary revascularization programs, affiliation and collaboration with larger volume programs
    f. tracking of quality and performance measures defined by attributes related to structure, processes, and risk-adjusted outcomes
    g. the numerous clinical guidelines for specific PCI indications, procedures, and approaches

2. The 2017 ACC/AATS/AHA/ASE/ASNC/SCAI/SCCT/STS Appropriate Use Criteria for Coronary Revascularization in Patients with Stable Ischemic Heart Disease
3. The 2023 SCAI Expert Consensus Statement on Percutaneous Coronary Intervention Without On-Site Surgical Backup and the following guidelines and requirements for conducting PCI at non-on-site surgical backup locations including:
    a. equipment and supplies
    b. transfer agreements
    c. quality assurances
    d. informed consent
    e. operator requirements
    f. staffing requirements
    g. surgical consultation
    h. case selection and management

4. Furthermore, in establishing new cardiac conducting PCI procedures applicants must additionally show the following:
    a. A clear public need and potential public benefit of the establishment of new cardiac services, potentially through identifying that Connecticut residents within the proposed Primary Service Area have insufficient access to PCI services, are receiving suboptimal therapy for STEMI, or via demonstrating need and potential benefit for a particular patient population.
    b. Any entity providing primary PCI services must show it will be available 24 hours per day, seven days per week and have adequate staff to staff the cardiac catheterization laboratory and coronary care unit at all times.
    c. Any entity providing primary PCI services must commit to providing PCI services as soon as possible.
    d. A hospital shall complete a PCI development plan that includes appropriate training for the emergency room, catheterization laboratory, coronary care unit and, if applicable, post-procedure unit.
    e. A hospital performing primary PCI without on-site cardiac surgery shall have a formal, written agreement with a tertiary institution that provides for unconditional transfer of the hospital's patients for any required additional care, including emergent or elective cardiac surgery or PCI.
    f. A hospital that performs primary PCI without on-site cardiac surgery shall maintain a formal written agreement with a licensed specialty care ambulance service that, when clinically necessary, guarantees arrival of the air or ground ambulance within 30 minutes of a request for patient transport by the hospital.

3.4.6.2 Cardiac Surgery/Open Heart Surgery

1. Guidelines for Standards in Cardiac Surgery developed by the Advisory Council for Cardiothoracic Surgery and approved by the American College of Surgeons' Board of Regents in October 1996 – Bulletin of the American College of Surgeons, Vol. 82, No. 2, February 1997 include:
    a. An annual volume of at least 100 to 125 open heart procedures per hospital is necessary from a quality standpoint and there is a greater variation in adjusted mortality rates for teams doing lower volumes as compared with those doing a high volume.
    b. At least 200 procedures per year are necessary in order for a program to function efficiently.
    c. A team approach with a minimum of two qualified cardiac surgeons is recommended to provide adequate and continuous perioperative care as well as assistance in the OR.

2. The following conditions must be met to initiate a new open heart surgery program:
    a. The annual caseload of other programs within the proposed PSA shall not drop below 350 procedures.
    b. Epidemiological evidence of conditions for which open heart surgery is appropriate within the PSA or demonstrates a significant unmet need in the PSA for these procedures.
    c. Existing program(s) in the service area are performing at least 350 open heart surgeries annually.
    d. Evidence demonstrating the performance of a minimum of 200 open heart surgeries annually within the first three years of the start of the new open heart surgery program.

3.4.6.3 Other Factors for Consideration

OHS should also consider outcomes of CON application decisions made after the publication of this document; particularly, any accepted applications that may have changed the service capacity of a particular primary service area or overall region, but whose effects are not shown in the data provided in this plan document.

3.4.7 Utilization of Cardiac Care

Section 3.4.7 details trends in the utilization of cardiac services across Connecticut over time; however, how this utilization compares to the overall state capacity for providing these services or individual facility capacity is not known at this time. A recommendation for OHS to conduct new data collection on the capacity and average utilization rates of existing inpatient and outpatient cardiac facilities across the state is listed in Chapter 9.

3.4.7.1 Acute Cardiac Care

The number of inpatient cardiac discharges declined slightly from 2018 to 2023, falling by 4% for medical cardiac visits and 2% for surgical visits among Connecticut residents **(Table 3.18).** There was a significant decrease in this care in 2020, very likely as a result of the COVID-19 pandemic delaying or complicating certain cardiac treatments, and then a recovery in the number of discharges in 2021. While the number of discharges declined, the number of patient days actually increased from 2018 to 2023 **(Table 3.19),** indicating on average the number of hospital days per discharge increased over this period, perhaps highlighting more complicated cardiac cases or more intensive treatment of cardiac needs in recent years.

Table 3.18 Cardiac Inpatient Discharges, FY 2018 to FY 2023*

Service Line	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	Change 2018 to 2023
Cardiac Care (Medical)	32,972	33,539	29,625	30,807	30,738	31,638	-4%
Cardiac Care (Surgical)	13,315	13,619	11,856	12,596	12,552	13,059	-2%

***Data Source:** OHS Hospital Discharge Database*

Table 3.19 Cardiac Inpatient Patient Days, FY 2016 to FY 2023*

Cardiac Care	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	Change 2018 to 2023
Medical	145,745	150,511	135,789	142,598	152,151	152,151	4%
Surgical	73,691	78,961	70,446	77,718	78,503	78,503	7%

***Data Source:** OHS Hospital Discharge Database*

The rate of inpatient cardiac care discharges varies across Planning Regions and race/ethnicity subpopulations in Connecticut. Discharges for acute medical cardiac interventions are generally higher for Non-Hispanic Black or African American and Non-Hispanic White populations, while surgical acute care discharges are consistently higher for Non-Hispanic White residents. These results could indicate differences in the underlying need for cardiac care, it may also signal barriers to access or disparities in the use of cardiac treatment for Hispanic/Latine and Non-Hispanic Black and African American residents. The observed rate of residents that reported a history of CHD or heart attack in CDC BRFSS data in 2021 was higher among Non-Hispanic White residents in the State (6.0% for Non-Hispanic White, 4.3% for Non-Hispanic Black, and 4.8% for Hispanic/Latine),[273] although the rate differences for condition prevalence were narrower in size than the observed treatment rates in **Table A5.** Inpatient discharge rates, by region are shown by insurance coverage in **Table A6.**

3.4.7.2 Percutaneous Coronary Interventions (PCI)

The overall population rate of PCI treatment in Connecticut was lower than the national average in 2015 among FFS Medicare beneficiaries,[274] and the observed rate of PCI treatments was lower in Medicaid and privately insured populations in 2021 compared to Medicare patients **(Table 3.20).** This is due to Medicare residents having higher rates of cardiovascular and heart disease, requiring greater number of PCI treatments.

While it is noted in the Standards and Guidelines that PCI is a medical intervention prone to overuse, lower average rates of the PCI in Connecticut compared to national averages provide evidence potentially in favor of more appropriate use of PCI treatment rates in Connecticut.

Table 3.20 Rate of PCI, per 1,000 population, by Primary Insurance Coverage, 2021*

Medicare	Medicaid	Private Insurance
4.7	1.3	1.1

***Data Source:** Altarum Analysis of Connecticut APCD data*

[273] Centers for Disease Control and Prevention. (2024). *Behavioral risk factor surveillance system prevalence and trends data.* cdc.gov/brfss/brfssprevalence/index.html

[274] Thomas, M.P., Parzynski, C.S., Curtis, J.P., Seth, M., Nallamothu, B.K., Chan, P.S., et al. (2015). Percutaneous coronary intervention utilization and appropriateness across the United States. *PLoS ONE 10*(9): e0138251. doi.org/10.1371/journal.pone.0138251

The overall rate of PCI treatments occurring in outpatient or ambulatory surgical center settings between 2016 and 2019 increased, from 35.4% to 37.5% **(Table 3.21).** During the COVID-19 pandemic years (2020 and 2021) the share in outpatient settings decreased notably (data not shown), alongside a decline in the total number of treatments among Connecticut residents. The temporary decline in PCI treatments and cardiac treatment rates during these years were likely due to a decrease in elective treatments over this period and also a greater share of medical needs coming from treating COVID-19, rather than co-occurring conditions like cardiac needs.

Table 3.21 Share of PCI in Hospital Outpatient Settings, 2016-2019*

FY 2016	FY 2017	FY 2018	FY 2019
35.4%	35.6%	35.5%	37.5%

***Data Source:** Altarum Analysis of Connecticut APCD data*

3.5 Cancer Treatment

Oncology is the branch of medicine concerned with the study and treatment of cancer, including screening, diagnosis, therapy, follow-up, and palliative care. It includes various sub-specialties such as radiation oncology (medical use of high-energy radiation to kill malignant cells), surgical oncology, and pediatric oncology. Chemotherapy, which uses drugs to kill cancer cells, can be used for a range of diseases, but most frequently refers to antineoplastic drugs to treat cancer.

In Connecticut, there is no unique licensure category for cancer treatment. The American College of Surgeons, Commission on Cancer (CoC) administers an accreditation program that encourages hospitals, treatment centers and other facilities to improve the quality of patient care by focusing on prevention, early diagnosis, pretreatment evaluation, staging, optimal treatment, rehabilitation, surveillance for recurrent disease, support services and end-of-life care. Nationally, more than 70% of all newly diagnosed cancer patients are treated in CoC-accredited cancer programs.[275] According to the Connecticut Cancer Partnership, 18 out of 27 acute care hospitals in Connecticut are CoC-accredited.[276]

[275] American College of Surgeons. (n.d.). *Apply for accreditation*. (n.d.). ACS. Retrieved May 14, 2024, from facs.org/quality-programs/cancer-programs/commission-on-cancer/coc-accreditation/apply-for-accreditation

[276] Connecticut Cancer Partnership. (n.d.) *Connecticut Cancer Plan*. ctcancerpartnership.org/wp-content/uploads/2022/09/Final-CT-Cancer-Plan-2021_2026-with-endnotes.pdf

3.5.1 Acute Care Hospital Cancer Service Lines

Table 3.22 Acute Care Hospital Cancer Services*

Hospital	Chemotherapy - Inpatient	Chemotherapy - Outpatient	Medical Oncology - Inpatient	Medical Oncology - Outpatient
William W. Backus	X	X	X	X
Bridgeport	X	X	X	X
Bristol	X	X	X	X
Central Connecticut Medical Center	X	X	X	X
Danbury	X	X	X	X
Day Kimball	X	X	X	X
Dempsey	X	X	X	X
Greenwich	X	X	X	X
Griffin	X	*a*	-	X
Hartford	X	X	X	X
Hospital of Central Connecticut	X	X	X	X
Charlotte Hungerford	X	X	X	X
Johnson Memorial	-	X	X	X
Lawrence & Memorial	X	X	X	X
Manchester	X	X	X	*b*
Middlesex	X	X	X	X
MidState	X	X	X	X
Norwalk	X	X	X	X
St. Francis	X	X	X	X
St. Mary's	X	*c*	X	*X*
St. Vincent's	X	X	X	X
Stamford	X	X	X	X
Windham	X	X	X	X
Yale New Haven	X	X	X	X

[a]*Griffin Hospital only provides outpatient chemotherapy for non-cancer treatments. Cancer related chemotherapy is provided at Griffin Hospital through the YMG/Smilow Cancer Center.*

[b]*Outpatient Medical Oncology is provided by a private group at the Cancer Center in Manchester.*

[c]*PET-CT scanning, outpatient chemotherapy services, outpatient medical oncology services and outpatient/inpatient radiation oncology services for St. Mary's Hospital and Waterbury Hospital provided by The Harold Leever Regional Cancer Center.*

***Data Source:** OHS Acute Care Hospital Service Line Survey, 2022*

3.5.2 CoC-Accredited Cancer Programs

Connecticut's CoC-accredited cancer programs and their CoC-designated accreditation category are shown in **Table 3.23.** The CoC-accreditation categories describe the services available at the facility

and may have customized requirements for selected standards based on facility type or the number of new patients receiving care each year.

Table 3.23 Accredited Cancer Programs*

Commission on Cancer (CoC) Accreditation Category[277, 278]	Hospital(s) and System(s)
NCI-designated Comprehensive Cancer Center Program (NCIP)	Yale-New Haven Hospital
Academic Comprehensive Cancer Program (ACAD)	Stamford Hospital
Academic Comprehensive Cancer Program (ACAD)	Bridgeport Hospital
Academic Comprehensive Cancer Program (ACAD)	Saint Francis Hospital
Academic Comprehensive Cancer Program (ACAD)	John Dempsey Hospital
Integrated Network Cancer Program (INCP)	Nuvance Health System
Integrated Network Cancer Program (INCP)	Hartford Healthcare System
Comprehensive Community Cancer Program (CCCP)	Lawrence and Memorial Hospital
Comprehensive Community Cancer Program (CCCP)	Saint Mary's Hospital
Comprehensive Community Cancer Program (CCCP)	Manchester Memorial
Comprehensive Community Cancer Program (CCCP)	Middlesex Hospital
Comprehensive Community Cancer Program (CCCP)	Greenwich Hospital
Community Cancer Program (CCP)	Waterbury Hospital
Community Cancer Program (CCP)	Day Kimball
Community Cancer Program (CCP)	Griffin Hospital
Veterans Affairs Cancer Program (VACP)	VA Connecticut Healthcare System

***Data Source:** ACS COC Accreditation Programs*

3.5.3 Cancer Services Utilization

Table 3.24 Inpatient Cancer Utilization* Discharges

Cancer Care	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	Change, 2018 to 2023
Medical	7,478	7,538	6,824	6,931	6,830	7,046	-6%
Surgical	1,908	2,047	1,846	2,004	1,816	1,874	-2%

[277] American College of Surgeons. (n.d.) *About cancer Program categories*. facs.org/quality-programs/cancer-programs/commission-on-cancer/coc-accreditation/categories
[278] American College of Surgeons. (n.d.) *Hospitals and facilities*. facs.org/hospital-and-facilities

Inpatient Cancer Utilization* Patient Days

Cancer Care	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	Change, 2018 to 2023
Medical	47,301	48,958	43,874	45,787	47,521	49,180	4%
Surgical	12,399	13,518	12,194	14,126	12,656	11,915	-4%

***Data Source:** OHS Hospital Discharge Database*

Analyses of acute cancer care based on discharges and patient days reveal a slight decline in acute care cancer utilization between FY 2018 and FY 2023. This trend follows a broader U.S. trend of declining cancer mortality and incidence over time, and Connecticut has a slightly below average mortality rate for cancer.[279] Surgical cancer acute care days and discharges have declined at a greater rate than medical visits, likely accounting for the fact that there has been a significant increase in cancer drug availability over this period that could be substituting pharmaceutical treatment for surgical interventions in some cancer cases.[280]

[279] Siegel, R. L., Giaquinto, A. N., & Jemal, A. (2024). Cancer statistics, 2024. *CA: A Cancer Journal for Clinicians*, *74*(1). doi.org/10.3322/caac.21820

[280] Miljković, M. D., Tuia, J., Olivier, T., Haslam, A., & Prasad, V. (2023). Cancer Drug Price and Novelty in Mechanism of Action. *JAMA Network Open*, *6*(12), e2347006. doi.org/10.1001/jamanetworkopen.2023.47006

Section 3 Chapter 4
OUTPATIENT SURGERY

4.0 Outpatient Surgery

4.1 Relationship to Certificate of Need

C.G.S. § 19a-638(a)(1) specifies a CON is required for the establishment of a new health care facility and subsection (a)(6) specifically lists the establishment of an outpatient surgical facility, as defined in § 19a-493b, or as established by a short-term acute care general hospital. Facilities seeking authorization to establish a new outpatient surgical center are required to demonstrate that they meet clear public need as well as other criteria set forth in C.G.S. § 19a-639.

4.2 Overview

This chapter describes surgeries in outpatient settings, meaning they are not accompanied by an overnight stay in the hospital. First, it describes outpatient surgery facilities (OSFs), the term used in Connecticut licensure regulations to describe entities that provide outpatient surgeries (in addition to diagnosing and treating patients). This chapter then highlights differences in surgeries performed in hospital-based outpatient departments (HOPDs) and OSFs over time and across regions, payers, and age groups.

Since the 1980s, there has been a trend toward providing certain surgeries in outpatient instead of inpatient settings.[281] This trend was driven by new anesthesia and pain management technologies that allow patients to regain consciousness more quickly. Surgery has also grown less invasive with laser, laparoscopic surgery, and endoscopic techniques. Payment policies contributed to this trend as well, making inpatient surgeries less lucrative for hospitals and payers. The COVID-19 pandemic accelerated this trend, as patients avoided hospitals due to safety concerns.[282]

[281] Young, S., Osman, B., & Shapiro, F. E. (2023). Safety considerations with the current ambulatory trends: more complicated procedures and more complicated patients. *Korean Journal of Anesthesiology, 76*(5), 400–412. doi.org/10.4097/kja.23078

[282] Cedar Gate. (2023, January 10). *Cedar Gate data analysis of 12 million members reveals accelerated shift from inpatient to outpatient surgeries* [Press Release]. Cedar Gate. prnewswire.com/news-releases/cedar-gate-data-analysis-of-12-million-members-reveals-accelerated-shift-from-inpatient-to-outpatient-surgeries-301716981.html

4.3 Outpatient Surgery Facilities (OSFs)

As well as following CON regulations OSFs that provide ambulatory surgery must also follow licensing regulations. OSFs are defined as "a corporation other than a hospital which provides ambulatory surgical care in addition to the provision of medical care for diagnosis and treatment of persons with acute or chronic conditions or to the provision of surgical care to well persons." Further, ambulatory surgery care is defined as, "surgical care not requiring overnight stay but requiring a medical environment exceeding that normally found in a physician's office." In sum, OSF is a term that broadly refers to any provider that provides surgery on an outpatient basis.

New OSFs require CON authorization before applying for an operating license. All licensed OSFs must follow state law to maintain their license and submit to regular inspections regardless of the type and procedures performed and how they are reimbursed.[283] Licensure regulations include requirements for ownership, administration, disaster planning physical space (including clinical facilities, surgical service areas, and supporting services), and staff assessment (including infection control and prevention, medication safety, and other important topics in medical care).

4.3.1 OSF Types and Ownership

While state regulations state OSFs may not be hospitals, they may still be owned by hospitals. Ownership structures include hospital-only, physicians-only, hospital-and-physician joint ventures, and corporations.

OSFs that are based in acute care hospitals operate under the hospital's license and management and offer the same types of services as other OSFs. These facilities can be part of the main hospital building, located in a separate building on the hospital campus, or situated in a building that is not on the hospital campus, which are known as satellites.

Physician-owned OSFs provide physicians with more direct control over their surgical practices. They may schedule procedures at their convenience, assemble their surgical teams, ensure the equipment and supplies being used are best suited to their technique, and design the OSF to suit their specialties. Physicians also benefit from professional autonomy over their work environment and the quality of their care. These facilities are often called "free-standing," as they are not hospital-owned or hospital-operated.

Joint venture facilities owned by hospitals and physicians became popular to help hospitals increase market share and stay profitable and physicians grow their surgical practices. In addition to the financial benefits, joint ventures enable hospitals and physicians to provide patients with services in an efficient, convenient, safe, high-quality facility at a lower cost.

[283] Conn. Agencies Regs. *§19-13-D56 - Licensing of Out-Patient Surgical Facilities Operated by Corporations*. portal.ct.gov/-/media/departments-and-agencies/dph/dph/public_health_code/sections/1913d56outpatientsurgicalfacilitiespdf.pdf

4.3.2 Facilities and Operating Rooms

As of the 2022 OHS Inventory of Health Care Services, Connecticut had:

- 27 general or children's general hospital-based multi-specialty OSFs (those surgeries occurring in a facility outside of the hospital setting) providing outpatient surgery service lines.
- 59 other licensed OSFs, including:
  - Hospital-satellite OSFs; and
  - Free-standing, independent OSFs.

Among the 59 other licensed OSFs, these facilities in the 2022 inventory reported:

- 89 operating rooms and 78 procedure rooms, for a combined room capacity of 167 in the State.
- Procedure rooms are only appropriate for minor procedures that require sterile instruments, whereas operating rooms are well suited for more major surgeries (e.g., requiring general anesthesia) and have a sterile environment.

4.4 Certified Ambulatory Surgery Centers

CMS reviews surgical procedures to determine those that are appropriate for the outpatient setting. CMS also determines which procedures are eligible for reimbursement of services under Medicare or Medicaid. In CMS regulations (and in the industry in general), OSFs are called ambulatory surgery centers (ASCs). In Connecticut, all ASCs are OSFs, but not all OSFs are ASCs.

CMS follows an established set of eligibility standards. The general standards for covered surgical procedures are those surgical and other medical procedures that:[284]

- Are specified by the Secretary and published in the Federal Register and/or via the internet on the CMS website that are separately paid under the OPPS.
- Generally do not pose a significant risk to a Medicare beneficiary when performed in an ASC.
- That would not require active monitoring and care at midnight following the procedure.
- Are not cosmetic surgery and related services, except as required for the prompt repair of accidental injury or to improve the functioning of a malformed body member.[285]

[284] Code of Federal Regulations (Annual Edition). *42 CFR Part 416 – Covered Surgical Procedures.* ecfr.gov/current/title-42/chapter-IV/subchapter-B/part-416/subpart-F/section-416.166#p-416.166(b)
[285] Code of Federal Regulations (Annual Edition). *42 CFR Part 411 -- Exclusions from Medicare and Limitations on Medicare Payment*. ecfr.gov/current/title-42/chapter-IV/subchapter-B/part-411

Eligible surgical procedures are limited to those that:[286]

- Do not generally exceed a total of 90 minutes of operating time and four hours of recovery time.
- Require local, regional, or general anesthesia for 90 minutes or less.
- Do not generally result in extensive blood loss or require major or prolonged invasion of body cavities or directly involved major blood vessels.
- Are not generally emergency or life-threatening in nature.

The majority of CMS' conditions for Medicare certification of ASCs are concerned with patient safety. The CMS Ambulatory Surgery Center Quality Reporting Program requires each ambulatory surgery center to submit information on nine quality measures. [287] Some focus on preventing avoidable hospitalizations, like the rate of unplanned hospital visits within seven days of an orthopedic surgery. Others are related to health outcomes, like the percentage of patients who had cataract surgery and had better visual function within 90 days.

4.5 Outpatient Surgery Encounters

Table 4.1 Number of Outpatient Surgery Encounters in Connecticut by Setting, 2021 to 2023*

Description	2021	2022	2023
Number of OP Surgery Encounters	561,374	584,417	651,047
Average OP Surgeries per HOPD**	11,220	11,331	11,975
Average OP Surgeries per OSF***	4,628	4,528	4,864

***Data Source**: Connecticut OHS Surgery Encounter Data*

***Notes:** **HOPD is defined as Hospital Outpatient Department, these surgeries occur in a hospital setting.*
****OSF is defined as Outpatient Surgery Facility, these surgeries occur outside of a hospital setting.*

Each HOPD provided on average 11,975 surgeries in 2023, while each OSF provided on average 4,864 surgeries. These averages are higher than those reported in 2021, as elective surgeries were performed again following the peak of the COVID-19 pandemic. These averages are shown in **Table 4.1.** Averages were used because some facilities did not report surgery counts in each year. These missing data are more common among the OSFs, while only a few HOPDs did not report surgery counts over these three years.

[286] Code of Federal Regulations (Annual Edition). *42 CFR Part 416 – Covered surgical procedures.* ecfr.gov/current/title-42/chapter-IV/subchapter-B/part-416/subpart-F/section-416.166
[287] Centers for Medicare and Medicaid Services (n.d.) *Hospitals - ambulatory surgical centers (ASCS) | provider data catalog*. data.cms.gov/provider-data/topics/hospitals/ambulatory-surgical-centers

Table 4.2 shows the split of Connecticut OP surgical encounters by race/ethnicity in 2023 and reveals that 60.2% of all encounters reported were for those who were Non-Hispanic White, while a much smaller share of encounters were provided to those who were Hispanic/Latine (9.6%) and Non-Hispanic Black or African American (6.5%). Given the population share of these race/ethnicities, it appears Hispanic/Latine and Non-Hispanic Black or African American Connecticut residents were less likely to receive OP surgeries in 2023 than Non-Hispanic White residents, relative to the overall population. These differences represent potential gaps in access or underutilization of care for those populations receiving a smaller relative share of OP surgery encounters.

Table 4.2 2023 Number and Share of Outpatient Surgery Encounters, by Race/Ethnicity*

Race/Ethnicity	Number of OP Surgery Encounters	Share of Total
Non-Hispanic White	391,691	60.2%
Hispanic or Latine	62,581	9.6%
Non-Hispanic Black or African American	42,118	6.5%
Other Race/Ethnicity or Unknown	154,657	23.8%
Total	651,047	100.0%

***Data Source**: Connecticut OHS Surgery Encounter Data portal.ct.gov/ohs/pages/data-compendium*

4.6 Trends in Utilization Outpatient Surgeries

Trends in outpatient surgeries nationwide have varied over time. Between 1996 and 2008, the number of OSFs grew dramatically because Medicare reimbursements were higher for these settings than for HOPDs. However, provisions in the ACA made reimbursements for OSFs much lower than for HOPDs. The difference in reimbursements is primarily due to higher facility fees in HOPDs.[288] These facilities fees include non-physician expenses like medical equipment, medical supplies, and overhead. Commercial insurers also tend to reimburse HOPDs at a higher rate and prices for these providers are rising faster than OSFs.[289] Therefore, OSFs may offer more affordable care with similar outcomes for certain procedures. Additionally, the presence of non-hospital OSFs in a local market can prevent HOPDs from negotiating high prices with commercial insurers.[290] This ultimately makes surgeries at HOPDs more affordable for patients.

It is therefore important to understand how utilization of HOPDs and OSFs vary in Connecticut. Public and private health insurance claims make these comparisons possible. These data can help illuminate changes in the use of these settings over time. They also help show differences in utilization of more affordable OSF care based on region, payer, and age group.

[288] Mathematica. (2023, June). *Commercial insurance prices for common outpatient services vary significantly across settings and providers.* mathematica.org/blogs/prices-for-common-outpatient-services-vary-significantly-across-settings-and-providers
[289] Blue Cross Blue Shield. (2023, December). *Hospital outpatient prices far higher, rising faster than physician sites.* bcbs.com/sites/default/files/BHI Issue Brief December_121323_SiteNeutral.pdf
[290] Carey K. (2017). Ambulatory Surgery Centers and Prices in Hospital Outpatient Departments. Medical care research and review. *MCRR, 74*(2), 236–248. doi.org/10.1177/1077558716633010

In 2021 in Connecticut, the surgeries most commonly performed in outpatient settings were colonoscopies and biopsies (85,609), upper gastrointestinal endoscopies with biopsies (55,299), sutures of skin and subcutaneous tissue (47,409), excision of skin lesions (34,633), and lens and cataract procedures (30,098). The next most common surgeries in outpatient settings are listed in **Table 4.3.** Also shown in **Table 4.3** is the decline in surgeries overall in 2020 and 2021 as federal and state mandates postponed all elective surgeries during the height of the COVID-19 pandemic.[291]

The percentage of surgeries performed in OSFs versus HOPDs varied. For example, 60% of lens and cataract procedures were performed in outpatient settings were performed in OSFs. On the other hand, 69% of debridements of wounds, infections, or burns are performed in HOPDs. For some surgeries, like procedures on nose, mouth and pharynx, there was a marked increase in the percentage of surgeries performed in OSFs and a decrease in the percentage performed in HOPDs from 2016 to 2021. The share of surgeries performed in OSFs either increased or stayed the same during this time period.

Table 4.3 Surgeries Most Commonly Performed in Outpatient Settings by Type of Outpatient Setting, 2016 to 2021*,**

Procedure Category	Setting	2016	2017	2018	2019	2020	2021	Change
Colonoscopy and Biopsy	Total Surgeries	87,270	90,404	91,164	97,128	62,395	85,609	-1,661
	OSF	44%	45%	46%	49%	52%	53%	9%
	HOPD	55%	54%	53%	50%	47%	46%	-9%
	Other	1%	1%	1%	1%	1%	1%	0%
Upper Gastrointestinal Endoscopy, Biopsy	Total Surgeries	59,227	60,017	60,370	62,115	42,254	55,299	-3,928
	OSF	37%	38%	39%	42%	45%	47%	10%
	HOPD	62%	61%	60%	57%	54%	52%	-10%
	Other	1%	1%	1%	1%	1%	1%	0%
Suture of Skin and Subcutaneous Tissue	Total Surgeries	58,531	61,613	60,759	61,937	41,810	47,409	-11,122
	OSF	1%	0%	0%	1%	0%	0%	0%
	HOPD	61%	63%	62%	57%	64%	61%	0%
	Other	38%	36%	38%	42%	35%	38%	0%
Excision of Skin Lesion	Total Surgeries	52,704	50,711	50,997	51,455	27,655	34,633	-18,071
	OSF	1%	1%	2%	2%	2%	2%	1%
	HOPD	24%	24%	23%	18%	17%	16%	-8%
	Other	75%	74%	75%	81%	81%	81%	7%
Lens and Cataract Procedures	Total Surgeries	44,356	43,758	45,378	47,474	22,815	30,098	-14,258
	OSF	45%	46%	49%	51%	56%	60%	15%
	HOPD	41%	40%	35%	32%	26%	23%	-18%
	Other	15%	15%	16%	17%	18%	17%	3%

[291] CMS. (2020). Non-emergent, elective medical services, and treatment recommendations. *CMS*. cms.gov/files/document/cms-non-emergent-elective-medical-recommendations.pdf

Procedure Category	Setting	2016	2017	2018	2019	2020	2021	Change
Other Diagnostic Procedures, Female Organs	Total Surgeries	25,440	25,717	25,529	25,790	20,187	24,336	-1,104
	OSF	1%	1%	1%	1%	1%	1%	0%
	HOPD	23%	23%	22%	23%	21%	22%	-1%
	Other	76%	76%	77%	76%	78%	77%	1%
Incision and Drainage, Skin and Subcutaneous Tissue	Total Surgeries	33,009	34,051	32,506	31,242	19,966	23,279	-9,730
	OSF	0%	0%	0%	0%	0%	1%	0%
	HOPD	33%	36%	36%	36%	40%	40%	7%
	Other	67%	64%	63%	63%	60%	60%	-7%
Debridement of Wound, Infection or Burn	Total Surgeries	29,095	32,501	33,639	34,706	19,062	21,655	-7,440
	OSF	0%	0%	1%	0%	1%	1%	0%
	HOPD	64%	66%	64%	66%	65%	69%	5%
	Other	35%	33%	35%	33%	34%	30%	-5%
Other Non-OR Therapeutic Procedures on Skin and Breast	Total Surgeries	25,826	26,078	25,359	25,372	17,853	20,068	-5,758
	OSF	0%	0%	0%	0%	0%	0%	0%
	HOPD	7%	8%	8%	8%	9%	9%	2%
	Other	93%	92%	92%	92%	91%	91%	-2%
Other Therapeutic Procedures on Muscles and Tendons	Total Surgeries	18,963	20,201	20,519	21,244	14,786	18,061	-902
	OSF	36%	40%	41%	43%	45%	47%	11%
	HOPD	55%	51%	51%	49%	48%	46%	-10%
	Other	9%	8%	8%	8%	8%	7%	-2%
Other OR Therapeutic Procedures on Joints	Total Surgeries	10,486	11,068	11,048	11,407	8,311	9,987	-499
	OSF	44%	49%	49%	52%	55%	57%	13%
	HOPD	55%	51%	50%	48%	45%	42%	-13%
	Other	1%	1%	1%	0%	0%	0%	0%
Breast Biopsy and Other Diagnostic Procedures on Breast	Total Surgeries	9,314	9,244	9,342	9,909	7,323	9,228	-86
	OSF	0%	0%	0%	0%	0%	0%	0%
	HOPD	70%	69%	68%	68%	68%	68%	-2%
	Other	30%	31%	32%	32%	32%	32%	2%
Other Non-OR Therapeutic Cardiovascular Procedures	Total Surgeries	11,302	12,414	13,064	12,294	7,252	8,929	-2,373
	OSF	0%	0%	0%	0%	0%	0%	0%
	HOPD	21%	19%	18%	19%	21%	20%	-1%
	Other	79%	81%	82%	81%	79%	80%	1%
Skin Graft	Total Surgeries	11,765	11,187	11,393	12,098	6,256	7,824	-3,941
	OSF	5%	5%	5%	5%	6%	7%	2%
	HOPD	53%	55%	54%	52%	51%	55%	2%
	Other	43%	40%	41%	44%	44%	39%	-4%
Other Therapeutic Procedures on	Total Surgeries	12,548	11,723	11,843	12,394	6,057	7,805	-4,743
	OSF	15%	16%	17%	18%	15%	19%	4%
	HOPD	26%	24%	23%	20%	18%	18%	-8%

Procedure Category	Setting	2016	2017	2018	2019	2020	2021	Change
Eyelids, Conjunctiva, Cornea	Other	59%	60%	60%	62%	66%	63%	5%
Other OR Therapeutic Procedures on Nose, Mouth and Pharynx	Total Surgeries	11,993	12,277	11,249	11,024	6,240	7,726	-4,267
	OSF	14%	18%	23%	27%	32%	31%	17%
	HOPD	51%	47%	42%	40%	40%	40%	-10%
	Other	35%	34%	34%	33%	28%	29%	-7%
Transurethral Excision, Drainage, or Removal Urinary Obstruction	Total Surgeries	9,158	8,927	9,048	8,693	4,851	5,719	-3,439
	OSF	5%	5%	6%	6%	5%	5%	0%
	HOPD	69%	67%	65%	66%	65%	66%	-4%
	Other	26%	28%	29%	28%	30%	29%	3%
Other OR Procedures on Vessels Other Than Head and Neck	Total Surgeries	5,328	4,862	5,193	5,122	2,866	3,200	-2,128
	OSF	0%	0%	0%	0%	0%	0%	0%
	HOPD	62%	62%	58%	53%	51%	54%	-8%
	Other	38%	38%	42%	47%	49%	46%	8%

***Source:** Altarum analysis of Connecticut All-Payer Claims Database data.*

****Note:** Surgeries are categorized using the Clinical Classifications Software for Services and Procedures from the U.S. Agency for Health care Research and Quality. Other outpatient settings include physicians' offices, federally qualified health centers, and other outpatient settings.*

To compare outpatient surgeries by region, payer, and age group, we analyzed where the most common outpatient surgeries are performed. Forty percent of outpatient surgeries were performed in OSFs in the Northwest Hills Planning Region in 2021, compared to just 1% in the rural Northeastern Connection region, as shown in **Table A7.** From 2016 to 2021, the rural Northwest Hills Planning Region saw the greatest shift in surgeries performed in OSFs, from 20% in 2016 to 40% in 2021. Regarding age groups, young people ages 19 and below were more likely to receive outpatient surgery in hospitals and other settings, while people age 45 and older were more likely to receive surgeries in OSFs, as shown in **Table A8.**

Regarding payer, individuals with Medicare or commercial insurance were the most likely to receive surgeries in OSFs, and the rate of OSF utilization increased from 2016 to 2021, as shown in **Table A9.** The rate that Medicaid enrollees received outpatient surgeries in OSFs grew as well, albeit at a slower pace, and these individuals were the least likely to receive outpatient surgeries in OSFs. The reason for disparities in Medicaid enrollees may be due in part to either lack of coverage for certain procedures or lack of reimbursement for aspects of procedures that might otherwise be performed. Additionally, HOPDs may have access to funding focusing on low-income individuals (like Disproportionate Share Hospital payments) that OSFs do not.

4.7 Standards/Guidelines

4.7.1 Definitions

1. C.G.S. § 19a-493b defines an OSF as "any entity, individual, firm, partnership, corporation, limited liability company or association, other than a hospital, engaged in providing surgical services or diagnostic procedures for human health conditions that include the use of moderate or deep sedation, moderate or deep analgesia or general anesthesia, as such levels of anesthesia are defined from time to time by the American Society of Anesthesiologists, or by such other professional or accrediting entity recognized by the Department of Public Health. An outpatient surgical facility shall not include a medical office owned and operated exclusively by a person or persons licensed pursuant to section 20-13, provided such medical office: (1) Has no operating room or designated surgical area; (2) bills no facility fees to third party payers; (3) administers no deep sedation or general anesthesia; (4) performs only minor surgical procedures incidental to the work performed in said medical office of the physician or physicians that own and operate such medical office; and (5) uses only light or moderate sedation or analgesia in connection with such incidental minor surgical procedures."
2. Nothing in this subsection shall be construed to affect any obligation to comply with the provisions of C.G.S. § 19a-691 concerning anesthesia accreditation or C.G.S. § 19-13-D56 of the Public Health Code concerning licensing of outpatient surgical facilities operated by corporations.
3. "Primary Service area" for an OSF is the area where approximately 75% of the facility's patients reside. Service area may be towns, zip codes, or other U.S. Census geographical type.
4. "Maximum Capacity" is the number of surgical cases that may be performed in a year based on Monday through Friday, eight hours per day, and 250 days per year. It is the responsibility of the Applicant to provide sufficient documentation to establish the length of time the average case requires and the time required for cleanup.

4.7.2 Standards and Guidelines

The following guidelines and/or standards for the establishment of an OSF will be considered by OHS when considering a CON request:

1. When an Applicant proposes to establish a new multi-specialty OSF, the case volume of single-specialty OSFs dedicated solely and exclusively for endoscopy may be excluded from the existing volumes when establishing need for the non-endoscopy surgical capacity of a multi-specialty OSF as required by C.G.S. § 19a-639 (3).
2. Unless otherwise established by the Applicant and supported with documentation:
    a. The capacity of the proposed facility will be based on eight (8) hours per day, five (5) days per week fifty (50) weeks per year for a total of 2,000 hours per year
    b. The optimal utilization for an operating room in an OSF is 80%

c. The average time for an outpatient case will be sixty (60) minutes
d. Thirty (30) minutes will be allocated to cleanup between cases

3. Unstaffed operating rooms are considered as available and shall be included in any calculations for capacity and utilization.
4. Delivery rooms for Caesarean sections and operating rooms specifically reserved for cardiac cases shall be excluded from calculations for capacity and utilization.
5. Proposed new OSFs must have written policies concerning access to care by persons who are underinsured or uninsured.
6. The Applicant must demonstrate the financial feasibility of the OSF within the first three (3) years of operations or within a reasonable time based on factors reported and supported by the Applicant.
7. The proposed new OSF must have in place at start of operations a transfer agreement with an acute care general hospital.
8. The Applicant must have in place at the start of operations a quality Assessment and Performance Improvement Program and be certified by Medicare or a national accrediting body for which CMS grants status to accredit ambulatory surgery centers.
9. The applicant must have in place at the start of operations a contract with a patient safety organization as defined at C.G.S. § 19a-127o.

4.7.3 Other Factors For Consideration

Supplemental to the current guidelines and principles, as listed in C.G.S. § 19a-639, OHS may at the agency's discretion require applicants to provide data and evidence regarding other factors when conducting CON review:

1. Changes in technology and changes in medical treatment specialties
2. Proposed service areas that include patients from those states that border Connecticut, i.e., Massachusetts, New York, and Rhode Island
3. Physician referral patterns
4. Underserved populations
5. Unique populations, specific clinical needs, or performance of time intensive procedures
6. Limited specialty programs where access to surgical services is limited
7. Atypical barriers to care based on cost, quality, financial access, or geographic access
8. Outcomes of CON application decisions made after the publication of this document; particularly, any accepted applications that may have changed known the service capacity of a particular primary service area or overall region, but whose effects are not shown in the data provided in this plan document.

Section 2 Chapter 5

IMAGING AND NEW TECHNOLOGY

5.0 Imaging and New Technology

5.1 Relationship to Certificate of Need

C.G.S. § 19a-638(a)(10) specifies a CON is required for the acquisition of computed tomography scanners, magnetic resonance imaging scanners, positron emission tomography scanners or positron emission tomography-computed tomography scanners, by any person, physician, provider, short-term acute care general hospital, or children's hospital, unless otherwise excepted from this requirement (Section 5.3). Entities seeking authorization to acquire such imaging equipment are required to demonstrate that they meet clear public need as well as other criteria set forth in C.G.S. § 19a-639. Technology not currently in use in the state also requires a CON.

5.2 Overview

OHS formed an industry workgroup to review the Imaging Standards and Guidelines as part of the state's CON regulations for imaging equipment and to make new recommendations based on the current market and trends in Connecticut.

The workgroup's convening in 2020 comprised representatives from a cross-section of Connecticut's imaging health care industry. It included independent and hospital radiologists, members of the Radiological Society of Connecticut, Connecticut Hospital Association, Connecticut Medical Society, Connecticut health care industry attorneys, and OHS staff. This workgroup helped OHS develop proposed imaging standards and guidelines, which OHS intends to promulgate as regulations. The imaging equipment definitions, standards and guidelines in this chapter were developed through collaboration with the imaging workgroup.[292]

This chapter focuses on magnetic resonance imaging (MRI), computed tomography (CT), and positron emission tomography-computed tomography (PET-CT). PET scanners are often combined with CT or MRI technology, known as PET-CT or PET-MRI scanners.[293]

5.3 Current Imaging Landscape

Pursuant to C.G.S. § 19a-634(c), in 2022, OHS surveyed all imaging providers in Connecticut to establish an inventory of all MRI, CT, PET and PET-CT scanners statewide. Based on survey responses, Connecticut has 135 MRI scanners, 136 CT scanners and 25 PET-CT scanners.[294]
As stipulated in C.G.S. § 19a-690, all magnetic resonance imaging equipment operating in Connecticut must be accredited through the American College of Radiology. The majority of imaging scanners

[292] Office of Health Strategy. (Mar. 2020). Imaging Workgroup: Imaging Standards and Guidelines Review. portal.ct.gov/-/media/OHS/docs/Imaging-Workgroup_Final-Report-4-3-2020.pdf
[293] Mayo Clinic. (2019). *Positron emission tomography scan*. Mayoclinic.org. mayoclinic.org/tests-procedures/pet-scan/about/pac-20385078
[294] Office of Health Strategy. (n.d.). *Inventory 2020*. CT.gov - Connecticut's Official State Website. portal.ct.gov/ohs/health-systems-planning/hc-facilities-and-services-plan-ab/2020-facilities-and-services-inventory

were acquired through the CON application process; however, some scanners were acquired without CON approval, as providers could acquire imaging equipment costing less than $400K without CON approval. Public Act 05-93 removed this threshold to deter the acquisition of substandard equipment. Providers still were allowed to acquire the equipment without CON approval if they could demonstrate that it was acquired prior to July 1, 2005, and was in operation before July 1, 2006, pursuant to Public Acts 05-93 and 06-28. Many of these providers sought a CON determination stating that they were in compliance with the law, without having to demonstrate the need for the equipment.

Under current law, a CON is not required for a scanner that is a replacement or relocation for a scanner that was previously acquired through CON approval or determination. The replacement imaging equipment must be of the same type that it is replacing but the specific model or strength may vary. Other than a notification to OHS of the date of replacement or relocation and disposition of the replaced equipment through the CON Replacement/Relocation form, no additional action is required.

Market trends over the past several years have affected the environment in which hospital and free-standing imaging centers operate. In the past, there was a steady and ongoing migration of imaging services out of the hospital setting, mostly to physician-owned free-standing imaging centers. Today however, reimbursement issues, access to capital, vendor relationships and physician employment are initiating a wave of acquisitions of imaging equipment at free-standing imaging centers by hospitals and private equity groups.[295] CON approval is required for these acquisitions and purchasers must demonstrate clear public need for the equipment.

5.4 Current Imaging Capacity and Utilization

A component of Connecticut OHS health care capacity surveys are counts and annual total utilization of the state's CT, MRI, and PET-CT imaging machines. These data are summarized in **Table 5.1,** detailing the number of machines, average number of scans, median number of scans, and approximate 75th percentile of scans per machine in 2022 by machine type, ownership, and mobility (fixed or mobile). Some providers report scan data for all their machines combined. Specifically, 44 CT machines (32% of the total), 24 MRI machines (18%), and 3 PET-CT machines (12%) were reported this way. In these cases, we evenly distributed the total scans across all machines for each provider. Additionally, data from scanners with annual scan counts that exceed reasonable limits were omitted, as these likely indicate submission errors.

These data show that there were 137 CT scanners, 135 MRI scanners, and 25 PET-CT scanners operating in the state in 2022. Of these machines, CT scanners complete the highest average number of scans per machine in a year, followed by MRI scanners, and lastly PET-CT scanners. Scanners

[295] Hagland, M. (2022, November 22). Consolidation and Change in Radiology: Where's This Train Headed? Healthcare Innovation. hcinnovationgroup.com/imaging/radiology/article/21283200/consolidation-and-change-in-radiology-wheres-this-train-headed

operated at hospitals also perform more scans per machine than scanners in outpatient settings, and fixed scanners are used more frequently than mobile scanners.

Table 5.1 Summary of Imaging Equipment by Type, Ownership, and Mobility, 2022*,**

Type	Ownership	Mobility	Count Scans Per Year	Average Scans per Year	Median Scans per Year	75th Percentile Scans per Year
CT	Hospital-Based	Fixed	56	13,314	12,862	16,882
	Outpatient	Fixed	77	4,552	3,343	5,251
	All Ownerships	Mobile	4	169	71	195
MRI	Hospital-Based	Fixed	40	4,436	4,614	4,804
	Outpatient	Fixed	86	3,290	3,391	4,400
	All Ownerships	Mobile	9	1,561	1,525	2,193
PET-CT	Hospital-Based	Fixed	9	2,364	1,486	3,660
	Outpatient	Fixed	8	856	913	1,129
	All Ownerships	Mobile	8	506	370	746

***Data Source:** OHS 2022 Inventory data*

****Note:** Some providers report scan data for all their machines combined; in these cases, the total scans were evenly distributed across each machine.*

Data from **Table 5.1** are used to inform the development of updated total capacity thresholds for fixed and mobile imaging machines by ownership status operating in Connecticut. The prior 2012 Facility and Services Plan used thresholds as shown in **Table 5.2;** however, research has shown imaging efficiency (scans per minute) have generally increased over time,[296] and many machines operate well above the expected number of scans per year thresholds. Additionally, previous thresholds did not account for different utilization of fixed versus mobile scanners in hospitals and outpatient settings.

To account for these factors, the 75th percentile value of the number of scans by imaging type, ownership, and mobility are considered alongside data points from other state CON language in developing new thresholds for imaging, shown in the second column of **Table 5.2.**[297] The 75th percentile was selected because the majority of machines likely do not operate at full capacity. Higher thresholds were not used to account for variations in the maximum capacity of different machines, as well as factors like staffing patterns and operational hours at various locations.

[296] Pelc N. J. (2014). Recent and future directions in CT imaging. *Annals of biomedical engineering*, *42*(2), 260–268. doi.org/10.1007/s10439-014-0974-z

[297] Michigan Department of Health and Human Services. (n.d.). *Michigan department of health and human services certificate of need (con) review standards for magnetic resonance imaging (mri) services*. michigan.gov/mdhhs/-/media/Project/Websites/mdhhs/Doing-Business-with-MDHHS/Health-Care-Providers/Certificate-of-Need/CON-Review-Standards/MRI_Standards.pdf

Table 5.2 Summary of Proposed New Capacity Thresholds for Imaging Equipment by Type, Ownership, and Mobility, 2022*,**

Scanner Type	Ownership	Mobility	Previous Threshold	% Above Previous Threshold	Revised Threshold	% Above Revised Threshold
CT	Hospital-Based	Fixed	12,000	59%	14,100	21%
	Outpatient	Fixed	3,700	42%	5,300	24%
	All Ownerships	Mobile	-	-	200	25%
MRI	Hospital-Based	Fixed	4,000	56%	4,800	38%
	Outpatient	Fixed	4,000	36%	4,400	22%
	All Ownerships	Mobile	4,000	0%	2,200	25%
PET-CT	Hospital-Based	Fixed	700	67%	3,700	22%
	Outpatient	Fixed	700	63%	1,100	38%
	All Ownerships	Mobile	700	38%	700	38%

***Data Source:** OHS 2022 Inventory data*

***Note:** The percentages of scanners or above or current and revised thresholds were based on scanners with complete data. Some providers report scan data for all their machines combined; in these cases, the total scans were evenly distributed across each machine.*

Applying the new thresholds of estimated total capacity per machine, an average utilization rate for each Connecticut planning region can be computed for 2022 MRI, CT, and PET-CT inventory data. These findings are shown in **Tables A10, A11,** and **A12.** The total capacity and overall average regional utilization of CT scanners are higher than MRI and PET-CT machines, but there is significant variation in the average utilization rates by region. Estimated utilization rates were highest in the Naugatuck Valley region for MRI scanners (96%), Northeastern Connecticut for PET-CT scanners (125%), and Greater Bridgeport for CT scanners (129%). CT scanner utilization was also over 100% in the Northeastern Connecticut, Northwest Hills, and South Central Connecticut planning regions.

Tables A10–A12 show the same data as **Tables 5.3–5.5,** but use patient place of residence rather than scanner location, and show that some variation exists in the rate of scans per person by patient residence. These data highlight the greater levels of need for imaging care among Medicare beneficiaries, indicating older adults and other Medicare beneficiaries contribute to some variation across regions. The range of population-based rates of use by the geography of the patient are a tighter range than the rates by the location of the scanner, indicating that some of the differences across regions in **Tables 5.3–5.5** are caused by patients traveling to hospitals and medical facilities in more populated regions. Data showing regions with high rates of use by a patient population, but low rates of use of scanners in that region could indicate a mismatch of need and capacity.

Table 5.3 CT Scanner Counts, Capacity, and Utilization by Region (Scanner Location), 2022*

Location	2022 Count	2022 Estimated Capacity	2022 Total Scans	2022 Percentage Utilization
Capitol	43	371,000	288,578	78%
Greater Bridgeport	8	77,600	99,758	129%
Lower Connecticut River Valley	5	35,300	28,343	80%
Naugatuck Valley	19	157,000	107,428	68%
Northeastern Connecticut	2	19,400	21,160	109%
Northwest Hills	4	47,600	54,874	115%
South Central Connecticut	25	197,800	229,779	116%
Southeastern Connecticut	9	91,700	88,257	96%
Western Connecticut	22	185,200	164,885	89%

***Data Sources:** OHS 2022 Inventory data and Connecticut Population Data, Connecticut State Data Center*

Table 5.4 MRI Scanner Counts, Capacity, and Utilization by Region (Scanner Location), 2022*

Location	2022 Count	2022 Estimated Capacity	2022 Total Scans	2022 Percentage Utilization
Capitol	42	177,200	131,678	74%
Greater Bridgeport	2	9,600	8,864	92%
Lower Connecticut River Valley	16	69,000	41,128	60%
Naugatuck Valley	24	107,000	103,129	96%
Northeastern Connecticut	9	36,400	27,922	77%
Northwest Hills	2	4,400	3,968	90%
South Central Connecticut	6	26,800	16,924	63%
Southeastern Connecticut	8	36,000	33,286	92%
Western Connecticut	26	116,800	69,600	60%

***Data Sources:** OHS 2022 Inventory data and Connecticut Population Data, Connecticut State Data Center*

Table 5.5 PET-CT Scanner Counts, Capacity, and Utilization by Region (Scanner Location), 2022*,**

Location	2022 Count	2022 Estimated Capacity	2022 Total Scans	2022 Percentage Utilization
Capitol	6	11,000	7,360	67%
Greater Bridgeport	1	3,700	2,962	80%
Lower Connecticut River Valley	4	3,200	2,472	77%
Naugatuck Valley	4	14,800	12,152	82%
Northeastern Connecticut	2	1,800	2,241	125%
Northwest Hills	1	700	136	19%
South Central Connecticut	1	1,100	600	55%
Southeastern Connecticut	3	5,900	1,948	33%
Western Connecticut	3	5,500	2,294	42%

***Data Sources:** OHS 2022 Inventory data and Connecticut Population Data, Connecticut State Data Center*

****Note:** Scan regions and counts per population are based on where the scan was provided, not the patient's region.*

5.5 Standards and Guidelines

5.5.1 Definitions

1. "Magnetic resonance imaging" or "MRI" means the use of magnetic fields and radio waves to produce cross sectional images similar to those displayed by computed tomography (CT).
2. "Magnetic resonance imaging scanner" means the magnetic resonance system consisting of an integrated set of machines and related equipment necessary to produce the images and/or spectroscopic quantitative data from scans, or any equipment that is classified by the US Food and Drug Administration as a magnetic resonance diagnostic device.
3. "Computed tomography" or "CT" means the use of radiographic and computer techniques to produce cross-sectional images of the head or body.
4. "Computed tomography scanner" means x-ray CT scanning systems, including axial, spiral, helical or electron beam CT systems (except as set forth in19a-638(b)(19)), capable of performing CT scans of the head, other body parts, or full body patient procedures, or any equipment that is classified by the United States Food and Drug Administration as a computed tomography device.
5. "Positron emission tomography" or "PET" is a non-invasive diagnostic technology which enables the body's physiological and biological processes to be observed through the use of positron emitting radiopharmaceuticals which are injected into the body and whose interaction with body tissues and organs is able to be pictured through a computerized positron trans axial reconstruction tomography scanner.
6. "Positron emission tomography scanner" or "PET Scanner" means a Food and Drug Administration-approved full or partial ring scanner or coincidence system that has a crystal at least 5/8-inch thick, techniques to minimize or correct for scatter and/or randoms, and digital detectors and iterative reconstruction, or any equipment that is classified by the US Food and Drug Administration as an emission computed tomography device.
7. "Positron emission tomography-computed tomography scanner" or "PET-CT scanner" is a medical imaging device which combines in a single gantry system both a positron emission tomography (PET) and a computed tomography (CT), so that images acquired from both devices can be taken sequentially, in the same session from the patient and combined into a single superposed image.
8. "Primary service area" or "PSA" means that geographic area (by town), for the service location in the application, consisting of the lowest number of contiguous zip codes from which the applicant draws at least 75% of its patients for this service at such location.

5.5.2 MRI Scanners Standards and Guidelines

1. Information Supporting Need Analysis

a. Identify the PSA.

b. Identify existing services (i) of the applicant, and (ii) of other providers in the PSA.

c. Provide capacity of existing services identified in subsection (1)(b).

d. Explain the likely impact on existing services identified in subsection (1)(b).

e. Provide actual and proposed hours of operation for services.

f. Provide 3-year projection of utilization, with reasonable assumptions on MRI scan volume and capacity.

g. Demonstrate need as described in 2 and 3 below.

2. Need Analysis – Statewide Benchmark

a. “Utilization ” means procedures per year for the PSA.

b. “Current Estimated Capacity” means the sum of (i) 4,800 scans per year multiplied by the number of fixed hospital-based scanners in the PSA at the time of the application, (ii) 4,400 scans per year multiplied by the number of fixed outpatient scanners, and (iii) 2,200 scans per year multiplied by the number of mobile scanners in all settings in the PSA at the time of the application.

c. “Percent Utilization of Current Capacity” means the “Utilization” divided by the ”Current Estimated Capacity.” For current estimated capacity to remain in effect, it must be updated and such update published by OHS not less than every two years based on the Statewide Facilities and Services Plan. If the Office does not publish an update, the applicant may present reliable need and capacity estimates for consideration by OHS to establish need.

3. Need Methodology

a. The Applicant shall demonstrate that the proposed scanner will be located in a Primary Service Area where the Percent Utilization of Current Capacity exceeds 85%.

b. Percent utilization of current capacity shall be the primary consideration in any CON application. However, if the applicant is unable to demonstrate a clear public need for the proposed scanner based upon the assumptions and need methodology in subsection 5.5.2.3a the Applicant may describe and OHS may consider other relevant factors, including those described in subsection 5.5.2.6, to clearly demonstrate unmet need among the population it intends to serve.

4. Quality and Access

The Applicant shall demonstrate that the proposal meets the following criteria:

a. Hospital applicants shall be accredited by the Joint Commission on Accreditation of Healthcare Organizations or certified by Medicare directly or through a deeming agency.

b. Non-hospital facilities shall obtain accreditation from the American College of Radiology within eighteen months of the date on which imaging activities are first conducted.

c. A board-certified radiologist, who is a member in good standing with the American College of Radiology, shall be responsible for managing the operation of the MRI scanner and for the written interpretation of the MRI scan.

d. Personnel shall be trained, consistent with guidance of the American College of Radiology, in the use of the MRI scanner and the safety procedures to follow in the event of an emergency.

e. When imaging is performed a physician must be available either on-site or with immediate access to remote viewing of images as they are acquired. The physician in this case must be qualified to interpret images, make adjustments to imaging parameters or protocols, make decisions regarding magnetic field strength risks, and consult with the technologists on technical factors related to the study acquisition. This physician must be board certified to perform and interpret the examinations so produced.

f. When contrast is administered, a physician capable of addressing any contrast reactions or adverse events must be on site and immediately physically available to assist in the imaging suite. This physician must be in proximity such that he/she can respond immediately if called. This is not intended to require the physical presence of a physician in the room or suite at all times.

g. The facility or provider must have a policy that explains what steps will be taken to respond in the event of a medical emergency for patients undergoing MRI scans, including the plan for responding to allergic reactions related to contrast media or other drugs or biologicals used in connection with the scan.

h. The facility or provider shall not deny MRI scanner services to any individual based upon the ability to pay or source of payment, including patients who are uninsured, underinsured, and Medicaid patients.

5. Financial Criteria

The Applicant shall demonstrate that it has sufficient capital to finance the project and provide projections concerning the revenue and expenses for the first three years of the proposal.

6. Other Factors for Consideration

Other factors that may be considered at the agency's discretion when conducting CON review include:

a. The capabilities of the proposed MRI scanner as compared to existing scanners.

b. The ability of the applicant to serve an underserved population and not jeopardize the financial viability of the project.

c. The impact on existing services, including avoiding delays in timely diagnosis or treatment.

d. The use of the scanner for clinical research.

e. The history of the applicant in running accredited, financially successful facilities.

f. The applicant's ability to make radiation dose exposure decisions.

g. For hospital applicants only, unique patient populations or specific clinical needs for specialty scanners or specific clinical applications, including scanners with multiple use applications; complexity of scanning procedures, including the impact on available scanner access due to lengthy procedures; necessity for back-up, redundant equipment, and sufficient capacity to meet the needs of emergency departments.

h. Outcomes of CON application decisions made after the publication of this document; particularly, any accepted applications that may have changed known the service capacity of a particular primary service area or overall region, but whose effects are not shown in the data provided in this plan document.

5.5.3 CT Scanners Standards and Guidelines

1. Information Supporting Need Analysis

a. Identify the PSA.

b. Identify existing services (i) of the applicant, and (ii) of other providers in the PSA.

c. Provide capacity of existing services identified in subsection (1)(a), if available.

d. Explain the likely impact on existing services identified in subsection (1)(b).

e. Provide actual and proposed hours of operation for services.

f. Provide 3-year projection of utilization, with reasonable assumptions on CT scan volume and capacity.

g. Demonstrate need as described in Sections 2 and 3 below.

2. Need Analysis – Statewide Benchmark

a. "Utilization " means the procedures per year for the PSA.

b. "Current Estimated Capacity" is the sum of (i) 14,100 scans per year multiplied by the number of fixed hospital-based scanners, (ii) 5,300 scans per year multiplied by the number of outpatient scanners, and (iii) 200 scans per year multiplied by the number of mobile scanners in all settings in the PSA at the time of the application.

c. "Percent Utilization of Current Capacity" means "Utilization" divided by "Current Estimated Capacity." For current estimated capacity to remain in effect, it must be updated and such update published by the OHS not less than every two years based on the Statewide Facilities and Services Plan. If the OHS does not publish an update, the applicant may present reliable capacity estimates for consideration by OHS to establish the capacity.

3. Need Methodology

a. The Applicant shall demonstrate that the proposed scanner will be located in a Primary Service Area where the percent utilization of current capacity exceeds 85%.

Percent utilization of current capacity shall be the primary consideration in any CON application. However, if the applicant is unable to demonstrate a clear public need for the proposed scanner based upon the assumptions and need methodology in subsection 5.5.2.3a the Applicant may describe and OHS may consider other relevant factors, including those described in subsection 5.5.2.6, to clearly demonstrate unmet need among the population it intends to serve.

4. Quality and Access

The Applicant shall demonstrate and attest that the proposal meets the following criteria:

a. Hospital applicants shall be accredited by The Joint Commission or certified by Medicare directly or through a deeming agency.

b. Non-hospital facilities shall obtain accreditation from either the American College of Radiology or the Intersocietal Commission on the Accreditation of Computed Tomography Laboratories within eighteen months of that date on which the imaging activities are first conducted.

c. The CT unit shall be operated safely by trained physicians and/or radiologic technologists who are licensed in Connecticut and who meet the minimum criteria set forth by the appropriate accrediting organization including but not limited to the American College of Radiology, the American Registry of Radiologic Technologists, and the American Registry of Clinical Radiography.

d. All applicants must employ or contract with a radiation physicist to review the quality and safety of the operation of the CT scanner.

e. When imaging is performed a physician must be available either on-site or with immediate access to remote viewing of images as they are acquired. The physician must be qualified to interpret images, make adjustments to imaging parameters or protocols, make decisions

regarding radiation dose, and consult with the technologists on technical factors related to the study acquisition. This physician must be board certified to perform and interpret the examinations so produced.

f. When contrast is administered, a physician capable of addressing any contrast reactions or adverse events must be on site and immediately physically available to assist in the imaging suite. This physician must be in proximity such that he/she can respond immediately if called. This is not intended to require the physical presence of a physician in the room or suite at all times.

g. The facility or provider must have a policy that explains what steps will be taken to respond in the event of a medical emergency for patients undergoing CT scans, including the plan for responding to allergic reactions related to contrast media or other drugs or biologicals used in connection with the scan.

h. The facility or provider shall not deny CT scanner services to any individual based upon the ability to pay or source of payment, including patients who are uninsured, underinsured, and Medicaid patients.

5. Financial Criteria

a. The Applicant shall demonstrate that it has sufficient capital to finance the project and provide projections concerning the revenue and expenses for the first three years of the proposal.

6. Other Factors for Consideration

Other factors that may be considered at the agency's discretion when conducting CON review include:

a. The capabilities of the proposed CT scanner as compared to existing scanners.

b. The ability of the applicant to serve an underserved population and not jeopardize the financial viability of the project.

c. Demonstrated ability to impact health disparities or health equity in the relevant service area.

d. The impact on existing services, including avoiding delays in timely diagnosis or treatment.

e. The use of the scanner for clinical research.

f. The history of the applicant in running accredited, financially successful facilities.

g. The applicant's ability to make radiation dose exposure decisions.

h. For hospital applicants only, unique patient populations or specific clinical needs for specialty scanners or specific clinical applications, including scanners with multiple use applications; complexity of scanning procedures, including the impact on available scanner

access due to lengthy procedures; necessity for back-up, redundant equipment, and sufficient capacity to meet the needs of emergency departments.

i. Outcomes of CON application decisions made after the publication of this document; particularly, any accepted applications that may have changed known the service capacity of a particular primary service area or overall region, but whose effects are not shown in the data provided in this plan document.

5.5.4 PET-CT Scanners Standards and Guidelines

1. Information Supporting Need Analysis

a. Identify the PSA.

b. Identify existing services (i) of the applicant, and (ii) of other providers in the PSA.

c. Provide capacity of existing services identified in subsection 1(b), if available.

d. Explain the likely impact on existing services identified in subsection 1(b).

e. Provide actual and proposed hours of operation for services.

f. Provide 3-year projection of utilization, with reasonable assumptions on PET or PET-CT scan volume and capacity.

g. Demonstrate need as described in Sections 2 and 3 below.

1. Need Analysis – Statewide Benchmark

a. “Utilization Rate” means procedures per year for the PSA.

b. “Current Estimated Capacity” is the sum of (i) 3,700 scans per year multiplied by the number of fixed hospital-based scanners, (ii) 1,100 scans per year multiplied by the number of outpatient scanners, and (iii) 700 scans per year multiplied by the number of mobile scanners in all settings in the PSA at the time of the application.

c. “Percent Utilization of Current Capacity” means “Utilization rate” divided by ”Current Estimated Capacity.” For current estimated capacity to remain in effect, it must be updated and such update published by the OHS not less than every two years based on the Statewide Facilities and Services Plan. If OHS does not publish an update, the applicant may present reliable capacity estimates for consideration by OHS to establish the capacity.

2. Need Methodology

a. The Applicant shall demonstrate that the proposed scanner will be located in a PSA where the Percent Utilization of Current Capacity exceeds 85%.

b. If the applicant is unable to demonstrate a clear public need for the proposed scanner based upon the assumptions and need methodology in subsection 5.5.4.3a the Applicant

may rely upon any other relevant factors, including those described in subsection 5.5.4.6, to demonstrate need among the population it intends to serve.

3. Quality and Access

The Applicant shall demonstrate that the proposal meets the following criteria:

a. Hospital applicants shall be accredited by the Joint Commission or certified by Medicare directly or through a deeming agency.

b. Non-hospital facilities shall obtain accreditation from either the American College of Radiology or the Intersocietal Commission on the Accreditation of Nuclear Laboratories within eighteen months of the date on which imaging activities are first conducted.

c. A physician who is board-certified, shall be available during service hours.

d. Qualified engineering and physics personnel with training in the operation and maintenance of PET equipment shall be available to the facility during service hours.

e. Qualified radiation safety personnel with training and experience in the handling of short-lived position emitting nuclides shall be available during services hours.

f. The facility must have a policy that explains what steps will be taken to respond in the event of a medical emergency for patients undergoing PET or PET-CT scans, including the plan for responding to allergic reactions related to contrast media or other drugs or biologicals used in connection with the scan.

g. The facility or provider shall not deny PET or PET-CT scanner services to any individual based upon the ability to pay or source of payment, including patients who are uninsured, underinsured, and Medicaid patients.

4. Financial Criteria

a. The Applicant shall demonstrate that it has sufficient capital to finance the project and provide projections concerning the revenue and expenses for the first three years of the proposal.

5. Other Factors for Consideration

Other factors that may be considered at the agency's discretion when conducting CON review include:

a. The capabilities of the proposed PET or PET-CT scanner as compared to existing PET or PET-CT scanners.

b. The ability of the applicant to serve an underserved population and not jeopardize the financial viability of the project.

c. The impact on existing services, including avoiding delays in timely diagnosis or treatment.

d. The use of the PET or PET-CT scanner for clinical research.

e. The history of the applicant in running accredited, financially successful facilities.

f. The applicant's ability to make radiation dose exposure decisions.

g. For hospital applicants only, unique patient populations or specific clinical needs for specialty scanners or specific clinical applications, including scanners with multiple use applications; complexity of scanning procedures, including the impact on available scanner access due to lengthy procedures; necessity for back-up, redundant equipment, and sufficient capacity to meet the needs of emergency departments.

h. Outcomes of CON application decisions made after the publication of this document; particularly, any accepted applications that may have changed known the service capacity of a particular primary service area or overall region, but whose effects are not shown in the data provided in this plan document.

6. Replacement of PET scanners

a. A facility or provider may replace a PET scanner with a PET-CT scanner, without obtaining a CON, provided that the CT scanner will not be used independently of the PET component of the PET-CT scanner.

b. A facility or provider may replace a mobile PET scanner or PET/CT scanner, without obtaining a CON, with a fixed PET or PET/CT scanner.

5.6 New Technology

5.6.1 Relationship to Certificate of Need

C.G.S. § 19a-638(a)(13) specifies a CON is required for the acquisition of equipment utilizing technology that has not previously been used in the state. The acquisition of new technology requires clear demonstration of public need as well as that other criteria set forth in C.G.S. § 19a-639 are met.

5.6.2 Determination of New Technology

Any person, provider or vendor seeking to introduce or acquire technology or service in Connecticut should first file a CON Determination Request Form with OHS for an official determination if the proposed technology is considered to be new technology.

5.6.3 Standards/Guidelines

5.6.3.1 Definitions

"New Technology" means equipment or services not previously provided in the state of Connecticut for the treatment of patients.

5.6.3.2 Review Criteria

A CON application for new technology shall be consistent with the Plan if the following criteria are met:

1. The applicant shall document that the proposed new technology is efficacious.
2. The applicant shall document that the equipment is certified for its proposed use by the United States Food and Drug Administration (FDA).
3. If applicable, preference shall be given to proposals that involve multi-institutional arrangements by contract, agreement, ownership, or other means between two (2) or more agencies to coordinate services, share support services, or provide services on a geographically integrated basis. A party to a multi-institutional arrangement shall not establish its own service or participate in another arrangement for the service until the original service is operating at sufficient capacity for adequate efficiency and quality of care. If the projected use of the new service includes expected referrals from others, the referring parties should be included in the multi-institutional arrangement, if possible.
4. If applicable, preference shall be given to proposals that place the new technology in a medical school or other teaching or research facility. New technology designed for pediatric use or proposed for use by pediatric patients shall be approved only in pediatric teaching facilities which have the availability of physician specialty support and specialized ancillary support services.
5. Before acquiring new technological equipment, applicants shall have complementary diagnostic and treatment services available to support the new program.
6. In cases where specific professional standards have not yet been formulated, applicants shall demonstrate that personnel who will staff the new technology are qualified and adequately trained. The applicant shall specify how personnel will be trained in the use of the specific equipment and safety procedures to follow in the event of an emergency. The institution providing the new services shall document its plan for providing continuing education for referring physicians and institutions in the use of the new technology.
7. Applicants acquiring new technological equipment shall report utilization and demographic data necessary to evaluate the technology and to facilitate State planning.

Section 2 Chapter 6
BEHAVIORAL HEALTH

6.0 Behavioral Health

6.1 Background and Relationship to Certificate of Need

C.G.S. § 19a-638 (a)(1)(2) and (5) specify that the establishment or transfer of ownership of a behavioral health care facility or the termination of hospital-operated behavioral health services requires a CON. The foregoing requires that certain criteria set forth in C.G.S. § 19a-639 be met. As provided by subsection (b) of the statute, CON approval is not required for non-profit facilities that contract with a State agency or programs licensed or funded by the Department of Children and Families (except psychiatric residential treatment facilities). In addition, behavioral health services provided by a licensed private practitioner do not require CON approval.

Further, as a result of the passage of Senate Bill No. 9 in 2023, regarding Public Act No. 23-97, if on or before June 30, 2026, a mental health facility would like to increase the licensed bed capacity, a CON for such increase will not be required, provided that the mental health facility demonstrates that it accepts reimbursement for (i) any covered benefit provided to a covered individuals under individual or group insurance policy, (ii) a self-insured employee welfare benefit plan, (iii) HUSKY Health.

If the mental health facility does not accept or stops accepting reimbursement for any covered benefit provided to a covered individual under a policy, plan, or program described in clause (i), (ii), or (iii) above, a CON for an increase in the licensed bed capacity shall be required.

Additionally, pursuant to the same Senate Bill, the establishment of a harm reduction center through the associated pilot program (C.G.S. § 17a-673c) also does not require a CON approval. The pilot program is to be established by the Department of Mental Health and Addiction Services, in consultation with the Department of Public Health to prevent drug overdoses, beginning not later than July 1, 2027.

More details on these CON behavioral health temporary exemptions and related guidelines can be found in the associated Public Act and Senate Bill.[298]

6.2 Mental Health and Substance Use Disorder Service Overview

Treatment for mental health and substance use disorders very often overlap and intersect. Adult and child/adolescent services also are interrelated, as services to a teen can transition to adult services as that person “ages out” of the child/adolescent programs. In addition, entire families of various ages can be fundamentally involved in the treatment of an individual with a mental health or substance use disorder. The services of private providers and the services of State-operated entities are related by referrals between private and State programs and by State funding sources. Behavioral Service facilities include Psychiatric Outpatient Clinic for Adults (POCA, Facilities for the Care or Treatment of Substance Abusive Persons (SA), Mental Health Day Treatment (MHDT), Mental Health Residential

[298] An act concerning health and wellness for Connecticut residents. (2003) Connecticut Public Act No. 23-97. cga.ct.gov/2023/ACT/PA/PDF/2023PA-00097-R00SB-00009-PA.pdf

Living Centers (MHRL), and Mental Health Community Residence (MHCR). Examples of types of mental health and substance use disorder services include intensive outpatient, partial hospitalization program, outpatient, and inpatient programs.

6.2.1 Data Collection and Limitations

It is important to note that there are multiple underlying data sources used to describe behavioral health treatment facilities in this section. This report includes data from Connecticut's Statewide Health Care Facilities And Services Inventory to determine the number of mental health and substance use facilities as listed in the 2022 inventories. This allows for a high-level examination of behavioral health treatment facilities in Connecticut. To expand on this inventory data, this section also utilizes self-reported survey data from the Substance Abuse and Mental Health Services Administration (SAMHSA) from its annual survey of available mental health and substance use disorder treatment facilities – the National Substance Use and Mental Health Services Survey (N-SUMHSS) and from the National Survey on Drug Use and Health (NSDUH). This allows for a more granular review of specific mental health and substance use disorder service lines available and populations served at select facilities in Connecticut. The report is then further augmented by data provided by the State of Connecticut Department of Mental Health and Addiction Services (DMHAS), that report bed availability and utilization of services at their own facilities. Multiple sources are reported to provide the most comprehensive picture of behavioral health treatment facilities in Connecticut. Since these data sources are not always consistent, the result may be inconsistent counts in available facilities/service lines. We point out these inconsistencies and the reasons behind them wherever feasible.

6.3 Description of the Behavioral Health Treatment Environment

6.3.1 Hospital and Inpatient Mental Health Treatment Services

Many of Connecticut's short-term private and public general acute care hospitals provide various types and intensities of inpatient services for the treatment of adult mental health conditions. For fiscal year 2022, 24 of the 27 hospitals (26 short-term general hospitals and one children's general hospital) reported more than 100 psychiatric inpatient-days, indicating at least some treatment of inpatient mental health/substance use disorder needs. In addition, 19 of the 27 hospitals have a "Mental Health Clinic – Outpatient" service line as listed by the 2022 inventory data. Most hospitals can therefore provide at least some short-term inpatient services for individuals with mental health diagnoses, and many can also offer outpatient services. **Table 6.1** shows the list of general acute care hospitals in Connecticut with more than 100 psychiatric inpatient patient-days in 2022, and those with the noted service line availability of an outpatient mental health clinic.

Table 6.1 General Acute Care Hospital Psychiatric/Mental Health Service Lines, 2022*

Hospital	Psychiatric Acute Bed Patient Days (>100 days)	Mental Health Clinic - Outpatient
William W. Backus Hospital	X	X
Bridgeport Hospital	X	X
Bristol Hospital	X	X
Connecticut Children's Medical Center	X	-
Danbury Hospital	X	X
Day Kimball Hospital	X	X
John Dempsey Hospital	X	X
Greenwich Hospital	X	X
Griffin Hospital	X	X
Hartford Hospital	X	X
Hospital of Central Connecticut	X	X
Charlotte Hungerford Hospital	X	X
Johnson Memorial Hospital	X	-
Lawrence & Memorial Hospital	X	X
Manchester Memorial Hospital	X	X
Middlesex Hospital	X	X
Midstate Hospital	-	-
Norwalk Hospital	X	X
Rockville General Hospital	-	X
Sharon Hospital	X	-
Saint Francis Hospital	X	-
Saint Mary's Hospital	X	-
Saint Vincent's Hospital	X	X
Stamford Hospital	X	-
Waterbury Hospital	X	X
Windham Hospital	-	-
Yale New Haven Hospital	X	X

***Data Source:** *Connecticut Acute Care and Children's Hospital Service Lines*

In addition to the use of general inpatient acute care hospital beds for mental health services, specific 24-hour hospital inpatient mental health treatment or partial hospitalization services are available at select facilities in Connecticut. Based on data collected by the Substance Abuse and Mental Health Services Administration (SAMHSA) in its annual survey of available mental health and substance use disorder treatment facilities—the National Substance Use and Mental Health Services Survey (N-

SUMHSS)[299]—in 2022, Connecticut had 19 non-acute care hospital facilities capable of providing 24-hour inpatient care, while 32 facilities could provide at least partial mental health hospitalization or day treatment. Seventeen of the 19 facilities reporting utilization statistics in 2022 in N-SUMHSS, averaged a bed count of 52 and in total those hospitals reported serving a total 803 clients on the particular day of the survey and with an overall utilization rate of 90.1%.[300]

Additional hospital-operated facilities include Connecticut facilities specifically providing inpatient beds for the diagnosis, treatment, or rehabilitation of psychiatric disorders. Of the 19 facilities six are licensed as Hospitals for Mentally Ill Persons (HMIP) as of 2022:

1. Silver Hill Hospital, New Canaan (129 psychiatric beds)
2. Natchaug Hospital, Mansfield Center (60 psychiatric beds)
3. Masonicare Health Center, Wallingford (43 psychiatric beds)
4. Hebrew Senior Care, West Hartford (38 psychiatric beds)
5. Whiting Forensic Hospital, Middletown (229 psychiatric beds, specific to those involved in the criminal justice system)
6. State of Connecticut Department of Children and Families (DCF), Albert J. Solnit Hospital, Middletown (50 psychiatric beds, specific to children ages 13 to 17)

The Department of Mental Health and Addiction Services does not collect utilization statistics for these non-state operated HMIP facilities.

[299] Substance Abuse and Mental Health Services Administration. (2022). *National Substance Use and Mental Health Services Survey (N-SUMHSS)* State Profiles 2022. samhsa.gov/data/sites/default/files/reports/rpt42713/NSUMHSS-State-Profile-22.pdf
[300] Substance Abuse and Mental Health Services Administration. (2022). *National Substance Use and Mental Health Services Survey (N-SUMHSS)* State Profiles 2022. samhsa.gov/data/sites/default/files/reports/rpt42713/NSUMHSS-State-Profile-22.pdf

In addition to direct care in the hospital and outpatient settings, several of the larger hospitals operate mental health services as a department or division within the hospital as a distinct identity (such as The Institute of Living, a department of Hartford Hospital and Yale-New Haven Psychiatric Hospital, a department of Yale-New Haven Hospital, and the Behavioral Health Services at both the Saint Francis Hospital and Johnson Memorial Hospital). In addition, many hospitals operate dedicated behavioral health units within their emergency department.

The State of Connecticut Department of Mental Health and Addiction Services (DMHAS) also operates its own inpatient treatment facilities, covering both psychiatric problems and persons with severe addictions. These facilities are a subset of the 19 non-acute care hospital facilities capable of providing 24-hour inpatient care and include:

1. Southwest Connecticut Mental Health System (aka Greater Bridgeport Community Mental Health Center), Bridgeport (62 State-operated acute psychiatric beds)
2. Connecticut Valley Hospital, Middletown (209 State-operated acute psychiatric beds)
3. Whiting Forensic Hospital, Middletown (229 psychiatric beds, specific to those involved in the criminal justice system)
4. Connecticut Mental Health Center, New Haven (20 State-operated acute psychiatric beds, plus 12 research beds)
5. Capitol Region Mental Health Center, Hartford (16 State-operated beds)

The DMHAS utilization statistics for acute psychiatric beds in their facilities show that for mental health care, the number of unduplicated clients increased in FY 2023 compared to prior years, after a brief dip in FYs 2021-2022. The occupancy rate of DMHAS beds has remained very near 90% since FY 2019 **(Table 6.2).**[301] An increasing count of clients, alongside consistently high utilization rates of acute psychiatric beds over time indicate a high need for these services in Connecticut.

Table 6.2 DMHAS Acute Psychiatric Bed Utilization and Annual Unduplicated Clients*

Description	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Unduplicated Clients	614	579	504	491	940
Bed Utilization Rate	90%	90%	86%	88%	89%

***Data Source:** Connecticut Department of Mental Health and Addiction Services*

The State of Connecticut Department of Children and Families (DCF) also operates the Albert J. Solnit Hospital and psychiatric residential treatment facility cottages for children aged 13 to 17, including 50 hospital beds and additional residential space.

[301] Altarum review of data provided by DMHAS staff in May 2024.

6.3.2 Non-Hospital Residential Mental Health Treatment

There are 25 mental health residential living centers operating in Connecticut according to OHS inventory data and a total of 247 total beds as of December 2022.[302] These living centers are covered under Mental Health Residential Living Center licenses, which pursuant to the Connecticut Public Health Code, is a supervised, structured, and supportive group living arrangement that includes psychosocial rehabilitation services and may also include assistance in obtaining necessary community services to persons in need of mental health services.[303] **Table 6.3** shows the number of licensed beds currently available at these residential mental health treatment centers by Planning Region from the Connecticut Inventory data.

Table 6.3 Mental Health Residential Treatment Beds, by Region*,**

Region	Number of Licensed Beds	Rate per 100,000 population
Capitol Region	69	3.47
Lower CT River Valley	23	6.50
Metropolitan	32	5.03
Naugatuck Valley	24	2.66
Northeastern CT	14	6.99
Northwest Hills	0	-
South Central	65	5.65
Southeastern CT	0	-
Western CT	20	1.73

***Data Sources:** State Data Center Population Projections and CT OHS 2022 Inventory Data*

****Note:** CT OHS 2022 Inventory Data are based on eLicense data maintained by the CT Department of Public Health.*

From the DMHAS data on use of intensive residential services for mental health needs, **Table 6.4** shows the number of unduplicated clients served and bed utilization rate over the past five fiscal years. Other DMHAS services include Group Home services, Supervised Apartments, and Transitional services (data not shown), each of which had an average utilization rate in FY 2023 of more than 90% of beds.

Table 6.4 DMHAS Intensive Residential Mental Health Bed Utilization and Annual Unduplicated Clients*

Description	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Unduplicated Clients	246	252	234	253	315
Bed Utilization Rate	93%	93%	91%	96%	95%

***Data Source:** Connecticut Department of Mental Health and Addiction Services*

[302] Inventory Table 15 is located at portal.ct.gov/ohs/health-systems-planning/hc-facilities-and-services-plan-ab/2022-facilities-and-services-inventory

[303] Licensure of private freestanding mental health residential living centers. Connecticut Department of Public Health, Public Health Code 19a-495-551. portal.ct.gov/-/media/departments-and-agencies/dph/dph/public_health_code/sections/19a495551privatementalhealthresidentialcenterspdf.pdf

6.3.3 Community Free-Standing Community Residences for Mental Health Treatment

There are five community mental health residences operating in Connecticut and a total of 35 licensed beds as of December 2022 based on OHS inventory data.[304]

6.3.4 Psychiatric Outpatient Mental Health Treatment

There are 299 psychiatric outpatient clinics for adults reported in the OHS 2022 Inventory data operating in Connecticut as of December 2022.[305] Some of the providers holding a Psychiatric Outpatient Clinic for Adults license are Community Health Centers. Many of Connecticut's Community Health Centers provide primary care, dental care, and behavioral health services. Most general hospitals provide some level of outpatient mental health services **(Table 6.1),** but they are not separately licensed as such. **Table 6.5** shows the number of outpatient mental health treatment clinics by Planning Region and the number of clinics per 100,000 population in each region.

Table 6.5 Mental Health Outpatient Clinics, by Region*

Region	Number of Clinics	Rate per 100,000 population
Capitol Region	64	3.22
Lower CT River Valley	18	5.09
Metropolitan	29	4.55
Naugatuck Valley	36	3.99
Northeastern CT	6	3.00
Northwest Hills	14	6.11
South Central	59	5.12
Southeastern CT	28	4.76
Western CT	45	3.89

***Data Source:** OHS 2022 Inventory Data and State Data Center Population Projections*

6.3.5 Mental Health Day Treatment

There are 19 mental health day treatment facilities operating in Connecticut as of December 2022 according to OHS 2022 inventory data.[306] These facilities provide evaluation, diagnosis and ambulatory treatment services for individuals who are experiencing mental, emotional or behavioral problems, disturbances, dysfunctions or disorders as defined in the most recent edition of the Diagnostic and Statistical Manual of the American Psychiatric Association. Day treatment facilities provide unit of service to each client is a minimum of four (4) hours and a maximum of twelve (12) hours, that is less rigorous than intensive outpatient treatment or partial hospitalization treatment, both of which also allow for patients to return home, yet partial hospitalization treatment is

[304] Inventory Table 16 located at portal.ct.gov/ohs/health-systems-planning/hc-facilities-and-services-plan-ab/2022-facilities-and-services-inventory
[305] Inventory Table 17 located at portal.ct.gov/ohs/health-systems-planning/hc-facilities-and-services-plan-ab/2022-facilities-and-services-inventory
[306] Inventory tables referenced in the Plan are located here: portal.ct.gov/ohs/health-systems-planning/hc-facilities-and-services-plan-ab/2022-facilities-and-services-inventory

considered to be more intensive and structured than intensive outpatient treatment or day treatment.[307]Most of the providers also hold one or more Psychiatric Outpatient Clinic for Adults licenses.

Separately, SAMHSA data in the 2022 N-SUMHSS Connecticut state profile found that 32 facilities were providing either mental health day treatment or partial hospitalization services.[308]

6.3.6 Hospital-based and Inpatient Substance Use Disorder Treatment Services

Some of Connecticut's short-term general acute care hospitals provide substance use disorder treatment, either in an inpatient setting or through outpatient treatment options. The types and intensity of services for substance use disorder treatment vary by general acute care hospital, and in general are less frequently offered than similar mental health services. Medical triage is the most common service line offered for substance use disorders (25 hospitals), followed by outpatient treatment (11 hospitals) and intensive inpatient treatment (11 hospitals). **Table 6.6** shows the offering of substance use disorder treatment service lines at Connecticut general acute care hospitals.

Table 6.6 General Acute Care Hospital Substance Use Disorder (SUD) Service Lines, 2022*

Hospital	SUD - Ambulatory Chemical Withdrawal Management	SUD - Outpatient Chemical Maintenance **	SUD - Day/Evening Treatment	SUD - Intensive Treatment - Inpatient	SUD - Medical Triage	SUD - Outpatient Treatment
William W. Backus	-	-	-	-	X	-
Bridgeport	-	-	X	-	X	X
Bristol	-	-	-	X	-	X
Connecticut Children's Medical Center	-	-	-	-	X	-
Danbury	-	-	X	-	X	-
Day Kimball	-	-	-	-	-	-
John Dempsey	-	X	-	X	X	-
Greenwich	X	X	X	-	X	X
Griffin	X	a	X	X	X	X
Hartford	-	X	X	X	X	X
Hospital of Central Connecticut	-	X	X	X	X	X
Charlotte Hungerford	-	-	-	-	X	X

[307] McCarty, D., Braude, L., Lyman, D. Dougherty, R., Daniels, A., Shoma, Shoma Ghose, S., Delphin-Rittmon, M. (2015). Substance abuse intensive outpatient programs: Assessing the evidence. *Psychiatr Serv. 65*(6). pmc.ncbi.nlm.nih.gov/articles/PMC4152944

[308] Substance Abuse and Mental Health Services Administration. (2022). *National Substance Use and Mental Health Services Survey (N-SUMHSS)* State Profiles 2022. samhsa.gov/data/sites/default/files/reports/rpt42713/NSUMHSS-State-Profile-22.pdf

Hospital	SUD - Ambulatory Chemical Withdrawal Management	SUD - Outpatient Chemical Maintenance **	SUD - Day/Evening Treatment	SUD - Intensive Treatment - Inpatient	SUD - Medical Triage	SUD - Outpatient Treatment
Johnson Memorial	-	-	-	X	X	-
Lawrence & Memorial	-	-	-	-	X	-
Manchester Memorial	X	X	X	X	X	X
Middlesex	-	-	b	-	X	b
Midstate	-	-	-	-	X	-
Norwalk	-	-	X	-	X	-
Rockville	-	-	-	-	X	-
Sharon	-	-	-	-	X	-
Saint Francis	-	-	-	X	X	-
Saint Mary's	-	-	-	X	X	-
Saint Vincent's	-	-	-	-	X	-
Stamford	-	-	-	-	X	-
Waterbury	X	X	X	X	X	X
Windham	-	-	-	-	X	-
Yale New Haven	-	-	X	X	X	X

[a]*Griffin Hospital substance abuse outpatient chemical maintenance is provided for Suboxone patients only.*
[b]*Middlesex Hospital operates a dual diagnosis day and evening program and an outpatient treatment program for patients with a primary diagnosis of a psychiatric disorder.*

***Data Source:** OHS 2022 Inventory Data*

***Note:** Chemical Maintenance Treatment means a service to which a person may receive medical supervision of the planned use of a prescribed substance, per the Public Health Code 19a-495-570.*

Of the 174 substance use disorder treatment facilities in the 2022 SAMHSA N-SUMHSS survey, 11 facilities report providing hospital inpatient care, for a total statewide of 277 beds (25 average beds per facility).[309] These beds were used at a 78.7% rate at the point-in-time survey in 2022, lower than the average utilization rate of the inpatient mental health beds. Seven (7) of these 11 facilities reported offering each "withdrawal management" services and "treatment" services in 2022.

6.3.7 Residential Substance Use Disorder Treatment Services/Facilities

OHS inventory data do not separately track residential substance use disorder treatment options in the State as of 2022. Residential substance use disorder treatment options provide a lower level of

[309] Substance Abuse and Mental Health Services Administration. (2022). *National Substance Use and Mental Health Services Survey (N-SUMHSS)* State Profiles 2022. samhsa.gov/data/sites/default/files/reports/rpt42713/NSUMHSS-State-Profile-22.pdf

medical support and intensity of care than inpatient treatment options.[310] Of the 174 substance use disorder treatment facilities in the 2022 SAMHSA N-SUMHSS survey, 38 facilities report providing residential treatment options for patients, offering 939 beds statewide (average of 36 beds per facility among those reporting the number of beds available).[311] These beds were used, based on the point-in-time survey, at a higher rate than the inpatient substance use disorder treatment beds, on average at 86.8% in 2022. In residential settings, seven (7) facilities reported offering withdrawal management services, while 22 offered short-term stays (<31 days) and 24 offered long-term stays (>30 days).

From the DMHAS data on use of residential services for substance use disorder needs, **Table 6.7** shows the number of unduplicated clients served and bed utilization rate over the past five fiscal years for different types of residential substance use disorder services. Compared to the mental health residential needs, the number of clients has not increased meaningfully over this five-year period and the average bed utilization rate at DMHAS facilities for SUD treatment has actually fallen slightly over time.

Table 6.7 DMHAS Residential SUD Bed Utilization and Annual Unduplicated Clients*

Description	FY2019	FY2020	FY2021	FY2022	FY2023
Intermediate/Long Term Residential - Clients	2,536	2,260	1,743	2,381	2,551
Bed Utilization Rate	94%	94%	81%	83%	85%
Intensive Res. Rehabilitation - Clients	2,270	2,295	2,048	2,227	2,255
Bed Utilization Rate	94%	94%	58%	64%	64%
Intensive Residential - Enhanced	703	674	592	616	649
Bed Utilization Rate	91%	91%	70%	84%	85%

***Data Source:** Connecticut Department of Mental Health and Addiction Services*

6.3.8 Outpatient Substance Use Disorder Treatment Services/Facilities

There were 151 non-residential outpatient substance use disorder treatment facilities in the 2022 SAMHSA N-SUMHSS survey in Connecticut, serving 32,350 patients within the state when the point-in-time survey was conducted.[312] Of these 151 facilities, 113 were offering methadone/buprenorphine maintenance or naltrexone treatment (64.9%), 142 were offering regular outpatient SUD treatment (81.6%), 101 were offering a form of intensive outpatient SUD treatment (58.0%), and 19 (10.9%) were offering outpatient withdrawal management services.

[310] McKinnel, N. (2023) Inpatient vs residential treatment: What's the difference? *Evoke Wellness*. https://evokewellnessoh.com/blog/inpatient-vs-residential-treatment-whats-the-difference

[311] Alternatively, the Connecticut DMHAS reports 1,065 residential beds in the state as of 2024, not including private residential facilities.

[312] Substance Abuse and Mental Health Services Administration. (2022). *National Substance Use and Mental Health Services Survey (N-SUMHSS)* State Profiles 2022. samhsa.gov/data/sites/default/files/reports/rpt42713/NSUMHSS-State-Profile-22.pdf

DMHAS also provides outpatient substance use disorder treatment services at its facilities and reported treating over 15,000 patients in the state fiscal year 2023.[313] According to DMHAS, the most common substance use disorder treatment needs seen among patients at their facilities are: Alcohol Use Disorder, Heroin Use Disorder, and Other Opioid Use Disorder.[314]

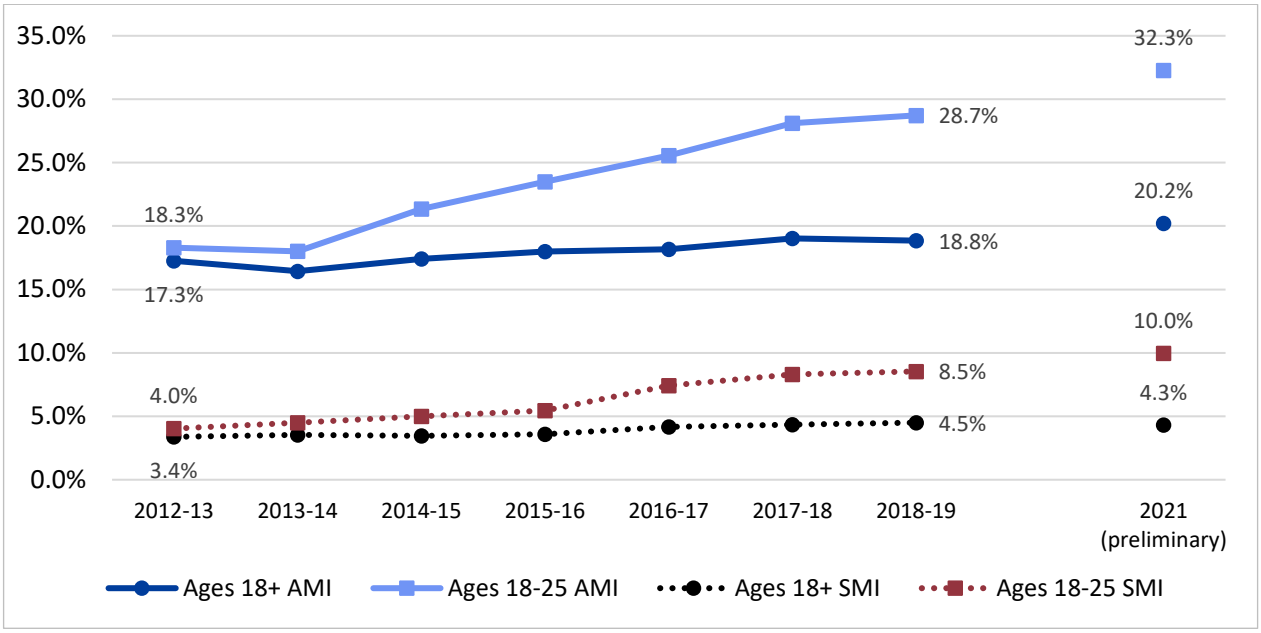
6.4 Adult Mental Health Condition Prevalence/Unmet Needs

The rate of mental illness needs, as measured by the SAMHSA National Survey on Drug Use and Health (NSDUH), among Connecticut residents has been rising over the past decade, particularly among young adults.[315] The overall rate of any mental illness[316] has increased from 17.3% in 2012-2013 to 20.2% in 2021 among all adults aged 18 and older, while the rate among those 18–25 increased from 18.3% to 32.3% **(Figure 6.1).**[317] The rate of serious mental illness[318] has also increased, from 3.4% in 2012-2013 to 4.3% in 2021 for all adults aged 18 and older, and even greater for young adults (ages 18–25), from 4.0% in 2012-2013 to 10.0% in 2021.

As a result of these prevalence increases, an estimated 581,700 adults in Connecticut had a mental illness and a need for treatment in 2021, with 124,100 needing treatment for serious mental illness (meaning an estimated 457,700 needed care for mild to moderate mental illnesses). This population need is more than 65,000 greater than the number of adults that required mental illness care in Connecticut in 2012–2013. Of the 581,700 adults needing treatment for mental illness, 531,400 received some form of mental health care services in 2021, or about 91% of those needing care.[319] The overall share of all adults in Connecticut who received mental health treatment in 2021 was 20.6% (nearly four full percentage points higher than the national average over the same time period (16.9%). Connecticut tends to rank highly among all U.S. states in the share of those with mental illness receiving at least some form of mental health care services.

[313] Department of Mental Health and Addiction Services, Evaluation, Quality Management and Improvement (EQMI). (2023). *2023 Annual Statistical Report*. portal.ct.gov/-/media/dmhas/eqmi/annualreports/annualstatisticalreport2023.pdf
[314] Department of Mental Health and Addiction Services, Evaluation, Quality Management and Improvement (EQMI). (2023). *2023 Annual Statistical Report*. portal.ct.gov/-/media/dmhas/eqmi/annualreports/annualstatisticalreport2023.pdf
[315] Substance Abuse and Mental Health Services Administration. (2022). *National Substance Use and Mental Health Services Survey (N-SUMHSS)* State Profiles 2022. samhsa.gov/data/sites/default/files/reports/rpt42713/NSUMHSS-State-Profile-22.pdf
[316] The definition used by SAMHSA for "any mental illness" over this period is as follows: "Any Mental Illness (AMI) aligns with DSM-IV criteria and is defined as having a diagnosable mental, behavioral, or emotional disorder, other than a developmental or substance use disorder."
[317] 2021 data may not be directly comparable due to changes in the survey during the COVID-19 pandemic
[318] The definition used by SAMHSA for "serious mental illness is as follows: "Serious Mental Illness (SMI) aligns with DSM-IV criteria and is defined as having a diagnosable mental, behavioral, or emotional disorder, other than a developmental or substance use disorder. Estimates of SMI are a subset of estimates of any mental illness (AMI) because SMI is limited to people with AMI that resulted in serious functional impairment."
[319] Substance Abuse and Mental Health Services Administration. (2022). *National Substance Use and Mental Health Services Survey (N-SUMHSS)* State Profiles 2022. samhsa.gov/data/sites/default/files/reports/rpt42713/NSUMHSS-State-Profile-22.pdf

Figure 6.1 Connecticut Rate of Adult Mental Illness, by Age Group and Mental Illness Status (2012–2021)*,**



***Data Source:** SAMHSA Interactive NSDUH State Estimates, datatools.samhsa.gov/saes/state*

****Note:** Due to changes in survey design and mental illness/substance use disorder definitions, 2021 statistics are not directly comparable to prior years, more detail is available at: samhsa.gov/data/report/2021-methodological-summary-and-definitions*

Yet, even with a higher rate of treatment for Connecticut adults, gaps in the use of mental health care services remain, especially in certain regions of the state. **Table 6.8** shows anticipated need for any mental illness care (and remaining unmet need after considering those that received treatment) for the population of Connecticut adults in each region. These estimates are made by applying 2016–2018 substance use disorder rates and shares of mental illness prevalence and use of care to the 2021 adult population rates.[320] Because the 2016–2018 NSDUH statistics use the DMHAS Regional Behavioral Health Action Organizations (RBHAOs) coverage areas for substate estimates, the RBHAO regions were mapped as best as possible to the Planning Regions used in the rest of the Plan.[321] Rates of mental illness prevalence and utilization should be interpreted as estimates for each Planning Region, not absolute counts of need.

An estimated 51,500 Connecticut adults had an unmet need for mental illness care in 2021, and the highest rates of untreated adults were in the Metropolitan and Western regions, while the greatest number of untreated adults were in the Capitol and Western regions (due to their larger overall population and number of adults with AMI). These statistics only report on the rate of the population receiving **any type** of mental health care services during the year, and likely under-report the

[320] Substance Abuse and Mental Health Services Administration. (2019). Substate Estimates of Substance Use and Mental Illness from the 2016-2018 NSDUH: Results and Detailed Tables. samhsa.gov/data/nsduh/2016-2018-substate-reports
[321] A map of the Regional Behavioral Health Action Organizations in Connecticut is available here: portal.ct.gov/-/media/dmhas/prevention/rbhaomappdf.pdf

anticipated additional need, due to individuals receiving some treatment, but inadequate amounts of care. **Table 6.8** shows indicators of need for additional mental health care services, although additional treatment beyond the "untreated" estimate of persons likely also exists and is not shown in this table.

Table 6.8 Estimated Unmet Need for Adult Mental Health Care Services, by Region (2021)*

Region	Total Adult Population (2021)	Population with Any Mental Illness	2021 Treated Estimate	2021 Untreated Estimate
Capitol Region	791,416	164,284	146,746	17,538
Lower CT River Valley	146,612	27,720	28,000	-
Metropolitan	246,614	49,667	42,167	7,500
Naugatuck Valley	362,452	72,373	69,252	3,121
Northeastern CT	80,684	17,632	15,436	2,196
Northwest Hills	94,904	18,950	18,133	817
South Central	463,393	87,614	88,500	-
Southeastern CT	236,474	51,678	45,241	6,437
Western CT	455,810	91,798	77,937	13,861
Total	**2,878,358**	**581,716**	**531,413**	**51,470**

***Data Sources:** 2016-2018 NSDUH Substate Estimates and ACS 2021 1-year population estimates (ages 18+)*

The prevalence of overall reported mental illness needs are greatest among young adults in Connecticut, particularly those aged 18–25. The rate of AMI is over 50% greater for this group compared to the overall 18+ adult population **(Figure 6.1).** Across race/ethnicity categories, mental illness is most common among Hispanic/Latine (22.5%) and Non-Hispanic White populations (21.0%), while Non-Hispanic Black and "Other" race/ethnicities had rates of mental illness below the broader state average.[322,323] Those covered by Medicaid have much higher rates of AMI (26.6%), compared to those with private health insurance (18.7%) and Medicare coverage (7.2%). By income, those below the FPL (<100% of FPL), had AMI rates of 24.2%, while population categories of those above the FPL had mental illness rates below 20.0%.

Statistics on the overall treatment rate for mental illness needs were not readily available in the data by race/ethnicity, health insurance coverage statuses, or poverty level categories. Available data on the rate of treatment specifically for adults with Major Depressive Episodes (MDEs) were tracked in the most-recent data summaries however, and can be used to highlight differences among these groups in accessing treatment.[324] The rate of Non-Hispanic White (56.3%) and Hispanic/Latine (58.2%)

[322] Substance Abuse and Mental Health Services Administration. Data Tools. NSDUH 2-Year Restricted-use Data (2021-2022). Accessible at: datatools.samhsa.gov

[323] It is important to note that rates of mental illness and substance use disorder in the SAMHSA NSDUH statistics are based on population surveys and therefore can be influenced by self-reporting bias. If self-reporting of mental health and/or SUD needs varies across populations, this could impact the comparisons of these groups; for more information, for example: Drapeau, A., Boyer, R., & Diallo, F. B. (2011). Discrepancies between survey and administrative data on the use of mental health services in the general population: findings from a study conducted in Québec. BMC public health, 11, 837. doi.org/10.1186/1471-2458-11-837

[324] Substance Abuse and Mental Health Services Administration. Data Tools. NSDUH 2-Year Restricted-use Data (2021-2022). Accessible at: datatools.samhsa.gov

Connecticut residents receiving professional counselling services or prescription drugs for MDE were twice as frequent as Non-Hispanic Black residents (28.6%) and also greater than "Other" race/ethnicity group treatment rates (43.8%). This is an indicator of disparities in mental health care utilization and access for Non-Hispanic Black and "other" residents. Similarly, rates of use of professional counselling or prescription drugs to treat MDE were higher among Medicare (75.8%) enrollees, compared to those with private insurance (60.0%), or those covered by Medicaid (54.9%). As a result of the observed disparities, access to mental health care treatment options to all Connecticut residents should be made a priority.

The NSDUH survey does not capture the predominant mental illness contributing to respondents' health care needs, but the most recent Connecticut DMHAS annual statistical report highlights the following most common mental health conditions: Depressive Disorders, Schizophrenia Spectrum and Other Psychotic Disorders, Trauma- and Stressor-Related Disorders, and Anxiety Disorders.[325]

It is important to note that differences in the receipt of mental health treatment can be driven by both the availability, access to, and affordability of care and the willingness of an individual to seek treatment. Disparities in the use of mental health care services (and substance use disorder treatment in the subsequent section), highlight disparities in the use of care and may represent barriers to care for some populations alongside differences in the willingness of individuals to seek treatment. As additional detail, the national survey component of the NSDUH details reasons for individuals not receiving mental health treatment in the past year and the most commonly cited responses include both systemic barriers (e.g., "thought it would cost too much," "did not know how or where to get treatment," "could not find treatment program or healthcare professional they wanted to go to") alongside individual willingness to seek treatment (e.g., "thought they should have been able to handle their mental health, emotions, or behavior on their own," "not ready to start treatment," "did not have enough time for treatment").

6.5 Substance Use Disorder Prevalence/Unmet Needs

The collection of 2021 data on substance use disorders changed dramatically as the definitions of drug use and alcohol use disorders were revised based on updates the revised DSM-V, and these changes increased many of the rates of use disorders. The SAMHSA state-level data collection in 2021 no longer reported the more narrowly defined illicit drug use disorder (in favor of a broader set of drug use disorders); however, rates of most of the underlying drug disorders increased between 2019 and 2021 and a recomputed metric of illicit drug use would be expected to do the same. Further trend analysis on substance use disorders will be available as more data becomes available.

[325] Department of Mental Health and Addiction Services, Evaluation, Quality Management and Improvement (EQMI). (2023). *2023 Annual Statistical Report*. portal.ct.gov/-/media/dmhas/eqmi/annualreports/annualstatisticalreport2023.pdf

6.6 Youth and Adolescent-specific Mental Health Treatment

While many of the mental health treatment facilities for adults also treat children and adolescents (under the age of 18) for their mental health needs, there are specific classifications/facilities for this care and population spread across the state. Among the total 173 mental health treatment facilities reported in the 2022 SAMHSA N-SUMHSS, 60 (34.7%) report a dedicated program for children/adolescents with serious emotional disturbance (SED), 68 report a dedicated program for treating young adults more broadly (39.3%) and 88 report a dedicated program for treating persons under the age of 18 with serious mental illness (SMI) (50.9%). Fifty-two (52) (30.1%) of the 173 facilities reported treating young children (ages 0-5) in 2022, while 74 (42.8%) reported treating children (ages 6-12), and 106 (61.3%) reported treating adolescents.[326]

Some of the 173 mental health treatment facilities reported by N-SUMHSS are operated by The Connecticut Department of Children and Families (DCF). DCF provides care via a spectrum of behavioral health services, child protection and family services, juvenile justice services, substance abuse-related services, education services and prevention services. DCF serves approximately 36,000 children and 16,000 families across its programs each year. Included in DCF facilities covering mental health needs are 70 DCF licensed outpatient psychiatric clinics for children and 10 extended day treatment facilities (providing 368 licensed slots).[327]

6.6.1 Child Mental Illness Condition Prevalence/Unmet Needs

The NSDUH survey does not ask the majority of the mental health questions for respondents under the age of 18. Estimates of treated vs. untreated rates and disparities in the use of mental health care services for children, youth, and young adolescents are not included.

6.7 Standards and Guidelines

A CON application for a new behavioral health care facility shall be considered when such facility or expansion is not subject to an exemption of the CON application requirement (current examples at the time of publication in Section 6.1), and should be consistent with the overall guidelines and principles detailed in Connecticut General Statutes Section 19a-639.

Particular attention for a behavioral health CON application should be paid to:

1. Whether there is a clear public need for the health care facility or services proposed by the applicant. Public need should incorporate an understanding of the current capacity and type of behavioral health care services offered in the proposed facility's service area to demonstrate a need for either additional capacity or new service lines within a region.

[326] Substance Abuse and Mental Health Services Administration. (2022). *National Substance Use and Mental Health Services Survey (N-SUMHSS)* State Profiles 2022. samhsa.gov/data/sites/default/files/reports/rpt42713/NSUMHSS-State-Profile-22.pdf
[327] Connecticut Department of Children and Families. (2024). *Outpatient Psychiatric Clinics for Children, DCF Licensed Programs, Facilities and Out-of-State Approved Adoption Agencies*. licensefacilities.dcf.ct.gov/listing_OPCC.asp

2. Whether an applicant has satisfactorily identified the population to be served by the proposed project and satisfactorily demonstrated that the identified population has a need for the proposed services, for example providing population estimates in primary service areas, prevalence of need, utilization of current services and wait lists.
3. Whether an applicant has satisfactorily demonstrated how the proposal will improve quality, access to, and cost effectiveness of health care delivery in the region, and the applicant commits to providing the highest quality treatment modalities (e.g., medication assisted treatment for opioid use disorder) as recommended by federal and state agencies.
4. Whether the applicant's past and proposed provision of health care services to relevant patient populations and payer mix promote access to all Connecticut patients, with a particular focus in access to mental health and substance use disorder treatment for all types of health insurance and a commitment to build robust provider in-network options (when relevant) for patients served at the new facility.
5. Whether an applicant has satisfactorily demonstrated that the proposed project shall not result in an unnecessary duplication of existing or approved health care services or facilities, including a consideration of both privately and publicly owned behavioral health care facilities.
6. Outcomes of CON application decisions made after the publication of this document; particularly, any accepted applications that may have changed known the service capacity of a particular primary service area or overall region, but whose effects are not shown in the data provided in this plan document.

Section 2 Chapter 7
PRIMARY CARE

7.0 Primary Care

7.1 Relationship to Certificate of Need

Most primary care services housed in facility settings are licensed as Outpatient Clinics, which do not require CON approval.[328] Other primary care settings are exempt as well, like school-based health centers, free clinics, and primary care services provided by a licensed private practitioner. However, as outlined by C.G.S. subsection (a) of § 19a-638, ending primary care services in a hospital generally requires CON authorization, including Federally Qualified Health Centers.

7.2 Service Introduction

Primary care includes preventive and routine care for acute and chronic illnesses for infants, children, adolescents, and adults.[329] More specifically, primary care includes:

- Immunizations against common diseases.
- Routine blood work and screenings.
- Health promotion and counseling regarding injury prevention; heart disease prevention; and drug, alcohol, and tobacco counseling.
- Treatment of common acute illnesses, like infectious, urologic, or gynecologic diseases.
- Ongoing treatment of chronic illnesses, like acne, rheumatoid arthritis, and cardiovascular disease.
- Treatment for common behavioral problems such as depression, anxiety disorder, substance use disorder, and other behavioral health issues.
- Other services like care coordination and community and public health services.[330]

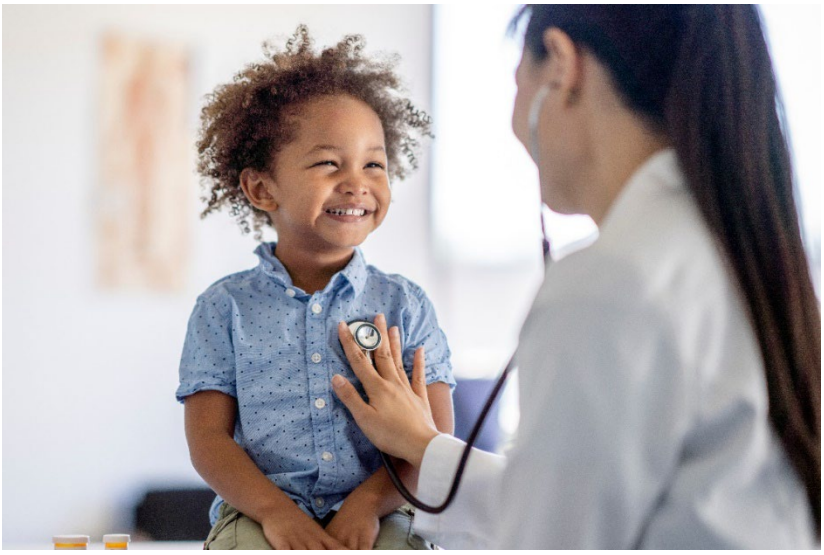
Demand for primary care services is expected to increase due to population growth, an increase in the number of residents with insurance coverage, and the aging-related health needs of seniors.[331]

Primary care is provided by a range of licensed professionals. Connecticut's 2021 Primary Care Assessment includes the following professionals as part of the state's primary care capacity: practitioners practicing family medicine or general practice, internal medicine, or pediatrics, as well as registered nurses, certified nursing assistants, and advanced practice registered nurses.[332] Licensed

[328] Connecticut Department of Public Health. (2021). *Connecticut primary care assessment*. portal.ct.gov/-/media/DPH/Primary-Care-Office/PCNA-FinalDraft-V8_122821Revised.pdf
[329] American Academy of Family Physicians. (n.d.). *Primary care*. aafp.org/about/policies/all/primary-care.html
[330] Rivo, M.L., Saultz, J.W., Wartman, S.A., & DeWitt, T.G. (1994). Defining the Generalist Physician Training. *Journal of American Medical Association*, *271*, (19), 1499-1504. jamanetwork.com/journals/jama/article-abstract/372405
[331] Connecticut Department of Public Health. (2021). *Connecticut primary care assessment*. portal.ct.gov/-/media/DPH/Primary-Care-Office/PCNA-FinalDraft-V8_122821Revised.pdf
[332] Connecticut State Department of Health. (2021). *Connecticut primary care assessment*. portal.ct.gov/-/media/dph/primary-care-office/pcna-finaldraft-v8_122821revised.pdf

nurse midwives and physician assistants were also included in the limited-term Statewide Primary Care Access Authority's (SPCAA) 2010 interim report to the General Assembly.[333]

Health care providers across settings provide some primary care services. However, primary care practitioners are distinct from other provider types. They primarily work in outpatient settings and make first contact with patients when they have a medical need. They also serve as personal clinicians who have long-term relationships with their patients, and continue to diagnose, treat, and educate them to meet most of their health care needs.[334]



Identifying primary care providers and describing the nature of their services are important to defining primary care. Designing a comprehensive system of primary care in which the role of other health care professionals is clearly defined helps with efficient allocation of resources and increases access to quality and effective care.

This section of the plan contains information on what primary care facilities and services are available and accessible in local communities statewide with a focus on safety net services. This section also identifies gaps in services and unmet need for primary care; and provides an inventory of ongoing public and private initiatives to address these issues.

7.3 Overview of Primary Care Delivery in Connecticut

People with health insurance coverage are most likely to regularly access primary care services. Some health care plans require beneficiaries to have a personal primary care practitioner to diagnose, treat, educate, and coordinate the services they access under the plans. In the U.S. in 2022, nearly 89% of adults under age 65 with private health insurance reported having one usual place to receive their health care, and 77% reported having a wellness visit (also known as an annual visit or preventive care visit) in the past year.[335, 336] Eighty-seven percent of adults under age 65 on Medicaid reported a usual place for care, and 79% reported having a wellness visit in the past year. Fifty seven percent of adults

[333] Flinter, M. & Swan, T. (2010). *Statewide primary care access authority: Interim report to the general assembly*. cga.ct.gov/ph/tfs/20071001 State-Wide Primary Care Access Authority/20100217/Interim Report to the General Assembly (2-17-10).pdf

[334] American Academy of Family Physicians. (n.d.). *Primary care*. aafp.org/about/policies/all/primary-care.html

[335] National Center for Health Statistics. (2024). *Percentage of having a usual place of health care for adults aged 18-64, United States, 2019—2022*. National Health Interview Survey. Generated interactively: wwwn.cdc.gov/NHISDataQueryTool/SHS adult

[336] National Center for Health Statistics. (2024). *Percentage of having a wellness visit in past 12 months for adults aged 18-64, United States, 2019—2022.* National Health Interview Survey. Generated interactively: wwwn.cdc.gov/NHISDataQueryTool/SHS adult

who are uninsured reported having one usual place to receive their health care, and 45% reported having a wellness visit in the last year. Ninety-four percent of adults over age 65 with Medicare reported having one usual place to receive their health care, and 87% indicated they had received a wellness visit in the past year.[337,338] Many of these wellness or preventive care visits were provided by primary care specialists;[339] however, there has been a shift in where these visits occur moving from primary care practitioner offices to other clinics.[340]

For purposes of this Plan, a primary care practice is one that employs at least one primary care practitioner who is responsible for all the primary care needs of all the practice's patients. In Connecticut, a primary care practice, office, clinic, or group may be operated under a clinician's license, the license of a general or children's general hospital, or a broad outpatient clinic license category. DPH is the licensing authority and does not have a separate license category for primary care practices or clinics.

7.4 Primary Care Services Provided in Facility Settings

Below are descriptions of the primary care practice settings and the populations they serve in Connecticut. Where available, office locations, hours of operation, populations served, and services provided are listed for each setting in the companion document, the Inventory of Health Care Facilities, Services, and Equipment.

The five main categories of primary care facilities covered in this section are:

1. Primary care practitioner offices/practices
2. Primary care providers licensed as outpatient clinics
3. Hospital operated primary care centers/clinics
4. Limited primary care services providers
5. Federal government primary care clinics

7.4.1 Primary Care Practitioner Offices and Practices

In 2009, more than two-thirds of the US population received their primary care services from a primary care practitioner (PCP) who operated in an office. By 2021 approximately 50% of the

[337]National Center for Health Statistics. (2024). *Percentage of having a usual place of health care for adults aged 65 and over, United States, 2019—2022*. National Health Interview Survey. Generated interactively: wwwn.cdc.gov/NHISDataQueryTool/SHS adult

[338] National Center for Health Statistics. (2024). *Percentage of having a wellness visit in past 12 months for adults aged 65 and over, United States, 2019—2022*. National Health Interview Survey. Generated interactively: wwwn.cdc.gov/NHISDataQueryTool/SHS adult

[339] Santo L, Kang K. (n.d.) *National Ambulatory Medical Care Survey: 2019 National Summary Tables.* dx.doi.org/10.15620/cdc:123251

[340] FairHealth. (2021). *FH Health care Indicators and Medical Price Index 2021*. FairHealth. mma.prnewswire.com/media/2042147/FH Healthcare Indicators and FH Medical Price Index 2023 - A FAIR Health White Paper.pdf

U.S. population received primary care services from a PCP in an office-based practice.[341] That share declined as more people sought care through retail clinics, urgent care facilities, and telehealth. Between 2020 and 2021 there was a 51% increase in utilization of retail clinics, and a 14% increase in use of urgent care centers, with Connecticut having the fourth greatest percentage of medical claim lines from retail clinics.[342] Further discussion on these trends of shifting care is provided in the sections below.

Each of the health insurance plans authorized by the Connecticut Department of Insurance (DOI) to be sold in the state has a dedicated phone line or a web-enabled database to assist beneficiaries in locating primary care practitioners and other health care practitioners.

7.4.2 Primary Care Providers Licensed as Outpatient Clinics

DPH oversees the licensing of outpatient clinics providing a variety of services, including primary care. Pursuant to the Public Health Code of the State of Connecticut, Chapter 4 § 19-13-d45, this licensure extends to outpatient clinics operated by municipalities or non-hospital corporations, providing ambulatory medical or dental care for the diagnosis, treatment, and management of chronic or acute conditions not necessitating overnight stay, as well as preventive, and maintenance services for well individuals.[343]

In addition to primary care, licensed outpatient clinics offering primary care services may also deliver dental, mental health, family planning, well-child, and, on rare occasions, urgent care services to residents. This section describes facilities providing primary care services into four separate categories: community health centers and federally qualified health centers, school-based health centers, free clinics, and clinics serving limited or special populations.

7.4.2.1 Federally Qualified Health Centers (FQHCs)

A Federally Qualified Health Centers (FQHCs) are health centers are federally designated non-profit or public health organizations that serve predominantly uninsured or medically underserved populations.[344] Connecticut classifies Federally Qualified Health Centers (FQHCs) and FQHC look-alike programs as “community health centers” for licensing purposes.[345] To be licensed as a community health center these facilities must meet a series of requirements outlined in C.G.S. § 19a-490a. Specifically, these providers must:

[341] Agency for Health care Research and Quality. (2024). *Usual Source of Health Care and Selected Population Characteristics, United States, 2021.* Medical Expenditure Panel Survey Household Component Data. Generated interactively. datatools.ahrq.gov/meps-hc/
[342] FairHealth. (2023). *FH Health Indicators and Medical Price Index 2023*. Fair Health. mma.prnewswire.com/media/2042147/FH Healthcare Indicators and FH Medical Price Index 2023 A FAIR Health White Paper.pdf
[343] Connecticut Department of Public Health. (n.d.). *The Public Health Code of the State of Connecticut, Chapter IV.* portal.ct.gov/-/media/sots/regulations/title_19/013dpdf.pdf
[344] Connecticut Department of Social Services. (n.d.) *Federally Qualified Health Center (FQHC) Medicaid Reimbursement*. portal.ct.gov/dss/health-and-home-care/reimbursement-and-certificate-of-need/fqhc-medicaid-reimbursement
[345] Connecticut State Department of Public Health. (n.d.) *Community health center overview*. portal.ct.gov/DPH/Family-Health/Community-Health-Centers/Community-Health-Center-Overview#WhatisaCHC

- Operate as a public or nonprofit medical care facility distinct from hospitals.
- Provide comprehensive primary care services, diagnostic laboratory and x-ray services preventive health services, patient care case management, and pharmacy services at least thirty-two hours a week.
- Be located in an area with a demonstrated need for services based on geographic, demographic, or economic factors.
- Provide services to individuals regardless of insurance status or ability to pay.
- Determine service costs using a sliding pay scale based on income.
- Maintain a governing board of 9 to 25 members responsible for policy and conduct of the center, the majority being active users of the center and limiting nonuser board members with income derived from the health care industry to no more than half.
- Implement an ongoing quality assurance program.
- Employ at least one-half of the full-time equivalent primary care providers as full-time members of its staff.
- Be a participating Medicaid and Medicare provider.
- Arrange for professional coverage during hours when the center is closed.[346]

FQHCs receive Health Center Program funding from HRSA, as authorized under §330 of the Public Health Service Act (PHSA). They also receive enhanced reimbursement from CMS. In 2022, 11% of funding for FQHCs in Connecticut came from federal §330 funding.[347]

A community health center that meets the criteria to qualify as an FQHC but does not receive §330 funding is classified as an "FQHC look-alike" program. This classification provides some of the same benefits FQHCs receive, such as enhanced reimbursement for services provided to Medicare and Medicaid patients, federal drug subsidies, and automatic designation as a health professional shortage area (HPSA).[348] However, they may not receive §330 funding.

The enhanced reimbursement is provided through a prospective payment system, which sets per-visit payment rates annually based on data from the preceding year.[349] The 2024 FQHC base payment rate under this system is $195.99. CMS then adjusts this rate based on geographic location.

[346] Public Health and Well-Being, Publ. L. No. 19A, Stat § 19a-490a (2022). cga.ct.gov/current/pub/title_19a.htm
[347] Kaiser Family Foundation. (2024). *Community health center revenues by payer source*. State Health Facts. kff.org/other/state-indicator/community-health-center-revenues-by-payer-source
[348] HRSA. (2023). *What is a health center program look alike (LAL)*. Health Resources and Services Administration Health Center Program. bphc.hrsa.gov/funding/funding-opportunities/health-center-program-look-alikes
[349] MACPAC. (2017). *Medicaid payment policy for federally qualified health centers*. Issue Brief. macpac.gov/wp-content/uploads/2017/12/Medicaid-Payment-Policy-for-Federally-Qualified-Health-Centers.pdf

The Connecticut geographic adjustment sets reimbursement rates slightly higher than the national base payment, bringing the reimbursement rate to approximately $198 per visit in 2024.[350]

Participation in the 340B drug pricing program allows these facilities to purchase prescription drugs at a steep discount, and the automatic HPSA designation grants these facilities the ability to apply for and participate in additional federal benefit programs, such as the Health Professional Shortage Area Physician Bonus Program.[351,352] In 2022 there were 13 FQHC look-alike clinics across Connecticut.[353]

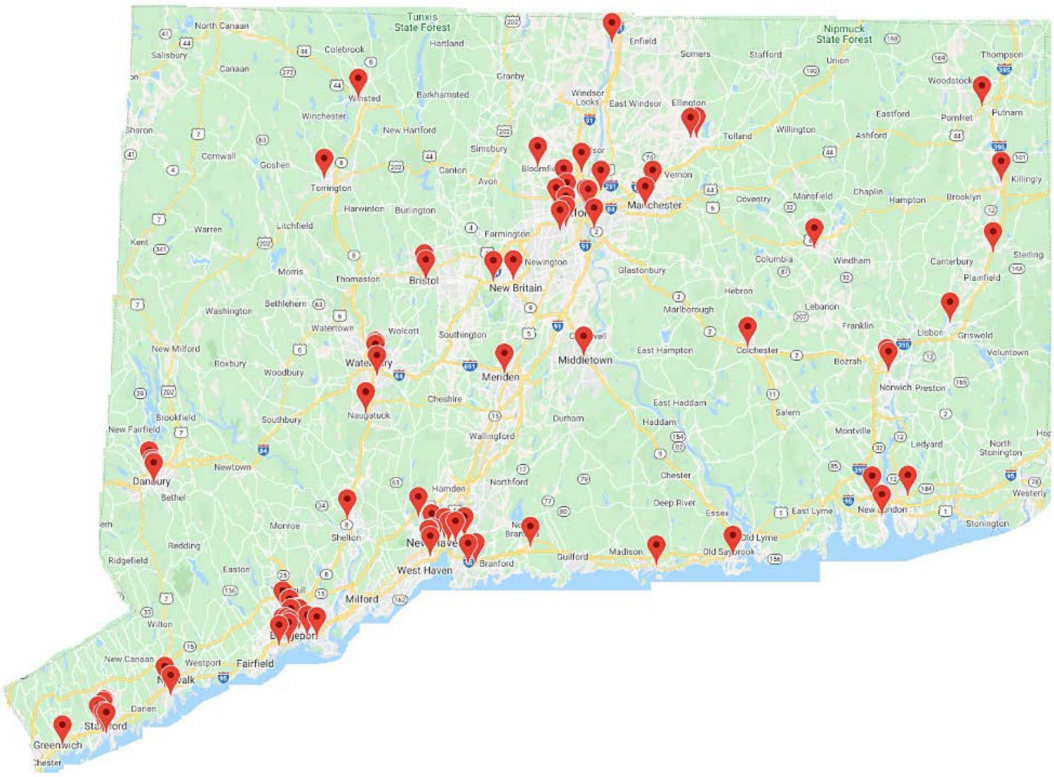
Recognizing that FQHCs and FQHC look-alike programs often function as the care organization for individuals experiencing hardship, the federal government requires that they must also be located in a federally designated Medically Underserved Area (MUA). MUAs are defined based on the number of providers per 1,000 people, the percentage of the population living in poverty, the percentage of the population ages 65 and over, and the infant mortality rate. FQHCs and look-alikes must also have accessible physical locations near major roads or public transportation and employ a governing board composed predominately of individuals who are registered patients at the center and who, as a group, represent the communities served.[354]

Sixteen FHQCs receiving Health Center Program § 330 funding operated across the state in 2022, with nearly four hundred delivery sites available to residents.[355] In fiscal year 2022, these clinics provided services to 420,005 individuals, including 136,295 children, 38,692 older adults, 14,217 patients experiencing homelessness, 2,248 Veterans, 3,218 agricultural workers, and 204,207 people of color. Sixty percent of these patients were enrolled in Medicaid, 27% were uninsured, and 47% lived in poverty.[356]

Population Served: FHQCs and FHQC look-alike clinics serve predominately lower-income communities, with a special emphasis on the medically underserved, migratory agricultural workers, people experiencing homelessness, residents of public housing or any combination of the above.

[350] Centers for Medicare and Medicaid Services. (2024). *Update to the federally qualified health center (FQHC) prospective payment system (PPS) for calendar year (CY) 2024.* CMS. cms.gov/regulations-and-guidance/guidance/transmittals/2023-transmittals/r12267cp
[351] HRSA. (2023). *340B drug pricing program*. Health Resources and Services Administration. hrsa.gov/opa
[352] Medicare Learning Network. (2022). *Health professional shortage area physician bonus program*. Centers for Medicare and Medicaid Services. cms.gov/outreach-and-education/medicare-learning-network-mln/mlnproducts/downloads/hpsafctsht.pdf
[353] National Association of Community Health Centers. (2023). *Connecticut Health Center Delivery Sites*. NACHC. nachc.org/wp-content/uploads/2023/06/Connecticut-state-map.pdf
[354] Health Centers, Publ. L. No. 42, Stat 254b. (n.d.) uscode.house.gov/view.xhtml
[355] Kaiser Family Foundation. (2024). *Community health center delivery sites and patient visit*. KFF. kff.org/other/state-indicator/community-health-center-sites-and-visits
[356] National Association of Community Health Centers. (2023). *Connecticut Health Center Fact Sheet*. NACHC. nachc.org/wp-content/uploads/2024/02/StateFactSheet_CT_2022UDS_Feb2024.pdf

Figure 7.1 Map of Community Health Centers in Connecticut*



***Data Source**: DPH Connecticut Primary Care Assessment*

7.4.2.2 School-Based Health Centers (SBHCs)

School-based health centers (SBHCs) are free-standing medical centers, licensed by the Connecticut DPH as outpatient clinics or as hospital satellite clinics, located within or on the grounds of schools.[357] There are a total of 316 SBHCs in the state serving over 44,000 students annually, with 92 centers receiving funding from the Department of Public Health.[358,359] A school may partner with a community health center, hospital or local health department to operate the clinic.[360]

SBHCs are safety net providers operated under the guidance of a medical director and staffed by a multidisciplinary team with expertise in caring for children and adolescents. The most common SBHC

[357] CT Department of Public Health. (2023). *School based health centers*. DPH. portal.ct.gov/-/media/DPH/School-Based-Health-Centers/SBHC-FS-112023.pdf
[358] Wilde-Lane, M. (n.d.). *School-Based Health Centers in CT*. Connecticut Association of School Based Health Centers. cga.ct.gov/ph/bhpoc/related/20190101_2019/20190213/School Based Health Centers.pdf
[359] Connecticut Association of School Based Health Centers. (n.d.). *Connecticut Association of School Based Health Centers Mapping Tool*. viewer.mapme.com/casbhc
[360] Healthy Schools Campaign. (2022). *Opportunity: Building partnerships to expand access to school health* services. healthyschoolscampaign.org/dev/wp-content/uploads/2022/04/Part-Nine Building-Partnerships-to-Expand-Access-to-School-Health-Services 2022-Update.pdf

staff are nurse practitioners, physician assistants, physicians, social workers, dentists, dental hygienists, dental assistants, outreach workers, nutritionists, and health educators.[361, 362]

SBHCs offer comprehensive services to address medical, mental, and oral health needs of students in grades pre-K through 12. All students are eligible but require written parental permission to access services.[363] Services are available during school hours throughout the academic year, from August through June, excluding weekends, holidays, and school vacations. Some sites provide services year-round, and clinics may extend hours of operation to include after-school, weekend, and summer hours based on community need.[364] All SBHCs provide, at a minimum, primary and preventive care services in accordance with federal and American Academy of Pediatrics standards.[365] They include:

- Physical exams, health assessments, and screenings for health problems
- Diagnosis and treatment of acute illness and injury
- Diagnosis and management of chronic illness
- Immunizations
- Health promotion and risk reduction
- Nutrition and weight management
- Reproductive health care
- Laboratory tests
- Prescription and dispensing of medication for treatment
- Referral and follow-up for specialty care that is beyond the scope of services they provide

SBHCs also provide mental health services, social services, and health education. Mental health and social services must be provided following nationally recognized and accepted standards such as the Child Welfare League of America or the National Association of Social Workers, Inc. Other nationally recognized and accepted standards may be utilized as a framework for professional practice with prior DPH approval. Mental health and social services include:

[361] School Based Advisory Committee. (2023). *Report to the public health and education committees on school based health centers.* School-Based Health Center Advisory Committee. portal.ct.gov/-/media/DPH/School-Based-Health-Centers/SBHC-Advisory/School-Based-Health-Advisory-Report--2023_Final.pdf
[362] Connecticut Association of School-Based Health Centers. (2017). *Connecticut School-Based Health Center Coordinator's Manual Version 2.0*. ctschoolhealth.org/wp-content/uploads/2021/04/Coordinators_Manual_Version_2.0_IN-1623.pdf
[363] Wilde-Lane, M. (n.d.). *Healthy kids make better learners.* Connecticut Association of School Based Health Centers. cga.ct.gov/ph/bhpoc/caq/related/20220101_2022/20220420/School Based Health Centers Presentation.pdf
[364] An act concerning school-based mental health clinics, House Bill No. 6509. (2021). cga.ct.gov/2021/fc/pdf/2021HB-06509-R000164-FC.pdf
[365] Connecticut Association of School-Based Health Centers. (2017). *Connecticut School-Based Health Center Coordinator's Manual Version 2.0*. ctschoolhealth.org/wp-content/uploads/2021/04/Coordinators_Manual_Version_2.0_IN-1623.pdf

- Assessment, diagnosis and treatment of psychological, social and emotional problems
- Crisis intervention
- Individual, family and group counseling or referral for same if indicated
- Substance abuse and HIV/AIDS prevention
- Risk reduction and early intervention services
- Outreach to students at risk
- Support groups focusing on topics of importance to the target population
- Advocacy and referral for such services like day care, housing, employment, and job training
- Referral and follow-up for care beyond the scope of services provided in the SBHC[366]

SBHCs also offer health education services, which must be supportive of existing health education activities of state and local education agencies. These services include:

- Consultation to school staff regarding issues of child and adolescent growth and development
- School staff and parent training regarding issues of importance in the target population
- Individual and group health education
- Classroom presentations[367]

Finally, 133 out of the state's 316 SBHCs provide oral health on-site or in partnership with community dental programs.[368] These services must conform with nationally recognized and accepted standards, like those recommended by the American Academy of Pediatric Dentistry. Other nationally recognized and accepted standards may be utilized as a framework for professional practice, with prior DPH approval. Oral health services may include:

- Exams/screenings
- Teeth cleanings
- Fluoride treatment
- Fissure sealants
- Fillings

[366] Connecticut Association of School-Based Health Centers. (2017). *Connecticut School-Based Health Center Coordinator's Manual Version 2.0*. ctschoolhealth.org/wp-content/uploads/2021/04/Coordinators_Manual_Version_2.0_IN-1623.pdf
[367] Connecticut Association of School-Based Health Centers. (2017). *Connecticut School-Based Health Center Coordinator's Manual Version 2.0*. ctschoolhealth.org/wp-content/uploads/2021/04/Coordinators Manual Version 2.0 IN-1623.pdf
[368] Connecticut Association of School Based Health Centers. (n.d.). *Connecticut Association of School Based Health Centers Mapping Tool*. viewer.mapme.com/casbhc

- Diagnostic X-rays
- Treatment for cavities and caries
- Simple extractions
- Referral and follow-up for care beyond the scope of services provided in the SBHC[369]

Notably, some services, including fillings, extractions, and other treatments for cavities, are only offered when a dentist is available to collaborate with the on-site dental hygienist. There is currently a shortage of dentists working regularly in SBHCs. [370]

Population served: Students in grades pre-K through 12 authorized by a parent or guardian to access services at the SBHC. SBHCs accept all student patients with particular focus on students who are underserved, lower-income, at-risk for poor health, enrolled in Medicaid, immigrants,[371] homeless, and uninsured.[372]

To Access: A list of Connecticut's SBHCs is located at Statewide Health Care Facilities and Services Inventory – 2022.

7.4.2.3 Free Clinics

Free or charitable clinics are tax-exempt facilities licensed by DPH as outpatient clinics "that utilize a volunteer/staff model to provide a range of medical, dental, pharmacy, vision and/or behavioral health services to economically disadvantaged individuals," who are usually uninsured or under-insured.[373] Free clinics are expected to respond to unmet need not accommodated by other safety net providers.

Free clinics are mostly independent entities, operating in owned or leased facilities or mobile units. They are mostly funded through private charitable donations from civic groups, churches, foundations, and business organizations, and some are affiliated with hospitals. Clinic staff are volunteers and paid employees, most often physicians, nurses, nurse practitioners, physician assistants, social workers, and psychologists.[374]

Free clinics in Connecticut offer scheduled and walk-in appointments for a range of services, including adult and pediatric medical care, chronic disease management, reproductive health services,

[369] Melanie Wilde-Lane of Connecticut Association of School Based Health Centers. Personal communication. (February 5, 2024).
[370] Melanie Wilde-Lane of Connecticut Association of School Based Health Centers. Personal communication. (February 5, 2024).
[371] Lofink, H., Juszczak, L., Trudnak, T., Koenig, K., & Fairbrother, G. (n.d.). *A promising future: School-based health centers and accountable care, perspectives from providers in Connecticut*. data.sbh4all.org/library/care management/CT-Care-Coordination-for-Adolescent-SBHC-provider-perspective.pdf
[372] Connecticut Department of Public Health. (2018). *Connecticut state oral health Improvement plan 2019 - 2024*. Connecticut Department of Public Health. portal.ct.gov/-/media/Departments-and-Agencies/DPH/dph/oral health/PDF/Improvement-Plan-Booklet Web-Ready.pdf
[373] NAFC (n.d.). *Our members*. National Association of Free & Charitable Clinics. nafcclinics.org/about-us/our-members
[374] NAFC (n.d.). *Our members*. National Association of Free & Charitable Clinics. nafcclinics.org/about-us/our-members

screenings and health education, dental care, dispensing medication directly to patients or through local pharmacies, referrals to specialty care, laboratory services, and some testing or procedures.

Populations served: People who are uninsured or under-insured.

To Access: Patients seeking care at a free or charitable clinic must meet the clinic's eligibility criteria to qualify to receive care. Criteria may include insurance status, income, and residency before qualifying to receive care.

7.4.2.4 Limited or Special Populations Clinics

Outpatient clinics serving limited or special populations are subject to the same licensing requirements as other outpatient clinics in Connecticut. These facilities are often established to provide services to manage a specific condition or set of conditions, including:

- Chronic diseases such as asthma, diabetes, human immunodeficiency virus (HIV) and acquired immune deficiency syndrome (AIDS).
- Special populations such as the chronically ill, pregnant women, LGBTQ+ residents or any combination of the listed.

Limited or special population clinics are safety net providers for many of the state's most vulnerable residents. Individuals receiving these services may have special needs or face additional barriers to care that the typical consumer does not.

Population Served: An insured or uninsured special or limited population.

To Access: Potential patients must contact the facilities directly to determine if the facility is accepting new patients and the accepted sources of payment.

7.4.3 Hospital Operated Primary Care Centers

Individuals across Connecticut may seek care at one of the 24 primary care clinics operated by hospitals in the state.[375] Most of these facilities provide comprehensive preventive care and treatment of common acute and chronic illnesses. However, the services they offer and the populations they serve vary.

Four hospital-operated primary care centers offer services to individuals of all ages, while ten only offer pediatric services to children. These categories are not mutually exclusive, and several facilities offer care to various populations (Inventory Table 25). Hospital-operated primary care clinics offer many of the same preventive and routine care for acute and chronic illnesses as other primary care providers.

[375] OHS Survey Process Undertaken in 2023 (Inventory Table 25, located at portal.ct.gov/ohs/health-systems-planning/hc-facilities-and-services-plan-ab/2022-facilities-and-services-inventory)

These facilities occasionally operate as a satellite location separate from the hospital campus (e.g., hospital-owned, school-based health centers) under different federal tax identification numbers. In 2023, 9 hospitals operated 25 primary care centers (Inventory Tables 24 and 25).

Populations served: The population served varies from location to location and may include newborns, infants, children, adolescents, adults, elderly, pregnant women, people who are uninsured, or any combination of the above.

To Access: A list of hospital operated primary care centers in Connecticut is located at Statewide Health Care Facilities and Services Inventory – 2022.

7.4.4 Limited Primary Care Service Providers

Health care facilities that provide occasional care and a limited range of primary care services to patients also operate with a DPH outpatient clinic license. This category includes urgent care centers and walk-in clinics; school infirmaries; municipal clinics; and dental, well-child, and family planning clinics.[376] Retail or store-based clinics are limited primary care services providers, too, but they are not licensed.

7.4.4.1 Urgent Care and Walk-in Clinics

Urgent care and walk-in clinics provide medical diagnosis and treatment for minor illnesses, conditions, and injuries that are not life-threatening. 42 C.F.R. § 405.400 defines urgent cares licensed as outpatient clinics as providing services to patients who require care within 12 hours to avoid the likely onset of an emergency medical condition, as opposed to providing "non-emergency" treatment. They must offer diagnostic imaging, intravenous fluids, and minimal resuscitative methods.[377]

Walk-in clinics and urgent care centers may provide many primary care services, including vaccinations, physical examinations, minor wound care, health screenings, and infection treatment.[378] Walk-in clinics also usually offer extended hours beyond the core working hours of 9 a.m. to 5 p.m., do not require an appointment to see a primary care physician, and provide services with shorter wait periods than EDs for similar conditions.

C.G.S. § 19a-493d states that urgent care centers licensed as outpatient clinics must offers services without requiring an appointment and must offer services during times of the day, weekends or holidays when primary care provider offices are not customarily open to patients.[379] However, urgent

[376] Department of Public Health. (n.d.). Facility Licensing and Investigations Section (FLIS). portal.ct.gov/DPH/Facility-Licensing--Investigations/Facility-Licensing--Investigations-Section-FLIS/Facility-Licensing

[377] Robinson & Cole's Health Law Group. (2018). New Connecticut legislation updates laws concerning Urgent Care Centers, hospital-based facility fees and freestanding hospital emergency departments. healthlawdiagnosis.com/2018/06/new-connecticut-legislation-updates-laws-concerning-urgent-care-centers-hospital-based-facility-fees-and-freestanding-hospital-emergency-departments

[378] CVS Minute Clinic. (n.d.). *What is the Difference Between a Walk-In Clinic and Urgent Care?* cvs.com/minuteclinic/why-choose-us/walk-in-clinic-vs-urgent-care

[379] An Act Concerning Outpatient Clinics, Urgent Care Centers and Freestanding Emergency Departments. Publ. L. No. 19a-493d (2018). cga.ct.gov/2018/amd/S/2018SB-00303-R00SA-AMD.htm

care centers and walk-in clinics are not accessible 24 hours a day and seven days a week and generally are not subject to the Federal Emergency Medical Treatment and Active Labor Act (EMTALA).[380]

Urgent care centers and walk-in clinics provide a limited scope of services in single episodes, in contrast with primary care providers, which provide a full array of services on an ongoing basis. They may be operated under the license of a primary care practitioner, an outpatient clinic, a hospital, or a hospital satellite. Under State regulations and the Public Health Code, licensed outpatient clinics must be operated by a governing board, appointed medical director, and a staff of qualified health care professionals.[381]

Population served: Insured and self-pay patients of all ages with minor illnesses, injuries, or conditions that are not immediately life-threatening.

To Access: A list of Connecticut licensed urgent care/walk-in clinics is located at Statewide Health Care Facilities and Services Inventory – 2022. The web link 211CT.org also provides contact information for some urgent care and walk-in clinics in various Connecticut communities.

7.4.4.2 Retail or Store-Based Health Clinics

In Connecticut, retail, store-based, minute or convenience care clinics are not licensed as outpatient clinics. They are operated under the individual licenses of clinical practitioners, usually a nurse practitioner or physician assistant, who may or may not have an established relationship with a physician in the community. Retail clinics are based in establishments like pharmacies and supermarkets. They provide short-term care in single episodes for most common diagnoses that do not require immediate treatment (e.g., headaches, coughs, fever, nasal congestion, and fever) and preventive care (e.g., health screening, vaccinations, and physical examinations). Further discussion on utilization trends for retail clinics and urgent care centers is following.

Population served: Insured and self-pay patients of all ages, with minor illnesses or conditions that do not require immediate attention.

7.4.4.3 Licensed Outpatient Clinics Operated by Municipalities

For licensing purposes, the Connecticut DPH defines municipal outpatient clinics as health facilities that provide preventive and ambulatory medical or dental care to healthy individuals or those with a

[380] EMTALA is administrated regionally, and there are some exceptions to this rule. In Friedrich v. South Cty. Hosp. Health care Sys., a federal court found that hospital-owned urgent care or walk-in centers may be liable under the Emergency Medical Treatment and Labor Act (EMTALA). MLMIC Insurance Company. (2017). *Hospital-owned urgent care center must comply with EMTALA*. mlmic.com/blog/physicians/urgent-care-centers-must-comply-with-emtala

[381] Connecticut Department of Public Health. (n.d.). The public health code of the State of Connecticut chapter IV, licensing outpatient clinics operated by corporations or municipalities, governing board, administrator and professional staff. Department of Public Health. portal.ct.gov/-/media/SOTS/regulations/Title_19/013dpdf.pdf

chronic or acute condition who do not require overnight care.[382] Their services vary and may only be offered to certain populations.

Municipalities may base these clinics in senior centers, traditional brick-and-mortar health facilities, or government agencies (e.g., the local health department). In 2021 (the most recent data available), municipalities operated 17 outpatient primary care clinics and 14 dental clinics. One of the municipal outpatient primary care clinics also offered mental health services.[383] These figures exclude school-based health centers operated by local municipalities.

Population Served: These facilities often serve lower-income individuals, but the specific populations served vary.

7.4.4.4 Infirmary Operated by an Educational Institution

Outpatient facilities licensed by DPH as school infirmaries and operated by educational institutions are not the same as school-based health centers. Their scope of services may include primary care, such as asthma and diabetes care or observational stays on college campuses and private schools. However, the care is not comprehensive or continuous, and is provided to a limited population. The infirmary license allows a facility to provide "evaluation and treatment services for routine health problems, limited overnight accommodations for students, faculty, and employees receiving treatment for noncritical illnesses, recovering from surgery, or requiring observation, and who do not require the skills and equipment of an acute care hospital."[384]

To Access: A list of school infirmaries is located at: Statewide Health Care Facilities and Services Inventory – 2022.

7.4.4.5 Well Child Clinics

There are 113 health care clinics that offer well child services in Connecticut. These clinics provide preventive and routine health care to support the health, wellbeing, and development of children. These clinics primarily serve uninsured and under-insured families. These facilities are licensed by DPH as outpatient clinics. A list of the clinics is provided in OHS 2022 Inventory Table 23.

To Access: Find a list of facilities offering well child visits (OHS Inventory Table 23): Statewide Health Care Facilities and Services Inventory – 2022.

7.4.4.6 Family Planning Clinics

In Connecticut, there are 57 health care clinics, licensed by DPH as outpatient clinics that offer family planning services. Services offered by family planning clinics include reproductive health care services

[382] Connecticut Department of Public Health. (2013). The public health code of the State of Connecticut, chapter IV*: licensing outpatient clinics operated by corporations/municipalities.* Department of Public Health. portal.ct.gov/-/media/SOTS/regulations/Title_19/013dpdf.pdf.

[383] Connecticut State Office of Health Strategy. (2021). *Statewide health care facilities and services inventory – 2020: **Table** 23: Facilities licensed as outpatient* clinics. OHS. portal.ct.gov/-/media/OHS/ohca/Inventory/2020/table23op-clinics2020.xlsx

[384] Department of Public Health. (n.d.). *The public health code of the State of Connecticut chapter IV: Licensure of infirmaries operated by educational institutions*. portal.ct.gov/-/media/SOTS/regulations/Title_19/013dpdf.pdf

for males and females (including clinical exams), contraception information and prescriptions, emergency contraception, pregnancy testing and counseling, STD and HIV testing and counseling, and other reproductive health services. Some sites provide pregnancy termination services.

To Access: A list of facilities providing family planning services is located at: Statewide Health Care Facilities and Services Inventory – 2022.

7.4.5 Federal Government Primary Care Clinics

The federal government operates a small number of facilities that provide health care service to limited and specific populations. Patients include Veterans and active service members of the US armed forces, as well as their dependents, families, and survivors. The U.S. Veterans Health Administration (VHA) runs the VA Connecticut Health care System, which has two hospital campuses and eight community-based outpatient clinics that provide a variety of services.[385] The federal government also operates a Naval Branch Health Clinic in Groton and a medical clinic at the Coast Guard Academy in New London.[386] Federal clinics also provide primary care to the federal prison population.

7.5 Evaluation of Unmet Needs and Gaps in Services

Identifying the settings or access points for primary care services is important for policymaking on health status assessments and improvements. To evaluate unmet needs and identify gaps in services, it is equally important to know 1) the capacity available in comparison to the population, 2) how appropriate, timely and accessible the services are, and 3) the outcome of care.

In 2020, Connecticut ranked 12th in the nation with 86 primary care physicians active in-patient care per 100,000 of the state's population. This figure was 76 nationally.[387] However, the distribution of primary care physicians across the state in comparison to the population varies. **Table 7.1** shows how these physicians are distributed among counties (as well as the distribution of dentists and mental health providers). It shows that the number of physicians per 100,000 people varies from a high of 97 in Fairfield County to a low of 45 in Windham County. The figures for dentists and mental health providers are similar.

Table 7.1 Numbers of Providers by County*,**

County	Number of Dentists	Dentists: Rate/100,000 Population	Number of Physicians in Patient Care	Physicians: Rate/100,000 Population	Number of Mental Health Providers	Mental Health Providers: Rate/100,000 Population
Fairfield	903	94	918	97	3,393	354
Hartford	965	108	856	96	5,346	596
Litchfield	119	64	100	56	562	304

[385] U.S. Dept. of Veterans Affairs. (n.d.). *VA Connecticut health care*. va.gov/connecticut-health-care/locations
[386] Tricare. (n.d.). *Getting* care. Find a military hospital or clinic. tricare.mil/GettingCare/FindDoctor
[387] County Health Rankings. (n.d.). *County health rankings & roadmaps*. Health data. countyhealthrankings.org. Excludes obstetrics and gynecology.

County	Number of Dentists	Dentists: Rate/100,000 Population	Number of Physicians in Patient Care	Physicians: Rate/100,000 Population	Number of Mental Health Providers	Mental Health Providers: Rate/100,000 Population
Middlesex	129	78	129	80	798	484
New Haven	671	78	740	87	4,323	501
New London	212	79	167	63	1,167	434
Tolland	73	49	81	54	433	288
Windham	58	50	52	45	474	407
Connecticut	3,130	87	3,043	86	16,504	458

***Data Source:** 2023 County Health Rankings, countyhealthrankings.org*

****Notes:** Primary care excludes obstetricians and gynecologists. Data are for the years 2021 (for Dentists), 2020 (for primary care), and 2022 (for mental health).*

An inadequate distribution of primary care providers and facilities can result in areas of the state lacking sufficient access to primary care. HRSA's designation of health professional shortage areas (HPSAs) provides a measure of unmet needs for providers on a scale ranging from 1 to 25, with larger scores indicating greater unmet need. HPSAs range in size, from individual providers' service area to multi-city regions. For primary care, HPSAs are based on a score computed from the area's:

- Population-to-provider ratio,
- Percent of population below 100% of the FPL,
- An infant health index based on the infant mortality rate and the low-birth-weight rate,
- Travel time to the nearest source of care outside the HPSA designation area.

Similar measures are used to compute the HPSA designations for dentists and mental health providers. **Table 7.2** identifies the number of clinics with HRSA health professional shortage area designations by county as of May 2024.

Table 7.2 Number of HPSA Designations by County, May 2024*,**

County	Number of Dental Clinics	Number of Primary Care Clinics	Number of Mental Health Clinics
Fairfield	11	12	12
Hartford	10	13	13
Litchfield	2	3	3
Middlesex	2	2	2
New Haven	7	7	8
New London***	5	6	7
Tolland	2	1	3
Windham	2	3	3
Connecticut	41	47	51

***Data Source:** HRSA HPSI Find tool, data.hrsa.gov/tools/shortage-area/hpsa-find*

***Notes:** **Designations that include multiple counties are separately counted for all counties to which they apply.*
**** Each category within New London includes 2 areas designated as Indian Health Service, Tribal Health, and Urban Indian Health Organizations.*

HPSA designations are based in part on locations of sources of care. **Tables 5.3** to **5.5** of this report identify locations of primary care facilities in Connecticut.

One way to improve access to primary care is through the use of telehealth to reach patients located in HPSAs. The expansion of broadband Internet and cell phone access would allow telehealth to be expanded and is a strategy identified in the 2021 State Health Improvement Plan.[388] Factors contributing to access to telehealth services (for example, broadband availability in Connecticut) will be evaluated in an upcoming addendum to this Plan document looking specifically at social and economic factors contributing to health and the need for health care services.[389]

As noted in Chapter 3, potentially avoidable emergency department visits and preventable hospitalizations (care that is usually treatable in outpatient settings) can be used to assess the availability of high-quality outpatient care, including primary care, because avoidable acute care visits represent care that could have been provided at lower cost in primary care or other outpatient settings. **Table 7.4** lists potentially preventable hospitalizations per 100,000 Medicare enrollees in 2020, showing that they are similar among counties. **Figure 3.6** in Chapter 3 shows the rate of avoidable ED visits over the past five years.

Table 7.4 Preventable Hospitalization Rate for Medicare Enrollees by County, 2020*

County	Preventable Hospitalization Rate/100,000
Fairfield	2,399
Hartford	2,738
Litchfield	2,457
Middlesex	2,607
New Haven	2,857
New London	2,950
Tolland	2,121
Windham	2,786
Connecticut	**2,638**

***Data Source:** 2023 County Health Rankings, countyhealthrankings.org*

As with primary care more generally, the number of obstetricians and gynecologists (OB-GYN) in Connecticut appears to be adequate. Doximity's 2019 OB-GYN Workforce Study examined shortages in the top 50 metropolitan areas in the U.S., using a shortage index based on the average age of OB-

[388] Connecticut Department of Public Health. (2021). *Healthy Connecticut 2025: State health improvement plan*. Connecticut Department of Public Health. portal.ct.gov/-/media/DPH/State-Health-Planning/CT_DPH_SHIP_Report_r1-10-6-2021.pdf
[389] Future CT OHS reports will be made available at: portal.ct.gov/ohs/services/data-and-reports/publications-and-reports

GYNs and births per OB-GYN.[390] They found that Hartford had the eighth lowest rank in the shortage index, and that Hartford (smallest) and New Haven (4th smallest) were in the bottom 10 areas with the smallest workload, at 54.2 and 61.3 births per physician, respectively. Statewide, BLS reports that there were 470 OB-GYNS practicing in Connecticut in 2022.[391] There were 36,927 births in the state in 2021,[392] suggesting that there are approximately 78.6 births per physician per year. This rate is exceeded by two-thirds of the 50 top metropolitan areas, according to the data reported by Doximity.

Access to these providers, however, might still be an issue for some Connecticut residents. Research has shown that longer drive times to prenatal appointments can make it harder to get needed prenatal care,[393] and increases the risk of poorer outcomes for birthing parents and newborns.[394]

Recent data from HRSA assigned a Maternity Care Target Areas (MCTA) score as a subset to eachHPSA to identify areas with a shortage of maternity care health professionals. The scores range from 0 to 25 with higher scores indicating a greater shortage. Points are awarded based on a population-to-provider ratio, the percentage of women below 200% of the FPL, travel time to care, fertility rates, social vulnerability, and several maternal health indicators.[395] A score greater than 15 means a HPSA qualifies as a "maternity care desert."[396] **Table 7.5** shows the number and percentage of primary care HPSAs in each Connecticut county that have MCTA scores greater than 15 as of May 2024, suggesting that access to maternity services can still be an issue in some areas of the state.

Table 7.5 MCTAS with Scores Greater than 15 by County, May 2024*

County	Number	Percentage
Fairfield	4	36%
Hartford	7	54%
Litchfield	1	33%
Middlesex	1	50%
New Haven	5	71%
New London	1	17%
Tolland	0	0%
Windham	1	33%
Connecticut	20	43%

***Data Source:** HRSA HPSI Find tool, data.hrsa.gov/tools/shortage-area/hpsa-find*

[390] Doximity. (2019). *2019 OB-GYN workforce study*. press.doximity.com/reports/ob-gyn-workforce-study-2019.pdf
[391] BLS. (n.d.). *BLS data viewer.* BLS Beta Labs. beta.bls.gov/dataViewer/view/timeseries/OEUS090000000000029121801
[392] Department of Public Health. (n.d.). *Vital statistics.* Office of Vital Records. portal.ct.gov/dph/Health-Information-Systems--Reporting/Hisrhome/Vital-Statistics-Registration-Reports
[393] Maldonado, L., Fryer, K., Tucker, C., & Stuebe, A. (2020). The association between travel time and prenatal care attendance. *Am J Perinatol, 37*(11), 1146-1154. thieme-connect.com/products/ejournals/abstract/10.1055/s-0039-1692455
[394] Minion, S, Krans, E., Brooks, M., Mendez, D., & Haggerty, C. (2022). Association of driving distance to maternity hospitals and maternal and perinatal outcomes. *Obstet Gynecol, 140*(5), 812-819. pubmed.ncbi.nlm.nih.gov/36201778
[395] HRSA. (2023). *Shortage Designation Management System: Manual for Policies and Procedures.* U.S. Department of Health and Human Services. programportal.hrsa.gov/docs/pco/Manual-for-Policies-and-Procedures.pdf
[396] Topmiller, M., Carrozza, M., Jetty, A., Rankin, J., & Huffstetler, A. (2023). Maternal car target areas (MCTAs), family physicians, and the expansion of obstetrical care in high-need areas. *Ann Fam Med, 21(*Suppl 3), 5030. (ncbi.nlm.nih.gov/pmc/articles/PMC10983294

This issue is being addressed with new legislation that has established licensing and certification procedures for free-standing,[397] independent birth centers. This creates an alternative to traditional hospitals for low-risk pregnancies and deliveries, yet still requires a written plan to obtain services for its patients from a hospital in case of an emergency.[398] To mitigate the risk of harm to patients, hospitals must have partnerships with birth centers to coordinate care for patients if emergencies arise. The legislation aims to fill gaps left by the closure of hospital maternity units.[399]

7.6 Primary Care Trends and Ongoing Public and Private Primary Care Initiatives

Over the last several years, trends in primary care services have shifted care delivery, offered new technology, and highlighted shortages in the primary care workforce. The shift in the location of care delivery away from primary care providers' offices to retail clinics and urgent care clinics is discussed above. The use of telemedicine also saw a spike in 2020 during the COVID-19 pandemic. Even with a substantial decline in 2021, telemedicine remains more common compared to pre-pandemic levels.[400] Telemedicine and COVID-19 trends are discussed further in Chapter 2. The shortage of primary care physicians is discussed below with further details on the demand and shortages of nurses and other health care professionals in Chapter 2.

7.6.1 Primary Care Trends

7.6.1.1 Shift in Site of Care Delivery: Urgent Care, Retail Clinics and Telemedicine

Since 2009 there has been a shift in site of primary care delivery away from primary care providers' office-based space to retail clinics and urgent care clinics.[401] Utilization of urgent care clinics in the U.S. increased between 2020 and 2021 by 14%. Growth appeared in urban areas more than rural areas, and for women, and people ages 23 to 60 years old.[402]

The use of retail clinics nationwide has also grown in the past several years. Between 2020 and 2021, utilization of retail clinics increased 51%. Data shows rural areas had a larger increase than urban areas, and for women, and people ages 23 to 60 years old. In 2021, Connecticut had the fourth highest use of retail clinics, behind Rhode Island, Maine, and Arkansas. [403]

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[397] An Act Protection Maternal Health, Publ. L. No. 23-147 (2023). cga.ct.gov/asp/cgabillstatus/cgabillstatus.asp
[398] An Act Protection Maternal Health, Publ. L. No. 23-147 (2023). cga.ct.gov/2023/act/pa/pdf/2023PA-00147-R00SB-00986-PA.pdf
[399] ctpublic.org/news/2023-03-13/as-hospital-labor-and-delivery-wards-close-a-new-ct-bill-would-permit-birth-centers
[400] FairHealth. (2023). *FairHealth health care indicators and medical price index*. mma.prnewswire.com/media/2042147/FH Healthcare Indicators and FH Medical Price Index 2023 - A FAIR Health White Paper.pdf
[401] FairHealth. (2023). *FairHealth health care indicators and medical price index*. mma.prnewswire.com/media/2042147/FH Healthcare Indicators and FH Medical Price Index 2023 - A FAIR Health White Paper.pdf
[402] FairHealth. (2023). *FairHealth health care indicators and medical price index*. mma.prnewswire.com/media/2042147/FH Healthcare Indicators and FH Medical Price Index 2023 - A FAIR Health White Paper.pdf
[403] FairHealth. (2023). *FairHealth health care indicators and medical price index*. mma.prnewswire.com/media/2042147/FH Healthcare Indicators and FH Medical Price Index 2023 - A FAIR Health White Paper.pdf

The use of telemedicine spiked during the COVID-19 pandemic as well. While telemedicine use has declined after the height of the pandemic, it remains higher than pre-pandemic levels. However, the use of retail clinics and urgent care centers was growing before the COVID-19 pandemic and has continued to increase during the pandemic.[404]

As stated above, Connecticut regulates urgent care centers under licensed outpatient clinics, but they do not license retail clinics. The lack of licensing and regulation for retail clinics may impede access to care for lower-income populations. These facilities tend to be in middle-class neighborhoods where more people are privately insured. There is no requirement to stabilize emergency patients (unlike emergency departments), meaning they can turn away individuals who are uninsured or have Medicaid regardless of their medical issue. There is no requirement for Retail Clinics to provide charity care, or to participate in insurance plans leaving people with unexpected medical bills if their insurance plan does not include services at a retail clinic.[405]

7.6.1.2 Primary Care Physician Workforce Trends

As of 2020, Connecticut had 11,092 active patient care physicians across all specialties, with 311.1 physicians per 1,000 people in the state, compared to 3,414 active patient care primary care physicians, with 95.8 physicians per 100,000 people.[406, 407, 408] Among specific occupations, the number of people in the state per physician was highest for internal medicine/pediatrics, geriatric medicine, and family medicine/general practice as of 2020 **(Table 7.6).**[409]

Table 7.6 Connecticut Physician Workforce Profile, 2020*,**

Occupation	Total Active Physicians 2020	People Per Physician 2020	Percent Age 60 or Older 2020
Family Medicine/General Practice	681	5,235	38.5%
Geriatric Medicine	112	7,905	25.9%
Internal Medicine	2,159	1,651	34.6%
Internal Medicine/Pediatrics	65	54,851	NA[a]
Pediatrics	839	1,274	37.0%

[404] Solomon, T., Popkin, K., Chen, A., Uttley, L, & Baruch, S. (n.d.) *Making convenient care the right care for all: Improving state oversight of urgent care centers and retail health clinics*. Community Catalyst and National Health Law Program. communitycatalyst.org/wp-content/uploads/2022/11/Urgent-Care-Center-BriefAppendix-2.pdf

[405] Solomon, T., Popkin, K., Chen, A., Uttley, L, & Baruch, S. (n.d.) *Making convenient care the right care for all: Improving state oversight of urgent care centers and retail health clinics*. Community Catalyst and National Health Law Program. communitycatalyst.org/wp-content/uploads/2022/11/Urgent-Care-Center-BriefAppendix-2.pdf

[406] AAMC. (2022). *Connecticut physician workforce profile*. Association of American Medical Colleges. aamc.org/media/58146/download

[407] AAMC. (2022). *2021 State physician workforce data report*. Association of American Medical Colleges. store.aamc.org/downloadable/download/sample/sample_id/506

[408] The Connecticut Academy of Physician Assistants Legislative Committee. (2022). *ConnAPA scope of practice review request*. portal.ct.gov/-/media/Departments-and-Agencies/DPH/dph/practitioner_licensing_and_investigations/Scope-of-Practice-2022/PhysicianAssistant.pdf

[409] AAMC. (2022). *Connecticut physician workforce profile*. Association of American Medical Colleges. aamc.org/media/58146/download

[a] - *Counts and percentages for specialties with fewer than 10 physicians are not shown.*
***Data Source:** AAMC. (2022). Connecticut Physician Workforce Profile. Retrieved from aamc.org/media/58146/download.*

***Note:** Only those 24 years or younger are included in People per Physician for Pediatric Care and only those 60 years and older are included in People per Physician for Geriatric Medicine.*

Geographically, the distribution of health care providers significantly impacts patient access and outcomes, with rural counties like Litchfield, Tolland, and Windham having fewer primary care providers per capita than urban areas **(Table 7.1).** Challenges in attracting providers to rural towns contribute to shortages in internal medicine physicians, nurse practitioners, and physician assistants, despite statewide projections from HRSA that suggest a greater supply than demand within these professions statewide.[410] This disparity highlights the uneven distribution and focus of health care providers throughout the state.

There are a variety of factors that negatively impact the number of physicians in primary care. Challenges include low reimbursement rates and lower incomes for primary care physicians compared to specialized doctors. This can be a deterrent given the high cost of education and student loans for doctors, burnout from the pandemic, and burnout caused by fee-for-service models that pay doctors based on the number of patients they serve.[411,412] In terms of the workforce pipeline, there is a lack of medical students in Connecticut choosing to pursue primary care,[413] and over 30% of family medicine physicians, internal medicine, and pediatric physicians in Connecticut were aged 60 or older in 2020, suggesting they may soon retire **(Table 7.6).**[414]

Institutions in Connecticut have pursued many strategies to increase the number of primary care physicians in the state, including providing low interest rates for graduating doctors who practice primary care within the state and offering annual fellowships.[415] Legislators are also considering financial incentive programs such as those in other states that offer lump sums to doctors who practice primary care for a certain number of years, and making it easier for doctors licensed in other states to transfer to Connecticut.[416]

[410] DataHaven. (2022). *Rural Health in Connecticut: A comprehensive review of social determinants, community resources, health outcomes, and wellbeing*. DataHaven. ctdatahaven.org/sites/ctdatahaven/files/Rural Health in Connecticut.pdf
[411] Srinivasan, S., & Talarski, C. (2022). Tackling the primary care physician shortage. *Connecticut Public*. ctpublic.org/show/where-we-live/2022-08-02/tackling-the-primary-care-physician-shortage
[412] Merelli, A. (2023). *A new paper suggests a simple fix to the primary care physician shortage*. STAT. statnews.com/2023/09/01/primary-care-physician-shortage
[413] Srinivasan, S., & Talarski, C. (2022, August 2). Tackling the primary care physician shortage. *Connecticut Public*. ctpublic.org/show/where-we-live/2022-08-02/tackling-the-primary-care-physician-shortage
[414] AAMC. (2022). *Connecticut physician workforce profile*. Association of American Medical Colleges. aamc.org/media/58146/download
[415] Srinivasan, S., & Talarski, C. (2022, August 2). Tackling the primary care physician shortage. *Connecticut Public*. ctpublic.org/show/where-we-live/2022-08-02/tackling-the-primary-care-physician-shortage
[416] Fortuna, A. (2023). What is causing the doctor shortage? Here's why it's only going to get worse. *NBC Connecticut*. nbcconnecticut.com/investigations/what-is-causing-the-doctor-shortage-heres-why-its-only-going-to-get-worse/3030878

While future projections show supply for some primary care occupations is projected to meet demand in Connecticut, the supply of Family Medicine Physicians is projected to meet only 44% of demand (projected demand of 1,530 compared to a projected supply of 640) **(Table 7.7).**[417]

Table 7.7 Connecticut Projected Workforce Supply, Demand, and Percent Adequacy in Primary Care Occupations, 2030*

Occupation	Total Projected Supply 2030	Total Projected Demand 2030	Total Percent Adequacy 2023
Family Medicine Physicians	640	1530	42%
General Internal Medicine Physicians	1620	1230	132%
Geriatrics Physicians	140	80	175%
Nurse Practitioners (PC)	1240	840	148%
Pediatrics Physicians	720	650	111%
Physician Assistants (PC)	670	460	146%

***Data Source:** National Center for Health Workforce Analysis, Workforce Projections Dashboard (April 10, 2024), Health Resources & Services Administration, data.hrsa.gov/topics/health-workforce/workforce-projections*

Find details about workforce trends in other primary care-related occupations including nursing in Chapter 2 Section 2.2.

7.6.2 Primary Care Redesign

Connecticut's Department of Social Services has recently focused on strengthening primary care services for people in HUSKY Health programs. Primary care providers help with routine medicine, which could include vaccinations, treating common illnesses, and managing chronic diseases. They also coordinate their patient's care with other health care providers, which is the focus of Connecticut's primary care redesign efforts.

In Connecticut, primary care redesign efforts started in 2012 with the state's Person-Centered Medical Home (PCMH) program and expanded with the Person-Centered Medical Home Plus (PCMH+) in 2017.[418] Under both programs, primary care providers received funding and coaching to improve patient care coordination. They also received financial rewards for improving care outcomes for those they served.[419] More than half of Medicaid-funded primary care providers and HUSKY enrollees have participated in at least one of these programs. A recent state-led evaluation found the programs reduced overall spending and encouraged more primary care providers to accept Medicaid. They also

[417] HRSA. (2024). *National center for health workforce analysis, workforce projections dashboard.* Health Resources & Services Administration. data.hrsa.gov/topics/health-workforce/workforce-projections
[418] Faulkner Consulting Group. (2023). *Primary care program advisory committee: Meeting 1. Connecticut's Official State Website.* portal.ct.gov/-/media/departments-and-agencies/dss/health-and-home-care/primary-care-redesign/pcpac-meeting-1_appendix_040623.pdf
[419] HUSKY Health Connecticut. (2023). *The clinical practice transformation specialist role.* huskyhealthct.org/providers/PCMH/pcmh-cpts-role.html

improved access to care and care quality. However, non-Hispanic white people tended to benefit more from these programs than people of color.

Building on these efforts, DSS recently launched a primary care redesign initiative and stakeholder committee, which met throughout 2023 and 2024. It will soon release recommendations about care delivery, Medicaid payments, and performance measurement in HUSKY Health, all focusing on improving health equity among HUSKY members.[420]

7.6.3 Ongoing Public and Private Primary Care Initiatives

In Connecticut, public and private entities have implemented several initiatives to address primary care. Below are highlights of some of the initiatives and recent policy changes designed to address primary care service needs and to fill gaps in the system in Connecticut, such as access to primary medical care, dental care, and mental health services.

7.6.3.1 Department of Public Health: Connecticut Primary Care Office

The Connecticut Primary Care Office (PCO) was created to improve the health of Connecticut's residents living in underserved areas, through assessment, planning, and assistance; and to increase access to primary care providers for medical, dental, and mental health services. The PCO identifies trends and develops strategies to address primary-care-related deficiencies through in-depth research and analyses of the health care delivery system and the populations served.[421]

The PCO works with communities to identify geographic areas, population groups, and health care facilities experiencing shortages of primary care, dental, and mental health providers. They use HRSA guidelines for HPSAs, as described above. PCO activities include:

- Providing information about the HPSA designation process.
- Offering technical assistance to individuals and health care organizations or facilities preparing designation applications.
- Identifying areas with underserved populations who have limited access to health professionals.
- Developing and submitting applications to HRSA.[422]

It is the PCO's goal to ensure that Connecticut recruits and retains highly qualified primary care professionals throughout the state. Working with HRSA, the PCO serves as the point of contact for

[420] Faulkner Consulting Group. (2023). *Primary care program advisory committee: Meeting 2. Connecticut's Official State Website.* portal.ct.gov/-/media/departments-and-agencies/dss/health-and-home-care/primary-care-redesign/pcpac-meeting-2_050423.pdf

[421] Department of Public Health (n.d.) *Connecticut primary care office.* Department of Public Health. portal.ct.gov/DPH/State-Health-Planning/Primary-Care/Connecticut-Primary-Care-Office-PCO

[422] Department of Public Health (n.d.) *Connecticut primary care office.* Connecticut Department of Public Health. portal.ct.gov/DPH/State-Health-Planning/Primary-Care/Connecticut-Primary-Care-Office-PCO

many federal and state workforce assistance programs designed to help attract new and experienced health professionals to Connecticut's health care provider community.

In December 2021, the PCO completed and published a Primary Care Assessment for the state, which included sections on state characteristics that impact how people access primary care services, primary care priority populations, key indicators of primary care, and the overall primary care infrastructure.[423]

7.6.3.2 Department of Public Health: Connecticut Health Improvement Coalition

The Connecticut Health Improvement Coalition is a diverse partnership of local, regional, and statewide organizations and agencies that address public health from many perspectives. DPH staff, coalition partners, and external stakeholders collaborated to develop the State Health Assessment (SHA), the foundation for the Healthy Connecticut 2025 State Health Improvement Plan (SHIP). Healthy Connecticut advances health promotion and disease prevention through cross-sector partner collaboration. Specifically, it addresses the social, economic, and environmental health factor that lead to poor health outcomes for Connecticut residents.[424]

7.6.3.3 Department of Public Health: Office of Oral Health

There is an important relationship between oral health and general health. Chronic oral infections can cause diabetes, osteoporosis, heart and lung conditions, and certain adverse pregnancy outcomes.[425] Oral health disparities exist across gender, race, ethnicity, and income levels. Vulnerable populations are more likely to have dental caries (tooth decay), periodontal or gingival diseases, oral and pharyngeal cancer, and conditions resulting from the side effects of over-the-counter drugs.[426]

The DPH Office of Oral Health (OOH) was established to coordinate and direct State and national dental public health programs activities in the state. More specifically, OOH:

- Serves as a chief advisor on oral health issues.
- Plans, implements, and evaluates oral health programs within the state.
- Promotes population-based approaches to improving the oral health of Connecticut's residents.
- Collects, analyzes, and reports on oral health data.
- Implements an oral health surveillance system for disease detection and formulates and evaluates policies.

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[423] Department of Public Health. (2021). *Connecticut primary care assessment*. Connecticut Department of Public Health. portal.ct.gov/-/media/DPH/Primary-Care-Office/PCNA-FinalDraft-V8_122821Revised.pdf

[424] Department of Public Health. (n.d.) *Healthy Connecticut 2025.* Connecticut Department of Public Health. portal.ct.gov/DPH/State-Health-Planning/Healthy-Connecticut/Healthy-Connecticut-2025

[425] CDC. (n.d.). *Adult oral health*. Centers for Disease Control and Prevention Oral Health. cdc.gov/oralhealth/basics/adult-oral-health

[426] CDC. (n.d.). *Disparities in oral health.* Centers for Disease Control and Prevention Oral Health. cdc.gov/oralhealth/oral_health_disparities

- Provides leadership and collaborates with community partners to identify and implement solutions to address oral health needs.
- Informs and empowers the public regarding the prevention of oral health problems and solutions to promote overall health.
- Improves access quality oral health services.
- Supports equitable access to culturally and socially appropriate, high-quality oral health services.
- Promotes laws and regulations that protect Connecticut residents' overall health and well-being.

OOH has implemented or partnered with a coalition of stakeholders to implement several initiatives and programs, including:

- Developing and publishing the Oral Health Improvement Plan of Connecticut.[427]
- Collaborating with the PCO to survey dentists to identify dental HPSAs in Connecticut.
- Promoting the benefits of fluoridation for oral health in partnership with DPH's Drinking Water Section.
- Participating in the Medical Dental Integration Pilot Program that integrates and coordinates dental medicine into primary care and behavioral health to support individual and population health.
- Conducting the Every Smile Counts oral health surveillance system to assess the oral health status of Connecticut kindergarten through third-grade children,[428] and vulnerable older adults.[429]

7.6.3.4 Screening, Brief Intervention, Referral and Treatment (SBIRT)

The Connecticut Screening, Brief Intervention and Referral to Treatment Program is a private-public partnership between the Connecticut Department of Mental Health and Addiction Services, the University of Connecticut Health Center, the Community Health Center Association of Connecticut, and 10 FQHCs.

The purpose of the program is to increase the identification and treatment of adults, ages 18 and older, who are at risk for substance misuse or diagnosed with a substance use disorder through the implementation of SBIRT services at health centers statewide. It also furthers the linkages between

[427] portal.ct.gov/-/media/Departments-and-Agencies/DPH/dph/oral_health/PDF/Improvement-Plan-Booklet_Web-Ready.pdf
[428] Department of Public Health. (2018). *Connecticut state oral Health improvement plan 2019-2024.* Connecticut Department of Public Health. portal.ct.gov/-/media/DPH/Oral-Health/Every-Smile-Counts-Report-2022.pdf
[429] Department of Public Health. (2023). *Every smile counts for older adults: The oral Health of vulnerable older adults in Connecticut.* Connecticut Department of Public Health. astdd.org/www/docs/connecticut-older-adult-bss-2022.pdf

primary care and behavioral health care at health centers and partnering substance use disorder treatment agencies.[430]

7.6.3.5 Public Acts Concerning Children's Mental Health

Connecticut has passed legislation specifically addressing children's mental health needs. Connecticut Public Act 22-47 was signed into law May 23, 2022.[431] It requires the development of a plan to waive licensure requirements for eligible mental or behavioral health care providers licensed or certified in other states to help address mental and behavioral health workforce shortages. Additionally, this Act requires certain health plans to offer coverage for two mental health wellness exams per year. Connecticut Public Act 22-80, signed into law May 24, 2022,[432] aims to enhance mental health programs in schools, and increases wages for childcare workers. Finally, Connecticut Public Act 22-81, signed into law May 24, 2022, expands access to mobile crisis centers and sets up funds to address social determinants of mental health factors.[433,434]

The Connecticut Department of Social Services increased reimbursement for select behavioral health services for HUSKY Health (Medicaid) members age 20 years and under pursuant to Public Act 23-204 §1[435] through a state plan amendment[436] effective July 1, 2024. Affected behavioral health services, inclusive of family therapy, include behavioral health clinics, psychologists, physician office and outpatient; medical clinics, inclusive of school-based health clinics, and rehabilitation clinics. These increases represent an estimated additional aggregate expenditure of $13.8 million in state fiscal year 2025 and $15.5 million in state fiscal year 2026.

7.6.3.6 Legal Challenges to Preventive Care Requirements

At the time of the development of this Plan, legal challenges to the ACA which would impact primary care services were undecided. The most threatening challenge to date to the ACA is *Braidwood Management v Becerra*, where on March 23, 2023, a US District Court Judge in the Northern District of Texas struck down part of the ACA's requirement for no cost coverage of preventive services recommended or updated by the U.S. Preventive Services Task Force, and PrEP medications for HIV prevention. On appeal, the 5th Circuit Court of Appeals issued an administrative stay, meaning the ACA requirements can continue to be enforced while the Circuit Court considers the appeal. The opinion

[430] Department of Public Health. (n.d.). *Connecticut screening, brief intervention, and referral to treatment (CT SBIRT) program.* Connecticut Department of Public Health. portal.ct.gov/-/media/DMHAS/Publications/SBIRTBriefOverviewpdf.pdf
[431] An Act Concerning Children's Mental Health, Pub L. No. 22-47 (2022). cga.ct.gov/asp/cgabillstatus/cgabillstatus.asp
[432] An Act Concerning Childhood Mental and Physical Health Service in Schools, Publ. L. No. 22-80 (2022). cga.ct.gov/asp/cgabillstatus/cgabillstatus.asp
[433] An Act Expanding Preschool and Mental and Behavioral Services for Children, Publ. L. No. 22-81 (2022). cga.ct.gov/asp/cgabillstatus/cgabillstatus.asp
[434] Carlesso, J. (2022). Three extensive bills targeting children's mental health win final passage. *CTMirror*. ctmirror.org/2022/05/03/three-extensive-bills-targeting-childrens-mental-health-win-final-passage-in-ct-legislature
[435] An Act Concerning the State Budget for the Biennium Ending June 30, 2025, and Making Appropriations Therefor, and Provisions Related to Revenue and Other Items Implementing the State Budget. Pub. L. No. 23-204. cga.ct.gov/2023/act/pa/pdf/2023PA-00204-R00HB-06941-PA.pdf
[436] Department of Social Services. (2024). Notice of Proposed Medicaid State Plan Amendment. portal.ct.gov/-/media/departments-and-agencies/dss/spas/spa-24-y-updates-to-the-rates-of-select-bh-services---website-notice.pdf

has not been issued yet, but the case could have broad implications for a range of clinical preventive services. Millions of people, including those in Connecticut may lose the guaranteed coverage for preventive services without cost sharing. This could cause barriers to care, especially for lower-income people and people of color.[437]

[437] Sobel, L., Ranji, U., Pestaina, K., Dawson, L. & Cubanski, J. (2023). Explaining litigation challenging the ACA's preventive services requirements: Braidwood Management Inc. v Becerra. *KFF*. kff.org/womens-health-policy/issue-brief/explaining-litigation-challenging-the-acas-preventive-services-requirements-braidwood-management-inc-v-becerra

Section 2 Chapter 8

LONG-TERM SERVICES AND SUPPORTS AND POST-ACUTE CARE SERVICES

8.0 Long-Term Services and Supports and Post-Acute Care Services

8.1 Relationship to Certificate of Need

CON regulations vary across Post Acute Care (PAC) and Long-Term Services and Supports (LTSS) settings. LTSS providers not offering PAC services are exempt from CON regulations. In contrast, state regulations require most PAC providers to demonstrate that they meet a clear public need. Home health agencies are the only exempt PAC setting. These agencies provide both PAC and LTSS to people in their private homes.

8.2 Overview

This chapter focuses on key trends in the use and capacity of LTSS and PAC services. These services help people with ongoing needs related to their health and disabilities. They can span a few days for people with a recent hospitalization who need extra help to recover or can last a lifetime for people who were born with severe disability.

PAC and LTSS can be similar, but they have different goals. LTSS are services that help older adults and people with disabilities with everyday activities. The main goal of LTSS is to help these people live healthy, independent lives. PAC services are for people who are stable enough to leave the hospital but still need extra help from health care providers and typically focus on rehabilitative therapies, such as physical and occupational therapy. These services help them regain strength and the ability to do everyday activities independently.

8.3 Long-Term Services and Supports (LTSS)

LTSS refers to paid and unpaid assistance for older adults and people with disabilities with everyday activities. These tasks fall into two categories: activities of daily living (ADLs) and instrumental activities of daily living (IADLs). ADLs are the things people do to take care of themselves, like eating, bathing, and dressing. IADLs are the things people do to manage their life, health, and home. IADLs include paying bills, arranging transportation, and going to appointments. People may need help with ADLs and IADLs due to chronic conditions, physical disabilities, Alzheimer's and related dementias, mental and behavioral health issues, and intellectual and developmental disabilities (e.g., autism and down syndrome).

Demand for LTSS is rising and meeting new demand is challenging. The number of older people is growing, and they are more likely to need LTSS than younger people. From 2025 to 2040, the number of older adults ages 85 and over in Connecticut will grow by 22%.[438] Meanwhile, the number of

[438] Connecticut State Data Center. (2023). *Connecticut town population projections, 2015-2040* [Data set]. Connecticut's Official State Website. data.ct.gov/Government/Connecticut-Town-Population-Projections-2015-2040/p6hp-fnp7/about_data

people ages 20 to 64 (who are most likely to provide care) will stay about the same in the state. This means fewer people will be available to provide care, relative to those who need it.

Unpaid caregivers are the primary source of LTSS for most people.[439] These caregivers are mostly family members but also include friends and volunteers. In Connecticut in 2021, approximately 420,000 family caregivers helped their loved ones, and the value of that unpaid care is estimated to be $7.2 billion.[440]

However, unpaid caregivers may be less available in the future.[441] Family sizes are smaller due to rising divorce rates and falling birth rates. Adult children live farther from their parents and women are more likely to work, making them less likely to provide care. All these trends mean people who need care might not be able to get it from family members, which may drive up demand for paid LTSS.[442]

There are four main ways people obtain paid LTSS. First, they may hire an agency or individual to provide care in their private home. They may also visit an adult day center during weekdays. These centers offer some help with tasks, meals and snacks, and social activities. People needing more help might live in assisted living communities, adult family living and community living arrangements, as well as residential care homes. These communities provide some assistance with tasks and communal meals but do not provide round-the-clock nursing care. All these settings are collectively referred to as home and community-based services (HCBS). People with higher needs who cannot safely live in the community can live in a nursing home. These homes offer help with daily tasks, communal meals, social activities, and 24-hour nursing care.

States have a key role in regulating and paying for LTSS, as Medicare and private health insurance do not cover these services and supports. Some people have private LTSS insurance plans, but they are expensive and have limited benefits.[443] Most people who need LTSS pay for it themselves. In Connecticut, out-of-pocket costs of LTSS vary.[444] On average, help with household tasks like cooking, laundry, and shopping (called homemaker services) costs $62,920 annually. A private room in a nursing home costs $182,044. People who need paid LTSS typically deplete their savings until they

[439] Chidambaram, P., & Burns, A. (2022, September 15). *10 things about Long-Term Services and Supports (LTSS)*. Kaiser Family Foundation. kff.org/medicaid/issue-brief/10-things-about-long-term-services-and-supports-ltss
[440] Reinhard, S.C., Caldera, S., Houser, A., & Choula, R.B. (2023). *Valuing the invaluable 2023 update: Strengthening supports for family caregivers.* AARP Public Policy Institute. doi.org/10.26419/ppi.00082.006
[441] PHI. (2019). *Envisioning the future of home care: Trends and opportunities in workforce policy and practice.* phinational.org/wp-content/uploads/2019/10/The-Future-of-Home-Care-2019-PHI.pdf
[442] Assistant Secretary for Planning and Evaluation. (2023). *Future change in caregiving networks: How family caregivers and direct care workers support older adults now and in the future* [Issue Brief]. Department of Health and Human Services, Office of Behavioral Health, Disability, and Aging Policy. aspe.hhs.gov/sites/default/files/documents/a449863a8c93838d37f78ccf29e9231f/future-change-caregiving-networks.pdf
[443] Chidambaram, P., & Burns, A. (2022, September 15). *10 things about Long-Term Services and Supports (LTSS*). Kaiser Family Foundation. kff.org/medicaid/issue-brief/10-things-about-long-term-services-and-supports-ltss
[444] Genworth. (2023). *Cost of care survey.* genworth.com/aging-and-you/finances/cost-of-care

reach poverty and qualify for Medicaid.[445] As a result, Medicaid LTSS expenditures totaled $3.2 billion in state fiscal year 2019, 40% of total Medicaid spending.[446]

To control LTSS spending, Connecticut has focused on shifting Medicaid spending away from costlier nursing homes that provide 24-hour nursing care and toward home and community-based services (HCBS). States often refer to this as "rebalancing." This shift toward HCBS aligns with what people prefer, too. Seventy-seven percent of adults ages 50 and older want to remain at home as they age.[447] The choice to receive care at home or in the community is also a civil right under the Americans with Disabilities Act and the Olmstead v. L.C. U.S. Supreme Court decision.[448]

Connecticut has used many strategies and federal funding opportunities to expand access to HCBS.[449] First, the state used federal Money Follows the Person funding to expand access to affordable housing, build the HCBS workforce, analyze gaps in LTSS, and provide training to hospitals with discharge planning. Then, using federal Balancing Incentive Program (BIP) dollars, the state developed a new way to assess the care people need across settings. These standard assessments help align provider payments with LTSS users' needs. The state also used BIP funding to launch MyPlaceCT, a resource to educate LTSS consumers about their care options.

According to state reports, the impact of these initiatives on Medicaid spending and utilization has been substantial. The percentage of LTSS consumers in Medicaid programs who received HCBS instead of institutional care increased from 54% in 2010 to 69% in 2023.[450] Over that same period, the share of Medicaid LTSS spending on HCBS grew from 38% to 56%. The state projects 81.5% of Medicaid LTSS consumers will receive services in HCBS settings by 2040.[451]

Despite progress, challenges persist. In 2023, 62% of older and disabled Medicaid enrollees admitted to nursing homes did not return to the community within six months.[452] That includes people who entered the nursing home for PAC after leaving the hospitals. This means some people plan to go home after a short stay in the nursing home but stay much longer or even indefinitely. Barriers to

[445] Reaves, E.L. & Musumeci, M. (2015, December 15). *Medicaid and long-term services and supports: A primer.* Kaiser Family Foundation. kff.org/medicaid/report/medicaid-and-long-term-services-and-supports-a-primer
[446] Connecticut Department of Social Services. (2020, February 6). Modernization of Connecticut Medicaid nursing facility reimbursement: An essential component of long-term services and supports "rebalancing." portal.ct.gov/-/media/departments-and-agencies/dss/medicaid-nursing-home-reimbursement/nursing-home-forum-for-the-committees-of-cognizance-2620.pdf
[447] AARP. (2021). *Where we live, where we age: Trends in home and community preferences*. livablecommunities.aarpinternational.org
[448] Chidambaram, P., & Burns, A. (2022, September 15). *10 things about Long-Term Services and Supports (LTSS)*. Kaiser Family Foundation. kff.org/medicaid/issue-brief/10-things-about-long-term-services-and-supports-ltss
[449] Connecticut State Department of Public Health. (2019). *What is rebalancing?* portal.ct.gov/-/media/Departments-and-Agencies/DSS/Health-and-Home-Care/Medicaid-Long-Term-Care-Demand-Projections/Overview-of-HUSKY-Health-Medicaid-Rebalancing-8-1-19-with-OPM-final-edits.docx
[450] UConn Health. (2023). *CT money follows the person report.* health.uconn.edu/aging/wp-content/uploads/sites/102/2024/02/2023-Q4-MFP-report.pdf
[451] Mercer. (2021). *Medicaid long-term care demand projections.* State of Connecticut Department of Social Services. portal.ct.gov/-/media/departments-and-agencies/dss/health-and-home-care/medicaid-long-term-care-demand-projections/ct-long-term-care-demand-report.pdf
[452] UConn Health. (2023). *CT money follows the person report.* health.uconn.edu/aging/wp-content/uploads/sites/102/2024/02/2023-Q4-MFP-report.pdf

HCBS for these people include mental and physical health issues, lack of affordable housing, challenges related to paid and unpaid support, and other issues.[453]

The state periodically releases a strategic plan that describes challenges in LTSS rebalancing and proposes strategies to address them. The *Strategic Rebalancing Plan: A Plan to Rebalance Long Term Services and Supports* reflects input from consumers, providers, state officials, and others. The goals of the current strategic plan include:

- Increasing education about HCBS options through a global communications plan that relies on a new LTSS website.
- Expanding access to affordable housing through partnerships with the Department of Housing and Interagency Council on Affordable Housing to develop new housing models.
- Increasing discharges to the community from hospitals and nursing homes through education on HCBS options, identifying and resolving barriers to transition people who are institutionalized, and development of predictive methods to identify and transition people at risk of nursing home long-term stays when there is a preference for living in the community.
- Transitioning workers in nursing homes who are displaced by rebalancing efforts toward HCBS settings, including providing training and education opportunities.[454]

The following subsections describe the supply, demand, and capacity of these different service models. They also explore the impact of state rebalancing efforts, the COVID-19 pandemic, and other factors.

8.3.1 Home Care

Home care refers to direct assistance with daily tasks that older adults and people with disabilities receive in their private homes. Often, these people also need health care and rehabilitation services, like help taking medications and range of motion exercises.

Some people get these services through agencies. Home care agencies hire, recruit, schedule, and manage home care workers. There are two types of home care agencies in Connecticut. Homemaker companion agencies (HCAs) only help with ADLs and IADLs, focusing on helping older adults and people with disabilities maintain independence at home.[455] These agencies do not need to be licensed but must still register with the Department of Consumer Protection.[456] Currently, there are

[453] Robison, J., Shugrue, N., Porter, M., & Baker, K. (2020). Challenges to community transitions through Money Follows the Person. *Health services research, 55*(3), 357–366. doi.org/10.1111/1475-6773.13267
[454] CT Department of Social Services. (2020). *Strategic rebalancing plan: A plan to rebalance long term services and supports*. portal.ct.gov/-/media/departments-and-agencies/dss/health-and-home-care/medicaid-long-term-care-demand-projections/strategic_rebalancing_plan-2020.pdf
[455] My Place CT. (2021). *Homemaker-companion services.* myplacect.org/services-and-supports/in-home-care/homemaker-companion-services
[456] Connecticut State Department of Consumer Protection. (n.d.). *Homemaker Companion Agency (HCA) registration.* portal.ct.gov/dcp/license-services-division/license-division/homemaker-companion-agency-registration

895 HCAs in Connecticut.[457] The other type of home care agency, called home health agencies (HHAs), may provide help with ADLs and IADLs but focus on rehabilitation and health care. Unlike HCAs, aides employed by licensed HHAs must be supervised by a licensed clinical professional, like a nurse. Because these providers provide nursing care, they provide both PAC and LTSS. Currently, there are 85 licensed home health agencies in Connecticut. [458]

People may also hire and employ workers directly. In public programs, this is known as the consumer-directed model of care. When these are private-pay arrangements, this approach is called the gray market. Some people hire workers through HCAs that function solely as worker registries. In such cases, HCAs connect people to workers but the people who need care ultimately employ the workers. The state also maintains a registry of potential workers for people in consumer-directed programs. However, reports from the field suggest consumers who request registry access often receive a printed binder with outdated worker contact information. This means they must make dozens of phone calls to identify workers who are still in the field, let alone available to work.[459] Beginning in 2024, investments made corresponding with PA 24-39 HB 5001 An Act Supporting Connecticut Seniors and Improvement of Nursing and Home-Based Care require DSS to develop and maintain a web-based homecare provider registry.[460]

The state has identified home care service capacity as a priority for expanding access to HCBS.[461] As noted above, issues with service availability are among the key barriers for nursing home residents who want to move into the community.[462] However, home care worker turnover is high and home care agencies struggle to recruit new workers.[463] Addressing these challenges will be necessary for the state to achieve long-term rebalancing goals. From 2020 to 2040, the state will need 4,857 more personal care aides and 524 more home health aides to meet rising demand for Medicaid-funded home care.[464]

The state has proposed and implemented strategies to address workforce challenges in home care. For example, in its strategic rebalancing plan, the state laid out strategies to raise awareness of home

[457] State of Connecticut. (2024). *eLicense Online: Available rosters for download.* elicense.ct.gov/Lookup/GenerateRoster.aspx
[458] State of Connecticut. (2024). *eLicense Online: Available rosters for download.* elicense.ct.gov/Lookup/GenerateRoster.aspx
[459] Carlesso, J., & Altimari D. (2023). *CT's aging population is growing. There are not enough people and facilities to take care of them.* CT Mirror. ctmirror.org/2023/03/19/ct-nursing-home-care-seniors-a-aarp-medicaid-1199-seiu
[460] Connecticut General Assembly, H.B. 5001, Public Act No. 24-39. cga.ct.gov/2024/ACT/PA/PDF/2024PA-00039-R00HB-05001-PA.pdf
[461] Department of Social Services. (2020). *Strategic rebalancing plan: A plan to rebalance long term services and supports.* State of Connecticut. portal.ct.gov/-/media/departments-and-agencies/dss/health-and-home-care/medicaid-long-term-care-demand-projections/strategic_rebalancing_plan-2020.pdf
[462] UConn Health. (2023). *CT money follows the person report.* health.uconn.edu/aging/wp-content/uploads/sites/102/2024/02/2023-Q4-MFP-report.pdf
[463] Kellett, K., Migneault, D., Shugrue, N., & Robison, J. (2023). *The Department of Social Services home and community-based provider recruitment and retention survey.* UConn Health Center on Aging. health.uconn.edu/aging/wp-content/uploads/sites/102/2023/10/HCBS-Provider-Recruitment-Retention-Survey-Report.pdf
[464] Mercer. (2018). Page 4 - supply and demand. In *Connecticut LTC Demand Report 2018.* mosanalytics.mercer.com/ghsc-ct/sense/app/ccc1460d-e01f-43cf-9907-011a6a1cc7d4/sheet/577fd2e8-a3c1-4986-b795-50b2e5e82aba/state/analysis

care careers and transition workers displaced from nursing homes into HCBS.[465] Additionally, the state has allocated additional funding to strengthen the workforce. They raised reimbursement rates for agencies and raised pay rates for consumer-directed workers.[466] The state also recently hired a new payroll vendor after complaints emerged that consumer-directed workers were leaving the field due to payroll problems.[467]

8.3.2 Adult Day Services

Adult day centers help fill in caregiving gaps, especially during the day on weekdays. These providers are registered with the Connecticut Association of Adult Day Services to receive Medicaid reimbursement. All adult day programs provide recreation, meals and snacks, transportation to and from the center, and recreational and social activities. Most adult day providers also offer personal care, rehabilitation, and basic health care. Some day centers specialize in certain populations, like people living with dementia and people with intellectual and developmental disabilities.

The number of adult day centers in Connecticut has fallen in recent years. From August 2020 to July 2023, the number of adult day providers declined from 45 to 38.[468] The number of towns in Connecticut without adult day providers grew from 30 to 41 over the same period **(Table 8.1).** In rural regions of the state, most towns lack an adult day center. Adult day centers were already closing before the COVID-19 pandemic, likely due to financial challenges.[469] These challenges were exacerbated during the pandemic when many centers closed their doors or operated at limited capacity due to safety concerns. This cut their revenue, even though they were allowed to continue delivering services remotely.[470]

Table 8.1 Connecticut Towns with and without Adult Day Center Services, 2020 and 2023*

Planning Region	2020 Adult Day	2020 No Adult Day	2023 Adult Day	2023 No Adult Day
Capitol	36	2	31	7
Naugatuck Valley	19	0	19	0
Southeastern Connecticut	18	1	19	0
Lower Connecticut River Valley	14	3	17	0
South Central Connecticut	15	0	15	0

[465] Department of Social Services. (2020). *Strategic rebalancing plan: A plan to rebalance long term services and supports.* State of Connecticut. portal.ct.gov/-/media/departments-and-agencies/dss/health-and-home-care/medicaid-long-term-care-demand-projections/strategic_rebalancing_plan-2020.pdf

[466] O'Malley, M., Burns, A., & Ammula, M. (2022). *Ongoing impacts of the pandemic on Medicaid Home & Community-Based Services (HCBS) programs: Findings from a 50-state survey.* Kaiser Family Foundation. kff.org/medicaid/issue-brief/ongoing-impacts-of-the-pandemic-on-medicaid-home-community-based-services-hcbs-programs-findings-from-a-50-state-survey

[467] Carlesso, J. (2023). *CT hires new home care payroll vendor after late pay allegations.* CT Mirror. ctmirror.org/2023/11/08/ct-home-care-workers-payroll-company-change

[468] Connecticut Association of Adult Day Services. (2020, August 14). *Members.* web.archive.org/web/20200814023558/https:/www.ctadultday.org/non-profit-organization-members

[469] Niesz, H. (2004). *Connecticut adult day care centers.* Connecticut General Assembly. cga.ct.gov/2004/rpt/2004-R-0774.htm

[470] Parker, LJ., Marx, K., Gaugler, J.E., Gitlin, L.N. (2021). Implications of the Covid-19 pandemic on adult day services and the families they serve. *American Journal Alzheimers Disease Other Dementias.* doi: 10.1177/15333175211050152

Planning Region	2020 Adult Day	2020 No Adult Day	2023 Adult Day	2023 No Adult Day
Western Connecticut	12	6	12	6
Greater Bridgeport	6	0	6	0
Northwest Hills	15	6	6	15
Northeastern Connecticut	4	12	3	13
Total	**139**	**30**	**128**	**41**

***Data Source:** Members - Connecticut Association of Adult Day Services, Inc. - Wallingford, Connecticut (ctadultday.org)*

The downward trend in the supply adult day centers could indicate an inadequate supply of these services now and in the future. The state projects that demand for adult day services will increase by about 25% from 2020 to 2040.[471]

8.3.3 Community-Based Residential Settings

Some individuals who require LTSS prefer to live in residential communities that provide some personal care and health care services but not the 24-hour health care that nursing homes provide. To meet their needs, there are several types of residential care settings with varying levels of support.

Residential care homes (RCH) help their residents (who are generally older adults) with daily tasks, recreation, and are required to have an attendant on duty throughout the day. They may offer some health services and have nurses on staff, or they may contract with other providers for these services. Residential care homes are the only residential care setting with public data on use and capacity. There are 86 RCHs with a typical (median) bed size of 23, with variation across homes. The smallest RCH has 3 beds, and the largest has 100. Out of the 2,576 total RCH beds in Connecticut, 86% are occupied **(Table 8.2).**[472] Occupancy rates range from 71% in the rural Northeastern Connecticut Planning Region to 90% in the Naugatuck Valley Planning Region.

There is also variation in the number of open RCH beds per 1,000 older adults with caregiving needs.[473] The rural Northeastern Connecticut Planning Region had the highest rate of open beds, with 24.4 per 1,000 older adults with caregiving needs. The regions with the lowest rates of open beds were the Naugatuck Valley Planning Region (4.7), Western Connecticut Planning Region (3.6), and Greater Bridgeport Planning Region (2.2).

[471] Mercer. (2018). Page 4 - supply and demand. In *Connecticut LTC Demand Report 2018.* mosanalytics.mercer.com/ghsc-ct/sense/app/ccc1460d-e01f-43cf-9907-011a6a1cc7d4/sheet/577fd2e8-a3c1-4986-b795-50b2e5e82aba/state/analysis

[472] Department of Social Services. (2024). *Residential Care Homes (RCH).* Connecticut Official State Website. portal.ct.gov/dss/health-and-home-care/long-term-care/residential-care-homes-rch/monthly-census

[473] Connecticut State Department of Public Health (2024). *Connecticut residential care home census report.* portal.ct.gov/-/media/departments-and-agencies/dss/health-and-home-care/reimbursement/rch/2024_01_29-rch-january-bed-census.pdf

Table 8.2 Residential Care Home Capacity Statewide and by Region, January 2024*,**

Planning Region	Occupancy Rate	Available Beds per 1,000 Older Adults with Caregiving Needs**
Naugatuck Valley	90%	4.7
Southeastern Connecticut	89%	9.4
Lower Connecticut River Valley	89%	11.0
Capitol	87%	9.6
Greater Bridgeport	86%	2.2
South Central Connecticut	83%	14.0
Western Connecticut	83%	3.6
Northwest Hills	82%	17.9
Northeastern Connecticut	71%	24.4
Connecticut Statewide	86%	8.4

***Data Sources:** 2024_01_29-RCH-January-Bed-Census.pdf (ct.gov); B18106: Census Bureau Table

****Note:** "Older adults with caregiving needs" are people ages 65 and above who live at home and have physical or mental health conditions lasting at least 6 months that make it difficult for them to take care of personal needs such as bathing, dressing, or moving around the house.*

Assisted living service agencies (ALSAs) provide more extensive support with activities of daily living as well as nursing and medication management.[474] They may only offer these services in managed residential communities (MRCs), communities that offer housing and services to people who live in private residences in the community.[475] Most residents are ages 55 and over. Some ALSAs work in MRCs they own, while others contract with separate MRCs to provide nursing and personal care. ALSAs must be licensed, while MRCs must be registered but not licensed. Currently, there are 122 licensed ALSAs in Connecticut.[476]

Finally, life plan communities (also known as continuing care retirement communities) provide a full spectrum of living arrangements, from independent living to nursing home care.[477] While some of these providers may own a licensed ALSA or nursing home and provide these services, they are also required to be registered by the state.[478] Public payers may cover nursing home care and assisted living services in life plan communities, but all other services require out-of-pocket payments.

[474] My Place CT. (2021). *Assisted living facilities and managed residential communities.* myplacect.org/services-and-supports/housing/assisted-living-facilities-and-managed-residential-communities
[475] Connecticut General Assembly. (n.d.). *Chapter 368bb: Managed residential communities.* cga.ct.gov/current/pub/chap_368bb.htm
[476] State of Connecticut. (2024). *eLicense Online: Available rosters for download.* elicense.ct.gov/Lookup/GenerateRoster.aspx
[477] My Place CT. (2021). *Assisted living facilities and managed residential communities.* myplacect.org/services-and-supports/housing/life-plan-communities
[478] Connecticut General Assembly. (n.d.) *Management of Continuing Care Facilities*. cga.ct.gov/current/pub/chap_319hh.htm

8.3.4 Nursing Home Care

Nursing homes are residential care settings where people receive 24-hour nursing care. Nursing homes also provide therapy services and opportunities for socialization and recreation. They may provide PAC and LTSS. Some homes may have specialty units for residents with specific conditions or needs. Memory care units for people with Alzheimer's or related dementias are the most common.

There are two types of nursing home licensure in Connecticut. Chronic convalescent nursing homes (CCNHs) provide 24-hour nursing supervision and can perform simple, non-surgical treatments. They also fulfill dietary orders from doctors, meaning they can plan, cook, and serve meals according to residents' health conditions and dietary restrictions. Rest homes with nursing supervision (RHNS) offer 24-hour nursing care but not treatment or dietary procedures, but this model is being phased out. A recent law placed a moratorium on new RHNS licenses.[479] There are 196 licensed CCNHs in Connecticut, compared to 9 remaining RHNS providers, 8 of which are also licensed as CCNHs.[480]

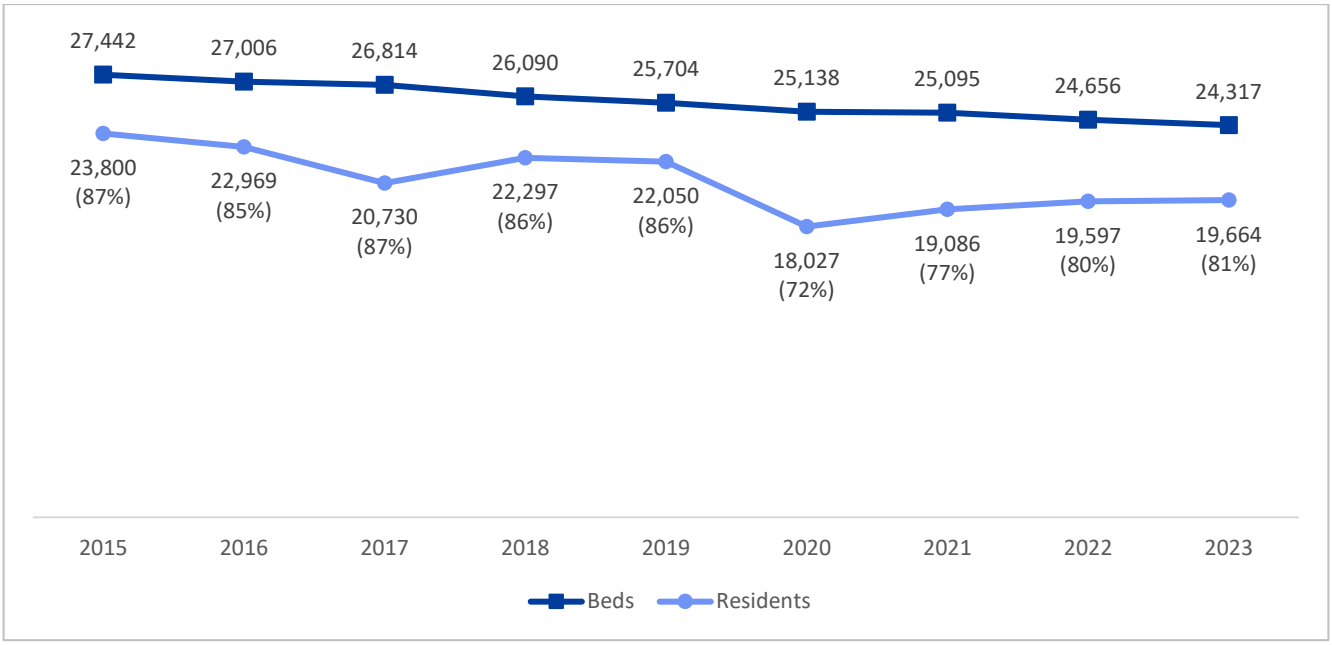
As described above, the state has implemented numerous policies and programs to expand access to HCBS and reduce the use of nursing homes for individuals who do not need or desire this level of care. Reflecting that goal, state law prevents nursing homes from expanding or adding more beds. They can only add capacity for people with a traumatic brain injury or acquired immunodeficiency syndrome (AIDS).

Before accounting for the COVID-19 pandemic, the state already expected to need 6,000 fewer nursing home beds by 2040. However, the pandemic caused a large reduction in nursing home use. As of February 2024, 3,346 nursing home residents have died from COVID-19, accounting for approximately a quarter of all COVID-19 deaths in Connecticut.[481]

CMS provides detailed data for nursing homes that are certified to provide Medicare services. Nearly all nursing homes in Connecticut are certified. These data show there were 23,800 nursing home residents in 2015 (the earliest year CMS data are available) and 19,664 in 2023, a decrease of 4,136 **(Figure 8.1).** In the same period, the total number of Medicare-certified nursing homes fell from 229 to 202, and beds declined from 27,422 to 24,317, a total decrease of 3,125 beds. The decrease in residents outpaced the decrease in beds, so occupancy rates fell from 87% in 2015 to 81% in 2023. The statewide occupancy rate was at its lowest (72%) at the height of the pandemic in 2020.

[479] Connecticut General Assembly. (2024). Public Act No. 24-141 An Act Promoting Nursing Home Resident Quality of *Life.* cga.ct.gov/2024/act/pa/pdf/2024PA-00141-R00HB-05046-PA.pdf
[480] State of Connecticut. (2024). *eLicense Online: Available rosters for download.* elicense.ct.gov/Lookup/GenerateRoster.aspx
[481] Centers for Medicare and Medicaid Services. (2024). *COVID-19 nursing home data*. data.cms.gov/covid-19/covid-19-nursing-home-data/data

Figure 8.1 Connecticut Nursing Home Capacity and Occupancy, 2015 to 2023*,**



***Data Sources:** Provider Information | Provider Data Catalog (cms.gov); Payroll Based Journal Daily Nurse Staffing - Centers for Medicare & Medicaid Services Data (cms.gov)*

***Note:** All occupancy figures are annual averages, except data for 2015, which reflects the average number of residents for the last three quarters of the year, and 2023, which reflects the average number of residents for the first three quarters of the year.*

While nursing home beds are trending downward overall, the number of RHNS beds has declined even faster, from 1,547 in 2004 to 353 in 2022, a 77% decrease.[482] This steep decline was likely due to efforts to serve more older adults and people with disabilities with less complex LTSS needs in the community.

Nursing home capacity varied by region in 2023. Occupancy rates ranged from 78% in the Western Connecticut Planning Region to 85% in the rural Northeastern Connecticut Planning Region. Available beds per 1,000 older adults with caregiving needs ranged from 74.8 in the Naugatuck Planning Region to 157.5 in the rural Northwest Hills Planning Region **(Table 8.3).**

[482] CT Data. (2023). *Connecticut annual nursing facility census.* Health and Human Services Policy and Planning Division, Connecticut State Office of Policy and Management. data.ct.gov/stories/s/Annual-Nursing-Facility-Census/k7kn-cnb6/#nursing-facilities

Table 8.3 Connecticut Nursing Home Occupancy and Capacity by Region, 2023*,**

Planning Region	Occupancy Rate	Available Beds per 1,000 Older Adults with Caregiving Needs**
Northeastern Connecticut	85%	156.7
Naugatuck Valley	84%	74.8
South Central Connecticut	82%	92.5
Southeastern Connecticut	82%	113.0
Capitol	81%	153.6
Western Connecticut	79%	84.8
Northwest Hills	78%	157.5
Greater Bridgeport	78%	88.8
Lower Connecticut River Valley	78%	136.3
Connecticut Statewide	81%	108.7

***Data Sources:** 2024_01_29-RCH-January-Bed-Census.pdf (ct.gov); B18106: Census Bureau Table*

***Note:** "Older adults with caregiving needs" are people ages 65 and above who live at home and have physical or mental health conditions lasting at least 6 months that make it difficult for them to take care of personal needs such as bathing, dressing, or moving around the house.*

As part of a recent funding package for nursing homes, the state required providers with extra beds in their homes or their region to submit a plan to promote efficiency, quality, or consolidation. The state is concerned about low occupancy rates because Medicaid reimbursements are calculated based on an assumed occupancy of 90% or actual occupancy, whichever is higher.[483] For example, if a nursing home has 60 residents but 100 beds, and the total administrative costs amount to $1,000, the administrative portion of its per-diem reimbursement would be calculated as if there were 90 residents. This would result in an imputed administrative cost of $11.11 per resident, which is lower than the actual cost of $16.67 based on the current occupancy. Consequently, nursing homes with occupancy below 90% receive lower administrative payments, potentially undermining their ability to invest in patient care, according to the state.

In their responses to the state's request, most homes (72%) indicated they did not plan to change their operations or capacity. Many cited workforce challenges as a key barrier to increasing occupancy and expected occupancy to climb once workforce shortages become less severe. Some described innovative strategies to boost recruitment and retention. Smaller percentages of homes planned to downsize, renovate their buildings, or create a specialty unit.

[483] Department of Social Services. (2022). *Report on Connecticut nursing home rebalancing & efficiency plans.* portal.ct.gov/-/media/departments-and-agencies/dss/highlights/nursing-home-efficiency-report-july2022-final.pdf

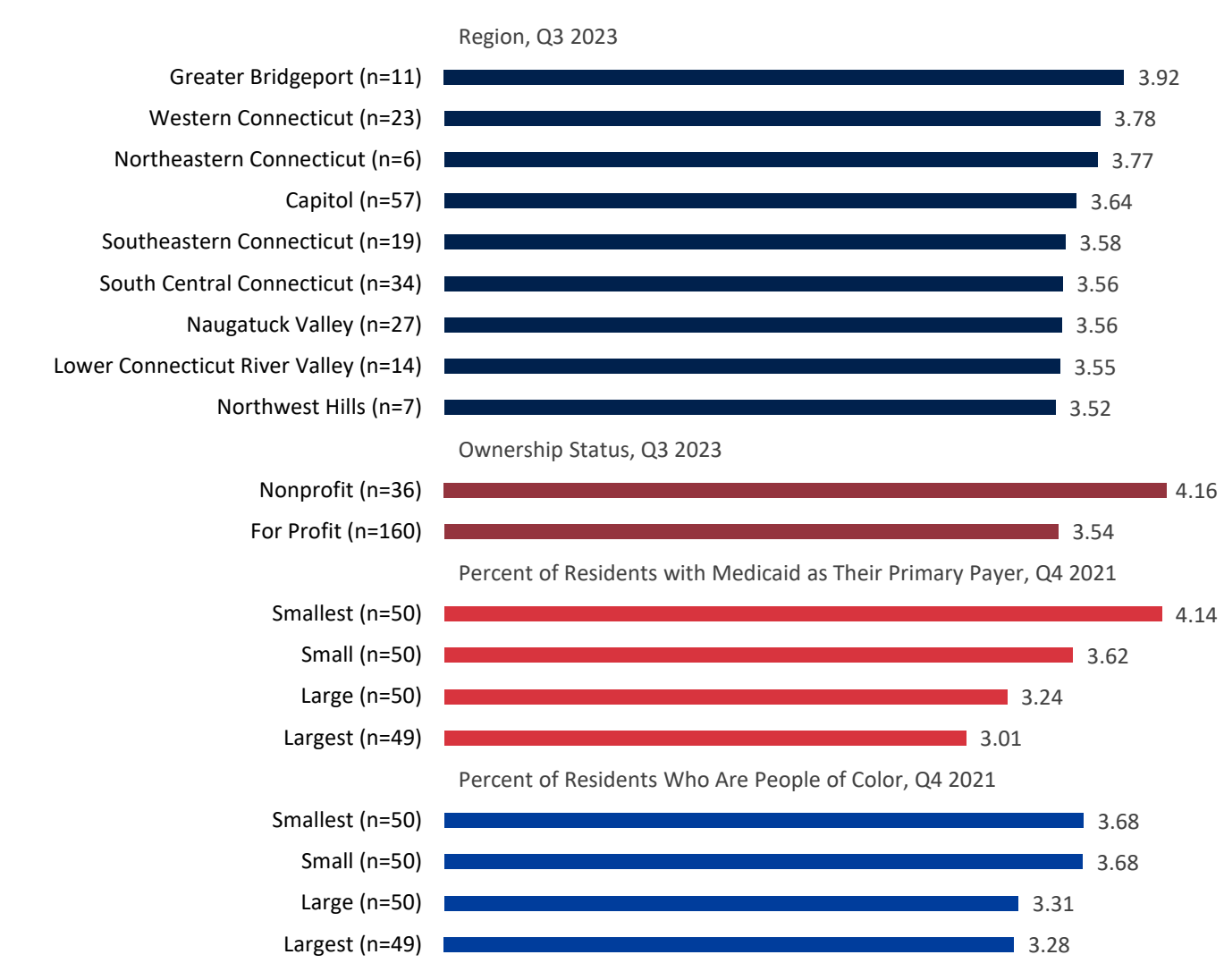
8.3.4.1 Nursing Home Staffing Levels

CMS requires Medicare-certified nursing homes to report detailed data on the hours of care each resident receives per day. These data include care from nursing assistants, licensed practical nurses, and registered nurses. In recent years, total nurse staffing levels in Connecticut remained mostly constant, from 3.49 hours per resident per day in the second quarter of 2017 to 3.64 in the second quarter of 2023, with a peak of 3.86 in the first quarter of 2021 when occupancy rates were low due to the pandemic.[484]

There was variation in staffing levels according to various facility characteristics in the second quarter of 2023 **(Figure 8.2).** Across regions, the average total nurse staffing was 3.52 HPRPD in the rural Northwest Hills Planning Region and 3.92 HPRPD in the Greater Bridgeport Planning Region. Nonprofit nursing homes had higher total nurse staffing than for-profit homes, 4.16 versus 3.54 HPRPD. Homes with more people on Medicaid also tended to have lower staffing levels. In the first quarter of 2021 (the most recent data available on payer mix), nursing homes with the largest share of residents on Medicaid had an average total nurse staffing level of 3.01, versus 4.14 for homes with the smallest share of Medicaid residents. Finally, nursing homes with the largest share of residents who were people of color in the first quarter of 2021 had lower staffing levels than nursing homes with the most non-Hispanic white residents, 3.28 versus 3.68 HPRPD.

[484] Centers for Medicare & Medicaid Services. (2024). *Provider Information.* data.cms.gov/provider-data/dataset/4pq5-n9py

Figure 8.2 Average Total Hours of Nurse Staffing Hours per Resident per Day by Nursing Home Characteristics*,**



***Data Sources:** Staffing Data – NursingHome411; Data – LTC Focus*

****Note:** The nursing homes have been divided into quartile ranges based on the share of residents who have Medicaid as their primary payer and who belong to people of color. This means that the smallest category includes the 25% of homes with the lowest share, whereas the largest category comprises the 25% of nursing homes with the highest share.*

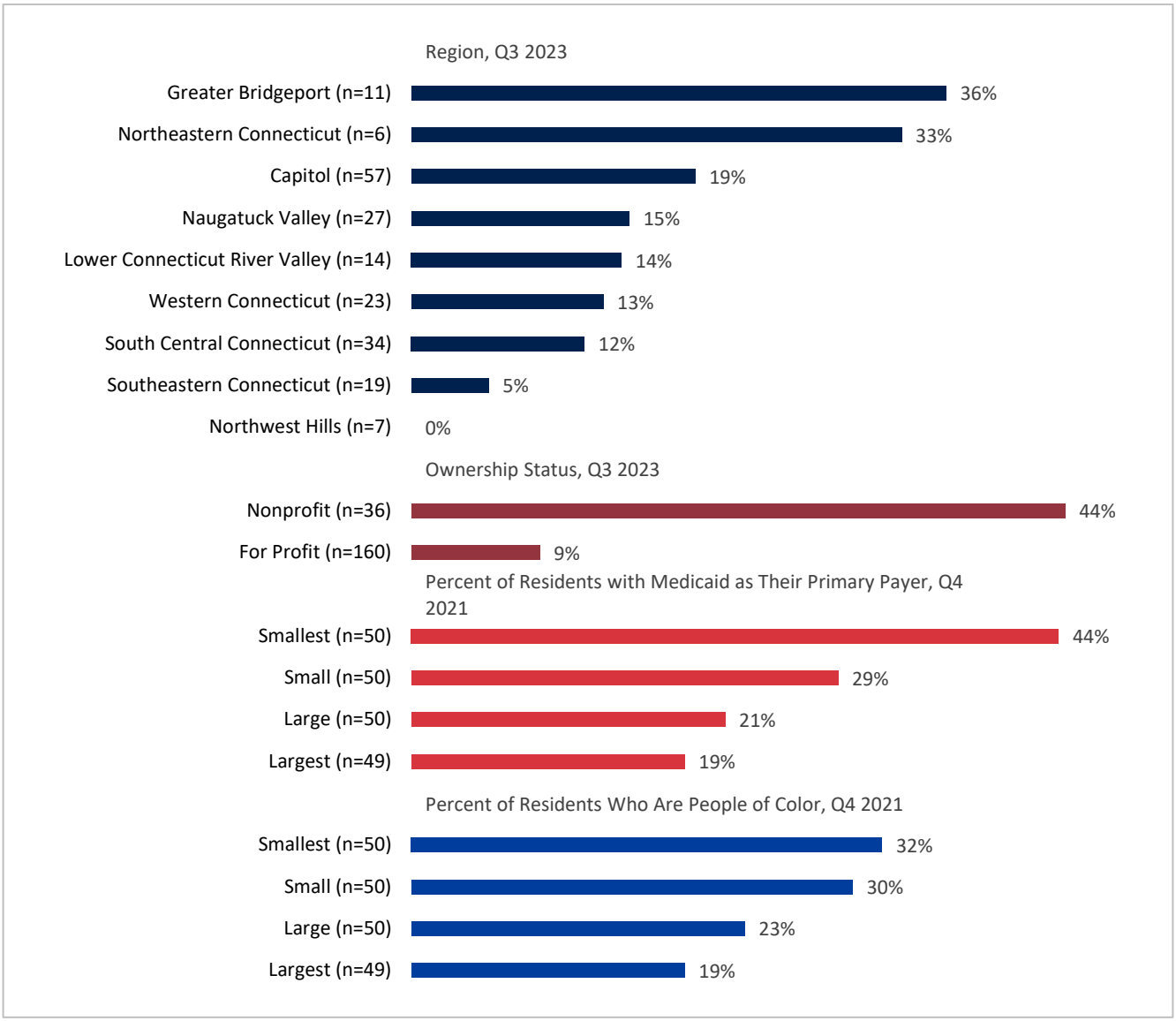
State and federal governments have proposed a minimum number of care hours per resident per day. The federal rule requires nursing homes to provide 2.45 nursing assistant HPRPD and 0.55 registered nurse HPRPD.[485] Policies and procedures in Connecticut were updated in January 2024. They listed similar staffing levels, but differentiated minimums for day and night shifts and set requirements for

[485] Centers for Medicare & Medicaid Services. (2024). Medicare and Medicaid programs: Minimum staffing standards for long-term care facilities and Medicaid institutional payment transparency reporting Final Rule (CMS 3442-F). cms.gov/newsroom/fact-sheets/medicare-and-medicaid-programs-minimum-staffing-standards-long-term-care-facilities-and-medicaid-0

licensed nurses (including licensed practical nurses and registered nurses) and total nurse staffing hours (including licensed nurses and nursing assistants).[486]

As of the second quarter of 2023, 16% of nursing homes in Connecticut met federally proposed staffing levels. Compliance levels are lowest for nursing homes in the rural Northwest Hills Planning Region, for-profit nursing homes, and nursing homes with a large proportion of residents who are on Medicaid or are people of color **(Figure 8.3).**

Figure 8.3 Percent of Connecticut Nursing Homes that Meet Proposed Federal Staffing Standards by Nursing Home Characteristics*,**



***Data Source:** Nursing Home 411 and LTCFocus*

[486] Phaneuf, K.M. (2024). *Disputed nursing home staffing policy will cost CT tens of millions.* CT Mirror. ctmirror.org/2024/02/27/ct-nursing-home-staffing-policy-cost

***Note:** The nursing homes have been divided into quartile ranges based on the share of residents who have Medicaid as their primary payer and who belong to people of color. This means that the smallest category includes the 25% of homes with the lowest share, whereas the largest category comprises the 25% of nursing homes with the highest share.*

The state has made targeted investments in the nursing home industry and workforce development to address staffing issues and stabilize the industry following the COVID-19 public health emergency.[487] Additionally, the state recently started paying nursing homes based on resident needs instead of the amount of care they receive. This change increased payment rates for most nursing homes.[488] These investments could help nursing homes grow their staff and capacity, including under new staffing requirements.

8.3.5 Hospice Care Providers

Hospice refers to health and long-term care services designed to improve comfort and quality of life for people who are dying.[489] Hospice can be provided at home, in residential care settings, and nursing homes. The state licenses hospice providers that offer inpatient services, but since 2008, they must provide hospice care in other settings. Only two of these providers are licensed currently.[490]

8.4 Post-Acute Care (PAC)

PAC refers to a range of health care and rehabilitation services that people require following an acute care discharge. Rehabilitation often includes physical, respiratory, occupational, and speech therapy. Physical therapy helps people regain their strength and range of motion after an injury or illness. Respiratory therapy helps people improve breathing by treating problems of the lungs. Occupational therapy helps people do everyday activities that they have trouble with, like cooking or getting dressed. Finally, speech therapy helps address speech, understanding, and swallowing difficulties.

Whether and how people receive PAC is decided through discharge planning while they are still in the hospital. This process often includes input from physicians, therapists, social workers, and patients and their family members. Hospitals aim to discharge patients once they are stable. They refer patients to PAC providers to receive the care they need without another hospitalization, which can result in financial penalties for hospitals. Sometimes, patients are unable or unwilling to receive PAC when their care teams recommend it. Common reasons patients refuse PAC are financial or insurance-related barriers, mental health or substance use disorders, provider availability, and a desire to receive support from family or friends.[491]

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[487] Department of Social Services. (2022). *Report on Connecticut nursing home rebalancing & efficiency plans.* portal.ct.gov/-/media/departments-and-agencies/dss/highlights/nursing-home-efficiency-report_july2022-_final.pdf

[488] Department of Social Services. (2022). *Report on Connecticut nursing home rebalancing & efficiency plans.* portal.ct.gov/-/media/departments-and-agencies/dss/highlights/nursing-home-efficiency-report_july2022-_final.pdf

[489] National Institute on Aging. (2021). *What are palliative care and hospice care?* nia.nih.gov/health/hospice-and-palliative-care/what-are-palliative-care-and-hospice-care

[490] eLi State of Connecticut. (2024). *eLicense Online: Available rosters for download.* elicense.ct.gov/Lookup/GenerateRoster.aspx

[491] Kennedy, E. E., Davoudi, A., Hwang, S., Freda, P. J., Urbanowicz, R., Bowles, K. H., & Mowery, D. L. (2023). Identifying barriers to post-acute care referral and characterizing negative patient preferences among hospitalized older adults using natural language processing. *AMIA Annu Symp Proc., 2022*, 606–615. ncbi.nlm.nih.gov/pmc/articles/PMC10148308

8.4.1 PAC Settings

Home health agencies and nursing homes provide most PAC services. Nursing homes are recommended when people require 24-hour support following a hospitalization. Home health, on the other hand, is used when people need less support. Often, home health nurses train unpaid caregivers to provide the PAC that people need. Some individuals are still discharged to nursing homes when their needs and preferences make home health a better fit. In many cases, these people end up staying in nursing homes long term. As noted above, 62% of people on Medicaid who are admitted to a nursing home end up staying for six months or more.[492]

A small number of patients are discharged to inpatient rehabilitation facilities. Under Medicare rules, this setting is meant for individuals who require at least three hours of speech, physical, or occupational therapy for five consecutive days.[493] The patients who require this level of support typically have diagnoses of severe injuries and illnesses. These include strokes, spinal cord injuries, and amputations. In Connecticut, there are seven inpatient rehabilitation facilities.[494]

The least common post-acute discharge setting is long-term acute care hospitals. These hospitals generally provide services similar to acute hospitals but for long periods (i.e., 25 days or more) to stable patients who still require hospital care.[495] New Medicare payment policy will incentivize using LTACHs for people with intensive care unit stays and people who received mechanical ventilation in the hospital.[496] There are only two LTACHs in Connecticut.[497]

8.4.2 Trends in PAC Utilization

In Connecticut, hospitals must report where patients go after they leave. These data offer insight into PAC utilization overall and by setting. These data also show differences in PAC trends across age groups, insurance types, regions, and racial and ethnic groups. These differences could indicate inequity in capacity, access, and utilization. They are reported by hospital fiscal year (FY), which spans from October 1 through September 30 of the next year.

Use of PAC services increases with age **(Table A13).** Most people age 75 and over need PAC services after they stay in the hospital. The total number of discharges fell from FY 2017 to FY 2022 because people avoided care during the pandemic due to safety concerns. Additionally, there was a notable

[492] UConn Health. (2023). *CT money follows the person report.* health.uconn.edu/aging/wp-content/uploads/sites/102/2024/02/2023-Q4-MFP-report.pdf
[493] Coulam, R. F., & Gaumer, G. L. (1992). Medicare's prospective payment system: A critical appraisal. *Health care financing review, 1991*(Suppl), 45–77.
[494]Centers for Medicare & Medicaid Services. (2024). *Inpatient rehabilitation facilities.* data.cms.gov/provider-data/topics/inpatient-rehabilitation-facilities
[495] Medicare. (2019). *What are long-term care hospitals?* medicare.gov/Pubs/pdf/11347-Long-Term-Care-Hospitals.pdf
[496] Makam, A. N., & Grabowski, D. C. (2021). Policy in clinical practice: Choosing post-acute care in the new decade. *Journal of Hospital Medicine, 16*(3), 171–174. doi.org/10.12788/jhm.3577
[497] Centers for Medicare & Medicaid Services. (2024). *Long-term care hospitals.* data.cms.gov/provider-data/topics/long-term-care-hospitals

shift in PAC away from nursing homes toward home health. This was true for most age groups, but there was a bigger shift for older age groups.

PAC use varies with age, and age can vary across regions, racial and ethnic groups, and payers. To compare discharge status across these different groups, age adjustment is appropriate. Age adjustment is a technique used to account for differences in age between groups when comparing health outcomes. This method allows for fairer comparisons of discharge trends, helping to reveal disparities.

Age-adjusted PAC trends varied across regions in the state. From FY 2017 to FY 2022, age-adjusted rates of hospital discharges with PAC grew the most in the Greater Bridgeport by 4.1 percentage points and South Central Connecticut planning regions by 2.7 percentage points **(Table A14).** In both cases, home health care utilization rates rose, and nursing home utilization declined.

In most other planning regions, PAC rates were either stable or declined slightly from FY 2017 to FY 2022. The biggest decline was in the Lower Connecticut River Valley Planning Region, where PAC use fell by 7.0 percentage points. That includes a 3.9 percentage point drop in nursing home utilization and a 2.9 percentage point drop in home health utilization. The rural Northwest Hills Planning Region also saw a large 5.1 percentage point decrease in PAC use. That includes a small 2.0 percentage point increase in home health utilization and a large 7.0 percentage point decrease in nursing home use. The rural Northwest Hills Planning Region also had the lowest rate of nursing home utilization for PAC statewide in FY 2022.

PAC trends also varied across people with different insurance sources. Medicare and Medicaid had the highest rates of PAC utilization, and both saw a decrease in nursing home use and an increase in home health care use **(Table A15).** However, both payers had higher utilization of nursing home care in FY 2022 than private insurers and other payers, even after adjusting for age differences across payers.

Regarding race and ethnicity, the rate at which people in different racial and ethnic groups received PAC did not change much from FY 2017 to FY 2022, as shown in **Table A16.** However, different racial and ethnic groups had different rates of PAC use. In FY 2022, Black or African American patients were the most likely to receive PAC, while people of another race or ethnicity were the least likely. Also, while nursing home use fell and home health use rose across racial and ethnic groups, non-Hispanic white and Black or African American patients were more likely to use nursing homes than people who were Hispanic, Latine, or another race.

Further analysis could help reveal why there are differences across regions, payers, and racial and ethnic groups. These factors could include provider availability, financial barriers, and patient preferences.

Section 3

Section 3 Chapter 9
RECOMMENDATIONS AND NEXT STEPS

9.0 Recommendations and Next Steps

Next steps and recommendations for further development of OHS data collection, additional Plan analyses to assess health care need and capacity, and integration of Plan findings with other health sector tracking are as follows:

- **Data Recommendations**
  - Continue to develop data collection on Connecticut planning regions and detail on the intersection of hospital primary service areas and planning regions.
  - Begin to capture and track race/ethnicity data in the All-Payer Claims Database and other sources to better identify health disparities and need for Connecticut populations.
  - Collect data on the service type classification of acute care beds, such that comparisons of average daily census by service line can be compared to available beds for their service line.
  - Track detailed data on the capacity, wait time, number of available beds, overall volume, number of admissions, demographics, and conditions of patients using emergency departments in Connecticut to better assess overall capacity and utilization of ED care.
  - Investigate the ability to measure the capacity and annual utilization of facilities licensed to provide cardiac angioplasty (separately measure primary and elective PCI capacities and use), to provide a better understanding of current use of available resources and possible need for additional cardiac services across the State.
  - Gather additional data on outpatient surgery measures to include race and ethnicity of patients, to better understand patient trends and potential disparities in the use of this care.
  - Investigate if additional categories of imaging machines can be collected in the survey of providers to better estimate the total annual capacity of each machine and if there are any restrictions on the types of scans each machine can conduct.
  - Gather additional data on the use of behavioral health care services by type of care and condition severity to determine if capacity is meeting patient needs. Integrate this data with observed use of behavioral health care services in different settings to estimate remaining unmet need for care.
  - Combine data from other state sources to provide greater detail on the volume of behavioral health care provided in state-run vs. other health care facilities.
  - Begin to gather data on ownership of health care facilities, machines, and service lines, such that evaluations of impact of private equity ownership and large health care system ownership impact care and outcomes.

- Continue to investigate more ways to identify underlying need for specific service lines among Connecticut residents, driven by condition prevalence and expected treatment modalities for care to compare with observed utilization of care.

- **Plan assessments of need, capacity, and access**
  - Work towards data and analyses that independently assess the available capacity for health care services and separately the expected need for those services based on population and condition-prevalence data.
  - Consider applying any new data collected on race/ethnicity and condition prevalence by Connecticut subpopulations to assessments of need, capacity and access to care for specific groups. Require the consideration of both overall need and need for specific groups, particularly vulnerable populations.
  - Expand the evaluation of utilization (e.g. use of imaging, cardiac interventions) to track the quality and appropriateness of services provided by service category. Use these insights to assess if utilization of capacity is "high-value" versus "low-value" and if current capacity could be sufficient if lower quality or unnecessary care was substituted for "high-value" services.
  - Work on developing approaches to quantify the impact of social and economic barriers on utilization of existing resources. Use this information to estimate what necessary total capacity for care would be, if barriers to access were eliminated, to ensure sufficient capacity is available.

- **Integration of Plan information with other health care, social, and economic data**
  - Overlay areas and populations of health care need with social and economic data for Connecticut to better understand the connection between social drivers of health and health care need.
  - Identify and track specific barriers to accessing health care services, the impact these barriers have on the use of health care in Connecticut and population health outcomes.

Next Steps

To supplement the findings in the Plan on the access, need, and use of health care services with a perspective of social and economic drivers of health, State Health Improvement Plan (SHIP) objectives and State Health Assessment (SHA) data will be curated and updated. These data will be analyzed with the goals of showing how social factors influence the need for and use of health care services. New and existing data sources that track social needs and public health outcomes will be applied to develop an addendum to this Plan, address Connecticut findings on trends in social, economic, and public health factors that impact state health outcomes, including specific assessments of the impacts on vulnerable populations.

The addendum will further identify the role of health care providers in promoting SDOH initiatives, and address how access to care can be influenced by economic stability, and community strength and resilience. The addendum will also include data on the SHIP-identified social needs that impact access and affordability of care and a review of health and social sector trends impacting state health care needs.

Section 3 Chapter 10
DATA SOURCES AND LIMITATIONS

10.0 Data Sources and Limitations

10.1 Data Sources

The following primary data sources were used in developing this plan:

- The Statewide Health Care Facilities and Services Inventory for 2022, which lists all health care facilities and services, as well as certain imaging equipment.
- The Connecticut All-Payer Claims Database (APCD).
- Connecticut hospital inpatient discharge data.
- Population estimates from the U.S. Census Bureau.
- Data from the U.S. Health Resources and Services Administration (HRSA) on health workforce supply and demand.
- Nursing home data collected by CMS.
- Data from the National Center for Health Statistics.

10.2 Data Limitations

- There is a lack of complete data on current capacity and availability of known health care providers.
- There is a lack of complete data on the underlying need for specific health care services to measure demand for those services.
- There is incomplete but useful data in the APCD on utilization due to the missing self-insured employer private insurance plans and associated provider data and missing Medicare Fee for Service data.
- There is a lack of race/ethnicity data in the APCD to track health disparities in utilization of care.
- The impact of COVID-19 on typical utilization trends beginning in March 2020.
- The age of data from some sources (some as old as 2020).
- There are minor discrepancies among multiple data sources, possibly because the data were drawn from different time periods or because of differences in the methods, assumptions, or definitions used in producing the data.
- There are limited data on emergency department utilization (In recent sessions, Connecticut lawmakers have been considering a bill that would require hospitals to collect and report data on emergency department wait times and volumes).

Section 4

Appendix 1:
SUPPLEMENTAL TABLES AND FIGURES

Figure A1 Connecticut Reference Map and Town Population

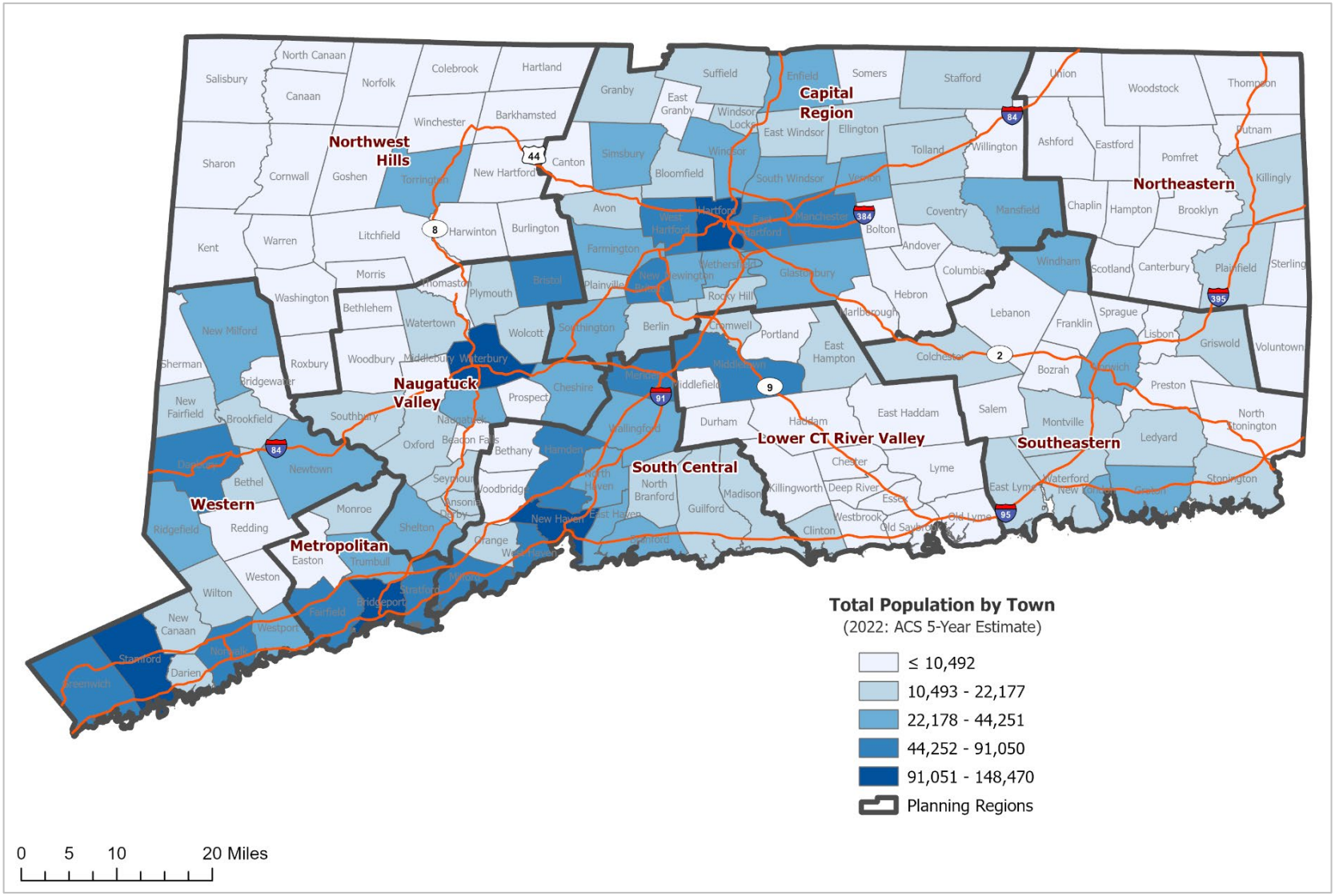

Figure A2 Connecticut Acute Care Hospitals

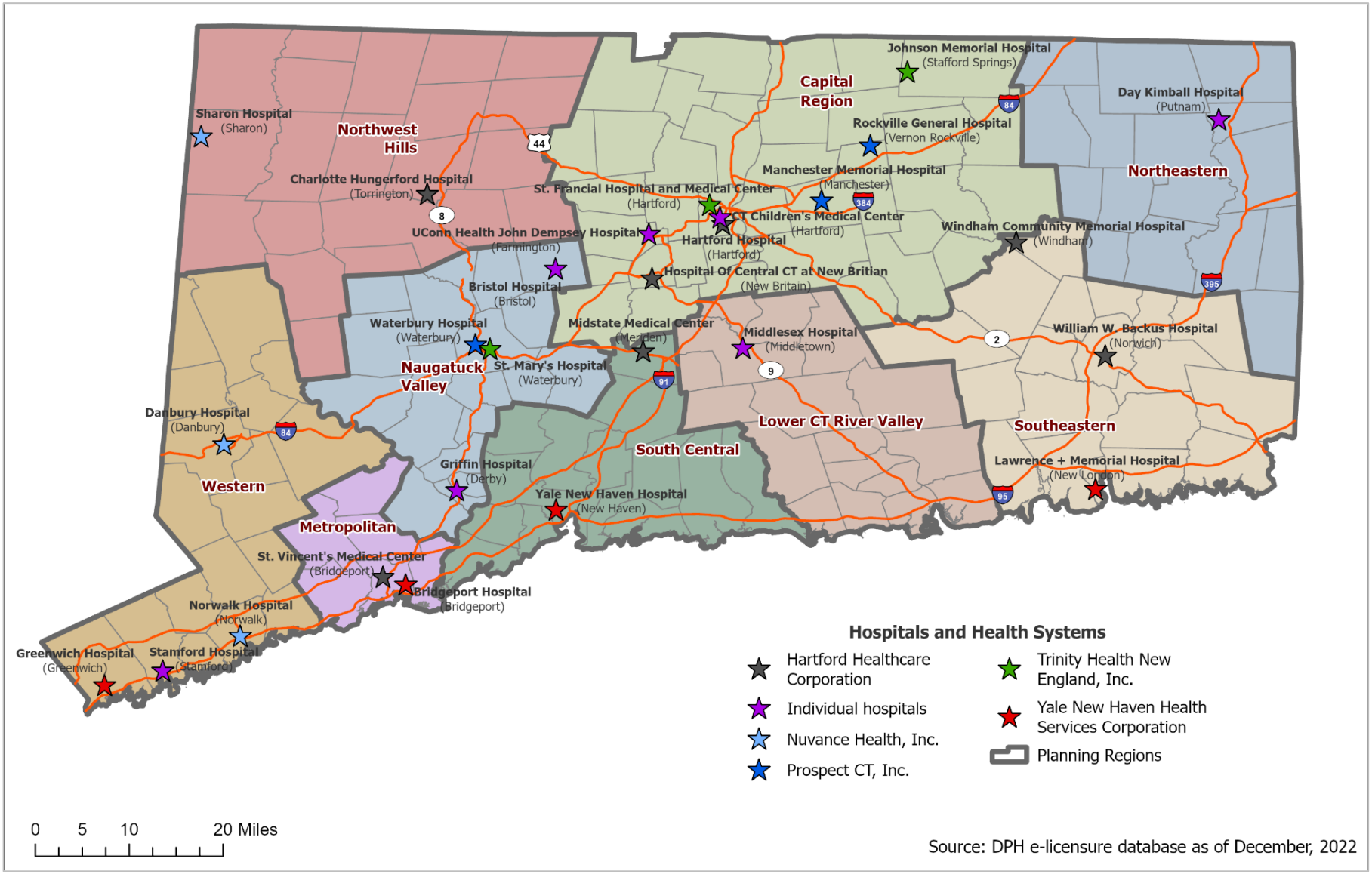

Figure A3 Connecticut Hospital ED and Satellite ED Locations

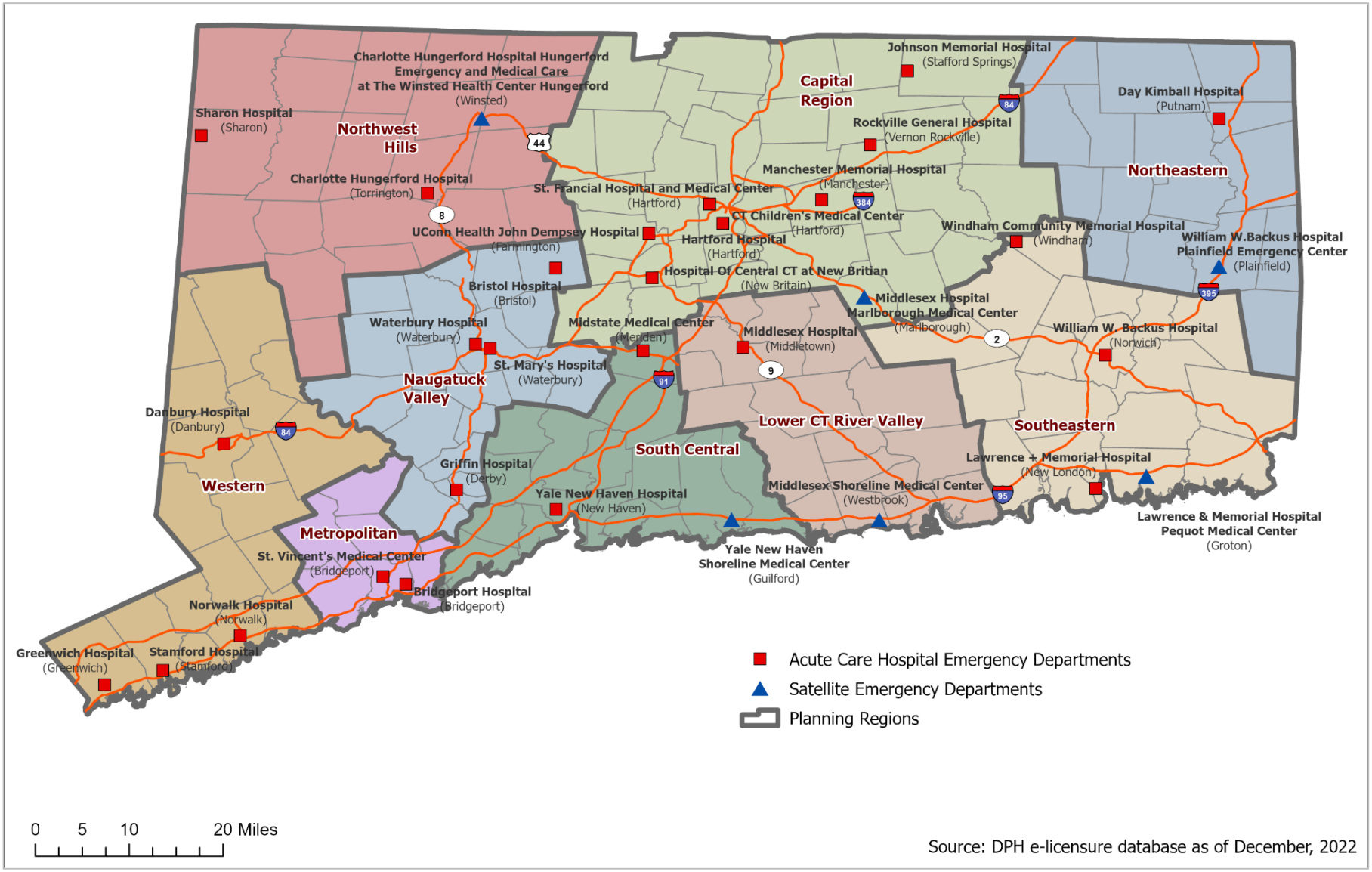

Figure A4 Connecticut Outpatient Surgery Facility Locations

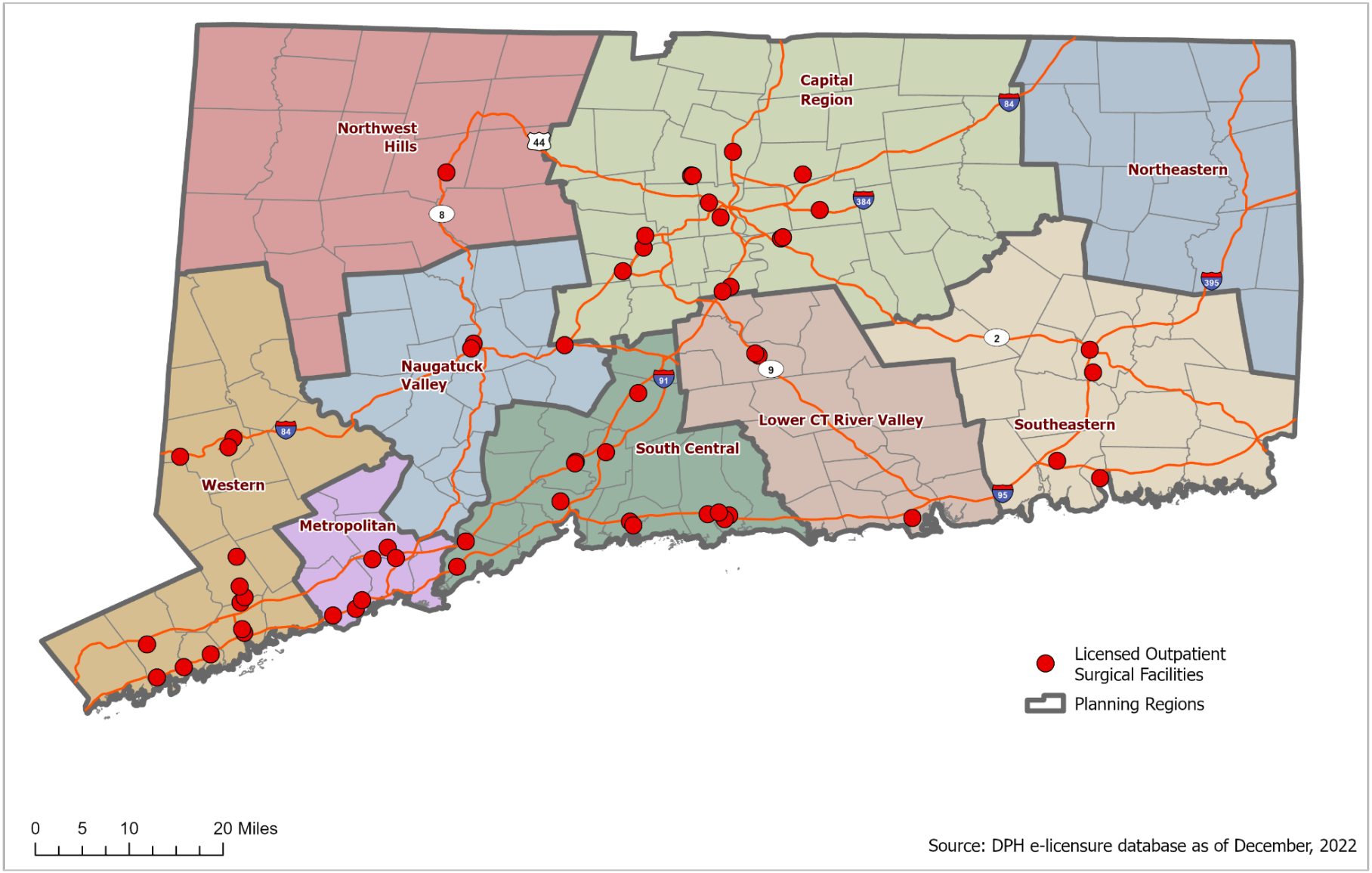

Figure A5 Connecticut CT Scanner Locations

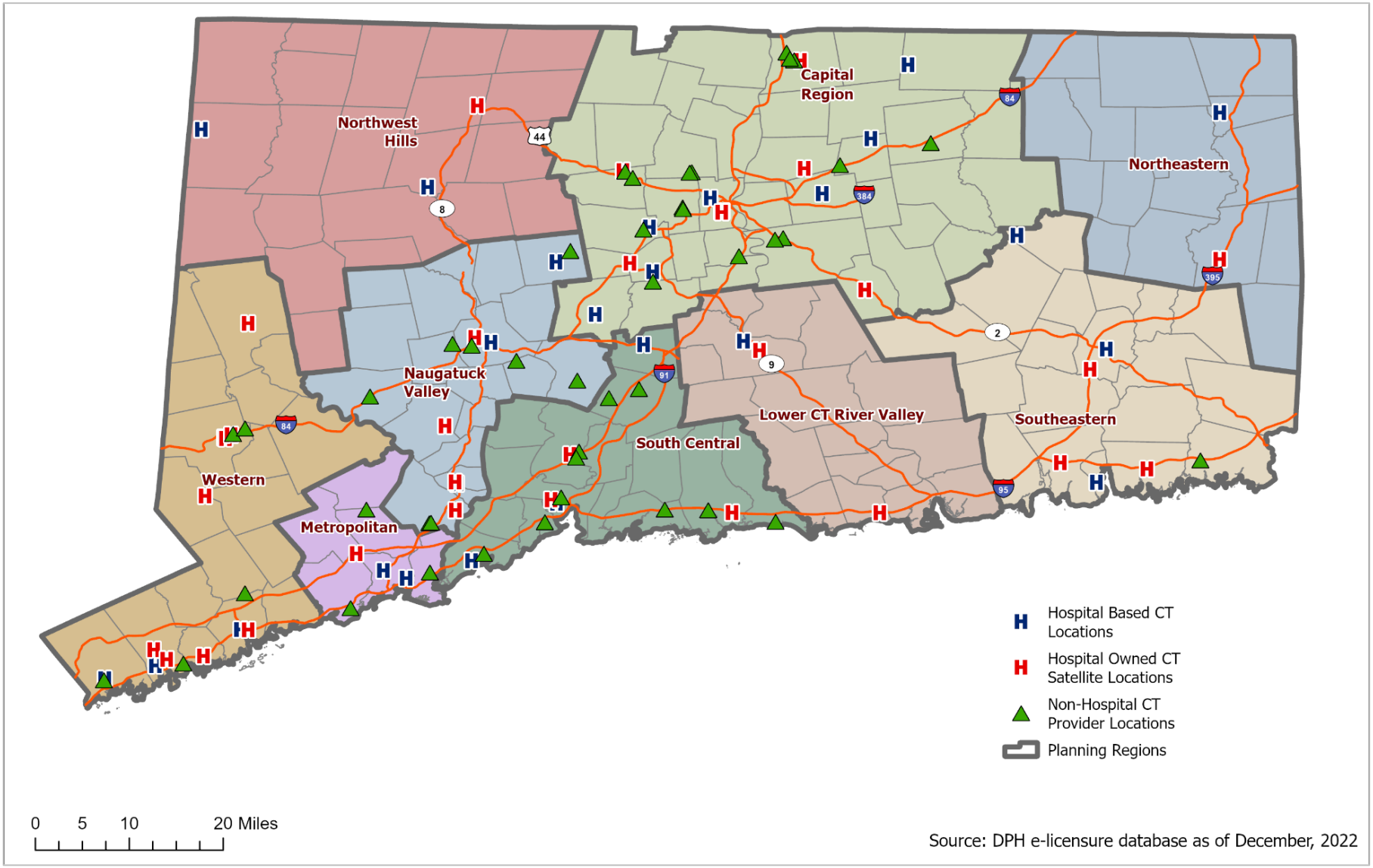

Figure A6 Connecticut MRI Scanner Locations

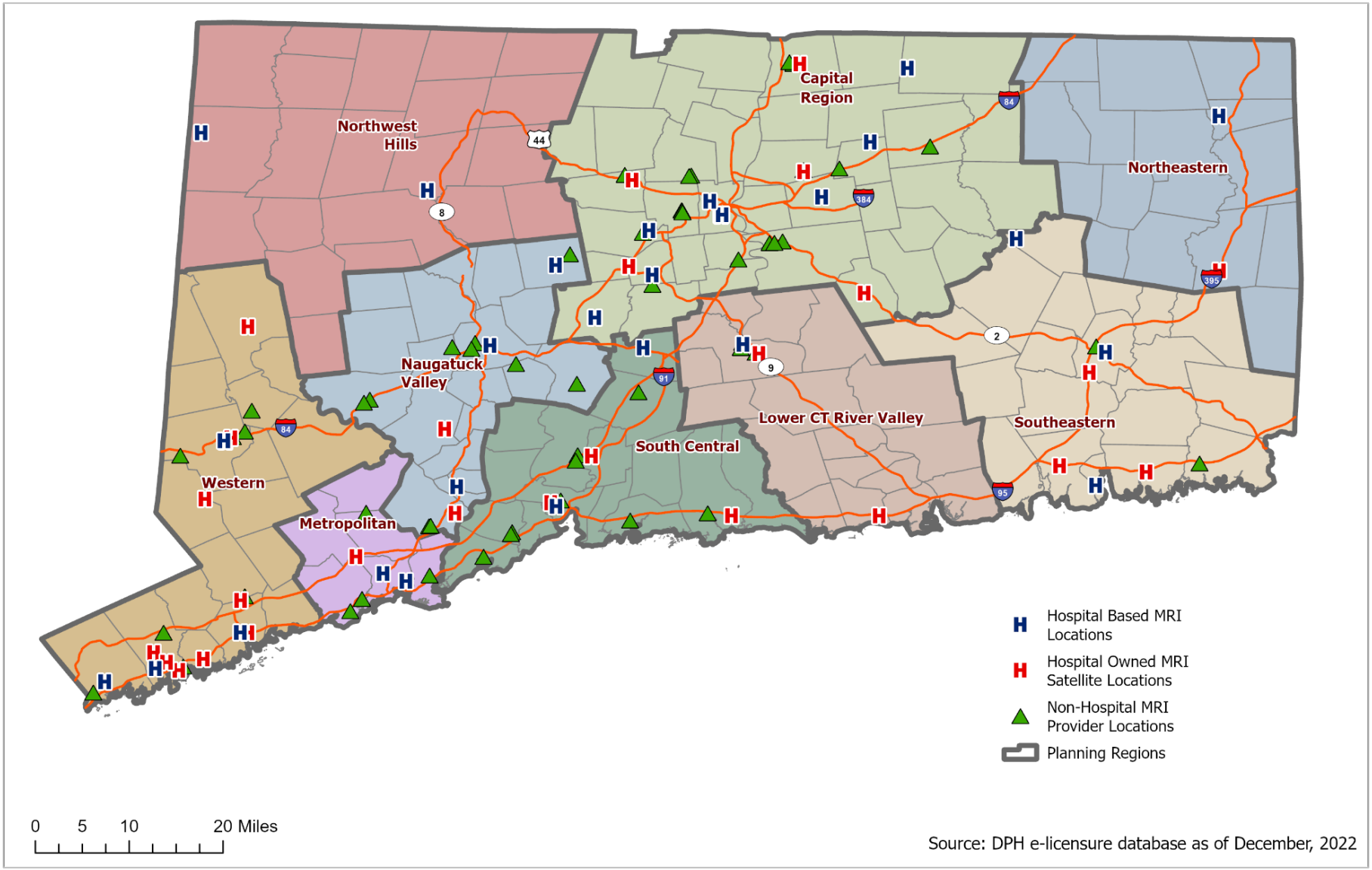

Figure A7 Connecticut PET-CT Scanner Locations

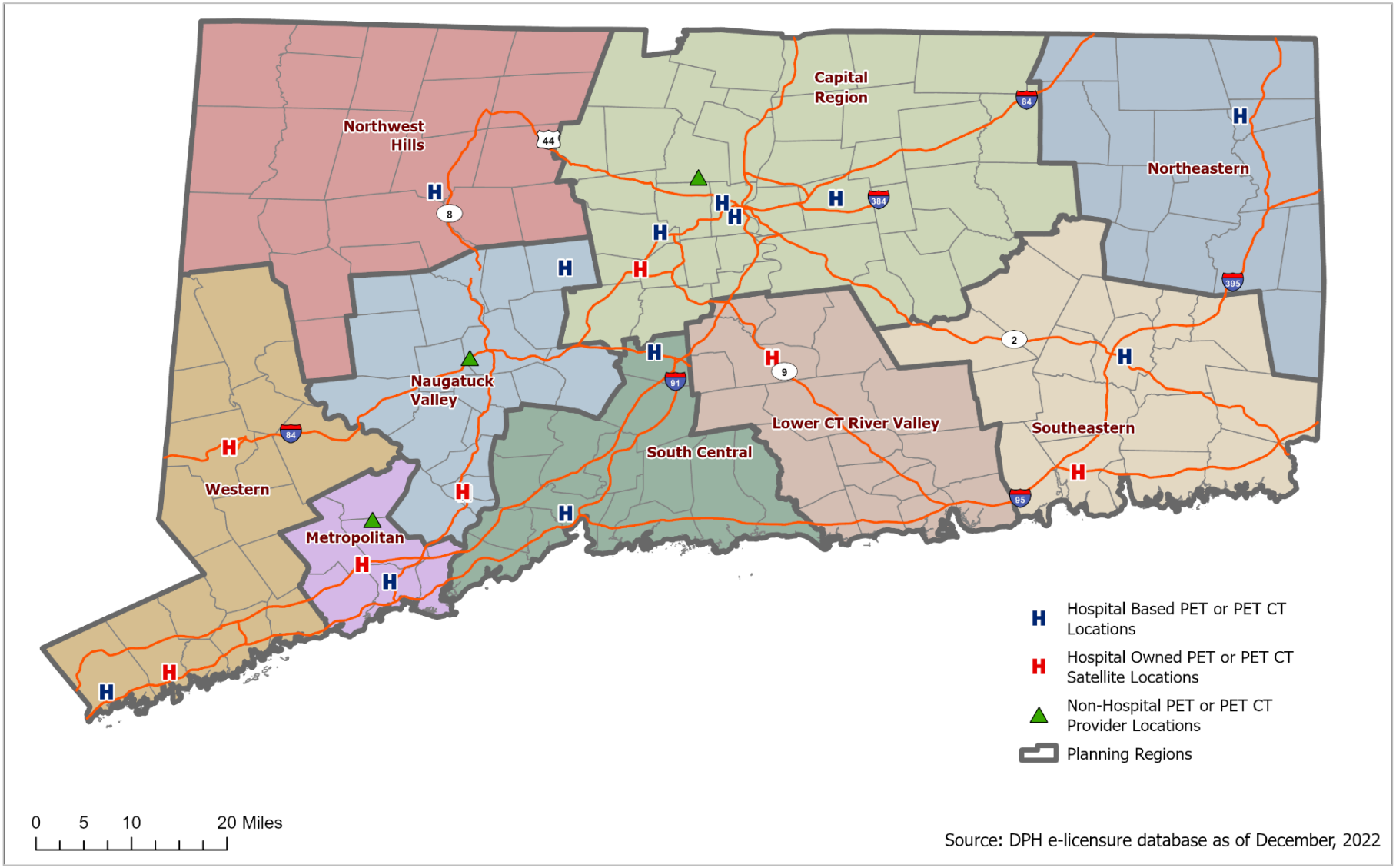

Table A1 FY 2023 Total Inpatient Discharges per 1,000 Population, by Race/Ethnicity*

Service Line	Hispanic/Latine	NH Black/African American	NH White	Other Race/Ethnicity
Cardiac Care (Medical)	4.8	11.1	9.8	3.2
Cardiac Care (Surgical)	1.9	2.6	4.3	1.7
Cancer Care (Medical)	1.3	2.2	2.1	1.0
Cancer Care (Surgical)	0.4	0.5	0.6	0.3
Neurological (Medical)	3.4	6.7	4.9	2.3
Neurological (Surgical)	1.5	2.4	2.9	1.2
Renal/Urology (Medical)	2.4	5.3	4.5	1.4
Renal/Urology (Surgical)	0.8	1.2	1.2	0.5
Women's Health	15.0	13.4	8.2	11.3
Orthopedics (Medical)	0.6	1.1	1.6	0.5
Orthopedics (Surgical)	1.3	2.5	3.3	1.1
Respiratory	6.7	10.2	9.4	3.9
Medicine	17.8	28.9	25.0	10.4
General Surgery	5.2	6.1	5.1	2.7
Other Surgery	2.1	3.8	3.1	1.2
Newborn	11.8	9.2	6.5	25.7
Psychiatry	5.2	9.2	5.1	6.3
Ophthalmology	0.1	0.2	0.2	0.1
Trauma (Medical)	0.7	0.7	1.0	0.5
Trauma (Surgical)	0.4	0.7	0.5	0.3
Dental	0.1	0.2	0.1	0.1
Substance Abuse	1.4	2.1	2.2	0.8
Miscellaneous	0.0	0.0	0.0	0.0

***Data Source:** *Connecticut OHS Hospital Discharge Database*

Table A2 FY 2023 Total Discharges per 1,000 Population, by Primary Insurance Coverage*

Service Line	Commercial	Medicaid	Medicare
Cardiac Care (Medical)	1.4	3.0	22.2
Cardiac Care (Surgical)	1.1	1.1	8.0
Cancer Care (Medical)	0.6	0.8	3.5
Cancer Care (Surgical)	0.2	0.2	0.8
Neurological (Medical)	1.0	2.4	9.7
Neurological (Surgical)	1.0	1.1	4.3
Renal/Urology (Medical)	0.6	1.4	10.2
Renal/Urology (Surgical)	0.3	0.4	2.1
Women's Health	7.3	13.4	0.4
Orthopedics (Medical)	0.2	0.6	3.1
Orthopedics (Surgical)	0.6	1.0	6.2
Respiratory	1.8	5.9	20.4
Medicine	5.6	14.5	44.4
General Surgery	2.1	3.8	6.6
Other Surgery	0.8	1.7	5.5
Newborn	6.4	12.4	0.0
Psychiatry	1.5	7.5	4.4
Ophthalmology	0.0	0.1	0.2
Trauma (Medical)	0.2	0.5	2.0
Trauma (Surgical)	0.2	0.4	0.6
Dental	0.0	0.1	0.1
Substance Abuse	0.4	3.2	1.2
Miscellaneous	0.0	0.1	-

***Data Source:** *Connecticut OHS Hospital Discharge Database*

Table A3 FY 2023 Total Discharges and Patient Days per 1,000 Population, by Race/Ethnicity and Planning Region*

	Discharges (per 1,000 pop)				Patient Days (per 1,000 pop)			
Region	Hispanic/ Latine	NH Black or African American	NH White	Other	Hispanic/ Latine	NH Black or African American	NH White	Other
Capitol	128	112	87	14	632	678	476	79
Greater Bridgeport	95	158	81	26	478	1,012	475	143
Lower CT River Valley	148	111	92	21	629	723	492	114
Naugatuck Valley	92	95	118	48	442	515	615	207
Northeast CT	85	85	89	22	425	385	414	108
Northwest Hills	111	72	103	19	478	443	520	93
South Central	90	159	110	42	490	1,174	685	222
Southeastern CT	105	144	103	25	516	905	572	135
Western CT	99	49	88	8	478	290	445	49

***Data Source:** Connecticut OHS Hospital Discharge Database*

Table A4 FY 2023 Total Discharges and Patient Days per 1,000 Population, by Primary Insurance Coverage and Planning Region*

	Discharges (per 1,000 pop)			Patient Days (per 1,000 pop)		
	Commercial	Medicaid	Medicare	Commercial	Medicaid	Medicare
Capitol	38	164	562	161	918	3,405
Greater Bridgeport	35	176	596	159	947	4,179
Lower CT River Valley	39	137	582	173	803	3,305
Naugatuck Valley	44	167	581	188	832	3,333
Northeast CT	32	111	683	125	521	3,486
Northwest Hills	35	170	719	151	922	3,745
South Central	36	176	782	167	1,104	5,730
Southeastern CT	37	141	639	157	746	4,106
Western CT	37	157	498	146	810	2,917

***Data Source:** Connecticut OHS Hospital Discharge Database*

Table A5 Cardiac Inpatient Discharges, by Region and Race/Ethnicity, 2023*

	Discharges per 1,000, Cardiac Care (Medical)				Discharges per 1,000, Cardiac Care (Surgical)			
	Hispanic/ Latine	NH Black or African American	NH White	Other	Hispanic/ Latine	NH Black or African American	NH White	Other
Capitol	0.6	10.5	8.7	9.5	0.2	2.3	3.6	2.5
Greater Bridgeport	1.3	14.9	7.3	6.3	0.6	3.6	3.6	2.0
Lower CT River Valley	1.1	8.3	8.9	7.7	0.4	1.9	4.3	4.0
Naugatuck Valley	1.8	8.8	12.1	7.5	0.8	2.1	5.1	2.0
Northeast CT	0.9	10.5	9.8	4.7	0.2	1.7	3.8	2.9
Northwest Hills	0.5	2.9	8.7	7.2	0.6	2.3	3.7	2.5
South Central	1.4	13.8	9.9	6.2	0.6	3.3	4.6	1.4
Southeastern CT	0.6	11.2	10.6	7.7	0.3	3.0	4.4	2.0

***Data Source:** OHS Hospital Discharge Database*

Table A6 Cardiac Inpatient Discharges, by Region and Insurance Coverage, 2023*

	Discharges per 1,000, Cardiac Care (Medical)			Discharges per 1,000, Cardiac Care (Surgical)		
Total	Commercial	Medicaid	Medicare	Commercial	Medicaid	Medicare
Capitol	1.4	7.0	83.1	1.1	2.3	27.1
Greater Bridgeport	1.4	6.9	82.9	1.2	2.7	30.2
Lower CT River Valley	1.7	4.2	79.5	1.4	2.4	33.4
Naugatuck Valley	2.5	7.3	84.0	1.6	2.6	29.9
Northeast CT	1.5	3.9	116.5	1.3	1.4	37.1
Northwest Hills	1.3	3.5	90.3	1.2	2.1	32.4
South Central	1.5	7.5	100.8	1.2	2.4	37.1
Southeastern CT	1.8	5.6	94.0	1.2	1.8	34.1
Western CT	1.4	4.8	67.5	0.9	2.3	23.5

***Data Source:** OHS Hospital Discharge Database*

Table A7 Surgeries Most Commonly Performed in Outpatient Settings by Type of Outpatient Setting and Planning Region, 2016 to 2021*,**

Planning Region	Category	2016	2017	2018	2019	2020	2021	Change
Capitol Planning Region	Total Surgeries	110,929	114,894	115,776	118,565	78,923	100,341	-10,588
	OSF	21%	23%	25%	26%	29%	35%	14%
	HOPD	42%	41%	39%	38%	36%	33%	-10%
	Other	37%	36%	36%	35%	35%	32%	-5%
Greater Bridgeport Planning Region	Total Surgeries	44,775	45,552	47,582	47,842	28,428	36,231	-8,544
	OSF	23%	24%	24%	27%	29%	31%	7%
	HOPD	38%	38%	37%	36%	38%	38%	1%
	Other	39%	37%	39%	36%	33%	31%	-8%
Lower Connecticut River Valley Planning Region	Total Surgeries	17,377	18,440	18,411	21,512	15,337	17,956	579
	OSF	35%	37%	36%	30%	26%	31%	-4%
	HOPD	32%	33%	34%	28%	26%	26%	-6%
	Other	33%	30%	30%	42%	48%	44%	11%
Naugatuck Valley Planning Region	Total Surgeries	45,013	46,880	47,539	49,505	32,280	38,411	-6,602
	OSF	11%	11%	12%	13%	12%	12%	1%
	HOPD	47%	46%	45%	46%	49%	50%	3%
	Other	42%	43%	43%	42%	39%	38%	-4%
Northeastern Connecticut Planning Region	Total Surgeries	5,109	5,207	5,331	5,396	3,555	4,231	-878
	OSF	1%	1%	2%	2%	1%	1%	0%
	HOPD	48%	55%	55%	55%	56%	56%	8%
	Other	51%	44%	43%	43%	43%	43%	-8%
Northwest Hills Planning Region	Total Surgeries	8,794	9,068	8,533	8,347	5,854	7,605	-1,189
	OSF	20%	20%	23%	26%	36%	40%	20%
	HOPD	64%	64%	62%	59%	51%	49%	-15%
	Other	16%	16%	15%	15%	13%	11%	-6%
South Central Connecticut Planning Region	Total Surgeries	86,554	89,256	87,684	88,176	57,208	68,933	-17,621
	OSF	21%	21%	22%	28%	29%	31%	11%
	HOPD	47%	47%	48%	43%	43%	42%	-5%
	Other	32%	32%	30%	29%	28%	27%	-5%
Southeastern Connecticut Planning Region	Total Surgeries	39,904	41,440	41,911	41,238	26,123	33,107	-6,797
	OSF	31%	31%	30%	30%	33%	33%	3%
	HOPD	40%	41%	38%	37%	38%	37%	-3%
	Other	29%	29%	32%	33%	30%	30%	1%
Western Connecticut Planning Region	Total Surgeries	80,322	84,221	82,929	85,222	47,185	60,438	-19,884
	OSF	17%	18%	19%	20%	18%	19%	2%
	HOPD	40%	39%	37%	37%	39%	40%	0%
	Other	43%	43%	44%	43%	43%	41%	-2%

***Source:** *Connecticut All-Payer Claims Database data.*

****Notes:** *Common outpatient surgeries included in this table comprise the surgery categories shown in Table 1. OSFs include physicians' offices, federal qualified health centers, and other outpatient settings.*

Table A8 Surgeries Most Commonly Performed in Outpatient Settings by Type of Outpatient Setting and Age Group, 2016 to 2021*,**

Age Group	Category	2016	2017	2018	2019	2020	2021	Change
0-19	Total Surgeries	18,873	20,112	19,010	18,934	15,488	18,384	-489
	OSF	5%	6%	6%	7%	8%	7%	2%
	HOPD	56%	57%	55%	54%	54%	54%	-2%
	Other	39%	37%	39%	39%	38%	38%	0%
20-44	Total Surgeries	80,366	84,223	83,183	82,952	71,422	86,611	6,245
	OSF	12%	12%	12%	14%	16%	17%	5%
	HOPD	48%	49%	48%	46%	46%	45%	-3%
	Other	40%	39%	40%	39%	39%	38%	-2%
45-64	Total Surgeries	161,284	166,464	164,364	165,189	128,714	165,161	3,877
	OSF	22%	23%	24%	26%	28%	30%	9%
	HOPD	49%	48%	47%	45%	43%	42%	-6%
	Other	30%	29%	30%	29%	29%	27%	-3%
65+	Total Surgeries	254,860	254,891	260,917	273,313	121,523	149,837	-105,023
	OSF	21%	21%	23%	24%	26%	29%	9%
	HOPD	43%	44%	42%	40%	39%	38%	-6%
	Other	36%	35%	35%	36%	35%	33%	-3%

***Data Source:** Connecticut All-Payer Claims Database*

***Notes:** Common outpatient surgeries included in this **table** comprise the surgery categories shown in **Table** 1. OSFs include physicians' offices, federally qualified health centers, and other outpatient settings.*

Table A9 Surgeries Most Commonly Performed in Outpatient Settings by Type of Outpatient Setting and Insurance Coverage, 2016 to 2021*,**

Payer	Category	2016	2017	2018	2019	2020	2021	Change
Medicare	Total Surgeries	255,928	251,592	264,571	276,491	106,006	129,370	-126,558
	OSF	20%	21%	22%	23%	26%	29%	9%
	HOPD	44%	45%	43%	41%	37%	37%	-8%
	Other	36%	35%	35%	37%	37%	35%	-1%
Commercial	Total Surgeries	160,561	166,663	154,449	152,002	127,801	168,070	7,509
	OSF	23%	24%	26%	29%	29%	32%	9%
	HOPD	38%	37%	36%	33%	33%	32%	-6%
	Other	39%	39%	39%	38%	38%	36%	-3%
Medicaid	Total Surgeries	100,150	108,837	109,675	113,129	104,357	123,616	23,466
	OSF	11%	11%	11%	13%	15%	16%	5%
	HOPD	64%	65%	63%	62%	61%	61%	-4%
	Other	25%	24%	25%	25%	24%	24%	-1%

***Data Source:** Altarum analysis of Connecticut All-Payer Claims Database*

***Notes:** Common outpatient surgeries included in this table comprise the surgery categories shown in **Table** 1. Medicare includes publicly funded commercial plans, like Medicare advantage plans. OSFs include physicians' offices, federally qualified health centers, and other outpatient settings.*

Table A10 MRI Population Utilization, by Primary Insurance Coverage and Region (Patient's location), 2021*

	Rate per 1,000		
Connecticut Planning Region	Medicaid	Medicare	Private
Capitol Planning Region	97	230	111
Greater Bridgeport Planning Region	98	238	121
Lower Connecticut River Valley Planning Region	130	342	156
Naugatuck Valley Planning Region	118	262	124
Northeastern Connecticut Planning Region	134	319	151
Northwest Hills Planning Region	142	250	130
South Central Connecticut Planning Region	128	281	131
Southeastern Connecticut Planning Region	130	342	155
Western Connecticut Planning Region	109	322	145

***Data Source:** Connecticut APCD Analyses*

Table A11 CT Population Utilization, by Primary Insurance Coverage and Region (Patient's location), 2021*

	Rate per 1,000		
Connecticut Planning Region	Medicaid	Medicare	Private
Capitol Planning Region	289	780	173
Greater Bridgeport Planning Region	237	803	172
Lower Connecticut River Valley Planning Region	310	866	205
Naugatuck Valley Planning Region	294	825	201
Northeastern Connecticut Planning Region	337	930	231
Northwest Hills Planning Region	272	719	194
South Central Connecticut Planning Region	303	847	194
Southeastern Connecticut Planning Region	345	1,004	232
Western Connecticut Planning Region	229	773	169

***Data Source:** Connecticut APCD Analyses*

Table A12 PET-CT Population Utilization, by Primary Insurance Coverage and Region (Patient's location), 2021*

	Rate per 1,000		
Connecticut Planning Region	Medicaid	Medicare	Private
Capitol Planning Region	4.2	27.2	5.0
Greater Bridgeport Planning Region	3.9	25.5	5.5
Lower Connecticut River Valley Planning Region	5.4	28.7	4.8
Naugatuck Valley Planning Region	3.8	21.7	5.4
Northeastern Connecticut Planning Region	4.2	26.8	6.3
Northwest Hills Planning Region	4.6	27.8	7.0
South Central Connecticut Planning Region	4.6	32.1	6.6
Southeastern Connecticut Planning Region	5.9	33.7	6.2
Western Connecticut Planning Region	3.4	25.2	5.5

***Data Source:** Connecticut APCD Files*

Table A13 Trends in Post-Acute Care Utilization by Setting and Age Group, FY 2017 to FY 2022*

	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	Change
Ages 0-14							
Total Discharges	50,845	48,926	48,174	47,921	45,702	45,666	-5,179
Any Post-Acute Care	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	0%
Home Health Agency	3.4%	3.4%	3.4%	3.4%	3.4%	3.4%	0%
Skilled Nursing Facility	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0%
Inpatient Rehabilitation Facility	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0%
Long-Term Acute Care Hospital	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0%
Ages 15-44							
Total Discharges	94,729	91,599	89,133	88,520	86,294	88,595	-6,134
Any Post-Acute Care	8.4%	8.4%	8.2%	7.7%	7.6%	8.0%	0%
Home Health Agency	6.5%	6.3%	5.8%	5.5%	5.6%	5.9%	-1%
Skilled Nursing Facility	1.3%	1.3%	1.5%	1.3%	1.2%	1.1%	0%
Inpatient Rehabilitation Facility	0.5%	0.5%	0.6%	0.6%	0.6%	0.7%	0%
Long-Term Acute Care Hospital	0.2%	0.2%	0.2%	0.3%	0.2%	0.2%	0%
Ages 45-64							
Total Discharges	99,818	96,776	95,326	94,622	86,504	86,588	-13,230
Any Post-Acute Care	32.1%	33.3%	33.7%	33.4%	33.2%	33.6%	2%
Home Health Agency	20.5%	21.7%	22.1%	21.7%	22.0%	22.7%	2%
Skilled Nursing Facility	10.0%	10.1%	10.0%	9.9%	9.2%	9.0%	-1%
Inpatient Rehabilitation Facility	1.0%	1.0%	1.0%	1.3%	1.4%	1.5%	0%
Long-Term Acute Care Hospital	0.5%	0.5%	0.5%	0.5%	0.6%	0.5%	0%
Ages 65-74							
Total Discharges	58,327	59,066	60,546	62,194	57,225	59,252	925
Any Post-Acute Care	49.6%	50.1%	50.9%	49.1%	49.2%	49.7%	0%
Home Health Agency	27.1%	28.1%	29.4%	28.1%	29.1%	30.3%	3%
Skilled Nursing Facility	20.7%	20.2%	19.6%	18.7%	17.8%	17.1%	-4%
Inpatient Rehabilitation Facility	1.3%	1.3%	1.3%	1.7%	1.7%	1.7%	0%
Long-Term Acute Care Hospital	0.6%	0.5%	0.6%	0.7%	0.6%	0.6%	0%

	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	Change
Ages 75-84							
Total Discharges	50,520	52,752	54,179	56,362	50,541	53,311	2,791
Any Post-Acute Care	60.2%	60.1%	60.3%	59.2%	58.7%	59.5%	-1%
Home Health Agency	26.6%	27.7%	29.0%	28.6%	31.0%	33.1%	7%
Skilled Nursing Facility	31.6%	30.6%	29.4%	28.2%	25.3%	24.0%	-8%
Inpatient Rehabilitation Facility	1.5%	1.4%	1.4%	1.9%	1.9%	1.9%	0%
Long-Term Acute Care Hospital	0.5%	0.5%	0.5%	0.5%	0.5%	0.4%	0%
Ages 85+							
Total Discharges	44,962	46,740	46,255	44,745	40,038	39,878	-5,084
Any Post-Acute Care	70.3%	70.6%	70.3%	69.0%	66.9%	67.3%	-3%
Home Health Agency	25.3%	27.0%	26.9%	26.3%	28.7%	31.0%	6%
Skilled Nursing Facility	43.5%	42.2%	41.9%	40.6%	36.3%	34.5%	-9%
Inpatient Rehabilitation Facility	1.2%	1.2%	1.2%	1.8%	1.7%	1.5%	0%
Long-Term Acute Care Hospital	0.2%	0.2%	0.2%	0.3%	0.3%	0.2%	0%

***Data Source:** *Altarum analysis of Connecticut Hospital Inpatient Discharge Data*

Table A14 Age-Adjusted Trends in Post-Acute Care Utilization by Setting and Planning Region, FY 2017 to FY 2022*

	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	Change
Capitol							
Total Discharges	67,620	67,168	65,244	64,737	57,518	56,507	-11,113
Post-Acute Care	34.1%	33.9%	34.4%	33.8%	32.0%	32.7%	-1.5%
Home Health Agency	17.4%	17.1%	17.7%	17.5%	16.9%	17.3%	-0.1%
Skilled Nursing Facility	15.4%	15.4%	15.2%	14.6%	13.2%	13.4%	-2.0%
Inpatient Rehabilitation Facility	1.1%	1.1%	1.2%	1.3%	1.4%	1.5%	0.4%
Long-Term Acute Care Hospital	0.3%	0.2%	0.3%	0.4%	0.4%	0.5%	0.2%
Greater Bridgeport							
Total Discharges	38,132	37,145	36,373	35,280	34,624	37,586	-546
Post-Acute Care	29.1%	32.6%	33.3%	33.0%	32.6%	33.3%	4.1%
Home Health Agency	14.3%	17.3%	17.2%	17.4%	18.7%	20.1%	5.8%
Skilled Nursing Facility	13.2%	13.8%	14.9%	14.4%	12.6%	11.9%	-1.4%
Inpatient Rehabilitation Facility	1.3%	1.3%	1.0%	1.1%	1.1%	1.1%	-0.2%
Long-Term Acute Care Hospital	0.3%	0.2%	0.2%	0.1%	0.1%	0.2%	-0.1%
Lower Connecticut River Valley							
Total Discharges	12,918	13,560	12,894	12,784	11,756	12,426	-492
Post-Acute Care	33.9%	34.0%	34.4%	34.9%	29.3%	26.8%	-7.0%
Home Health Agency	17.4%	17.6%	18.2%	18.4%	15.8%	14.5%	-2.9%
Skilled Nursing Facility	15.5%	15.7%	15.6%	15.8%	12.6%	11.6%	-3.9%
Inpatient Rehabilitation Facility	0.6%	0.3%	0.2%	0.2%	0.3%	0.3%	-0.3%
Long-Term Acute Care Hospital	0.3%	0.4%	0.4%	0.5%	0.6%	0.5%	0.2%
Naugatuck Valley							
Total Discharges	37,502	37,174	36,611	36,523	33,072	32,021	-5,481
Post-Acute Care	33.0%	35.0%	34.5%	29.7%	28.0%	29.5%	-3.4%
Home Health Agency	15.3%	17.4%	17.5%	13.6%	13.2%	15.3%	0.0%
Skilled Nursing Facility	16.9%	17.1%	16.2%	14.9%	14.0%	13.2%	-3.7%
Inpatient Rehabilitation Facility	0.4%	0.3%	0.4%	0.8%	0.5%	0.6%	0.1%
Long-Term Acute Care Hospital	0.4%	0.3%	0.5%	0.5%	0.3%	0.5%	0.1%
Northeastern Connecticut							
Total Discharges	4,127	3,961	3,985	4,077	3,732	3,696	-431
Post-Acute Care	28.5%	30.8%	29.1%	30.2%	27.7%	28.4%	-0.2%
Home Health Agency	13.2%	12.5%	11.3%	13.0%	13.7%	15.5%	2.4%
Skilled Nursing Facility	15.2%	17.7%	17.4%	17.0%	13.6%	12.6%	-2.6%
Inpatient Rehabilitation Facility	0.2%	0.6%	0.3%	0.3%	0.4%	0.2%	0.1%

	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	Change
Long-Term Acute Care Hospital	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Northwest Hills							
Total Discharges	7,945	7,812	7,557	7,701	8,124	8,328	383
Post-Acute Care	29.2%	29.3%	29.6%	25.4%	22.6%	24.1%	-5.1%
Home Health Agency	12.7%	12.7%	14.0%	13.9%	13.4%	14.7%	2.0%
Skilled Nursing Facility	16.1%	16.0%	14.9%	10.7%	9.0%	9.1%	-7.0%
Inpatient Rehabilitation Facility	0.3%	0.4%	0.7%	0.7%	0.2%	0.2%	0.0%
Long-Term Acute Care Hospital	0.1%	0.2%	0.0%	0.0%	0.0%	0.0%	-0.1%
South Central Connecticut							
Total Discharges	91,242	88,223	87,725	86,271	79,656	80,542	-10,700
Post-Acute Care	34.4%	35.7%	37.2%	36.7%	35.5%	37.2%	2.7%
Home Health Agency	18.5%	19.6%	21.0%	20.3%	20.8%	22.8%	4.3%
Skilled Nursing Facility	14.2%	14.5%	14.6%	14.9%	13.1%	12.8%	-1.4%
Inpatient Rehabilitation Facility	1.2%	1.1%	1.0%	0.9%	1.0%	1.1%	-0.1%
Long-Term Acute Care Hospital	0.5%	0.5%	0.6%	0.6%	0.5%	0.5%	-0.1%
Southeastern Connecticut							
Total Discharges	26,132	26,140	26,751	27,458	25,895	27,188	1,056
Post-Acute Care	36.1%	35.8%	32.9%	33.1%	33.4%	32.4%	-3.7%
Home Health Agency	20.4%	20.2%	17.8%	18.7%	20.7%	20.6%	0.2%
Skilled Nursing Facility	15.0%	14.8%	14.4%	13.8%	12.0%	11.1%	-3.9%
Inpatient Rehabilitation Facility	0.7%	0.8%	0.7%	0.6%	0.6%	0.6%	0.0%
Long-Term Acute Care Hospital	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%
Western Connecticut							
Total Discharges	33,959	33,597	33,783	34,622	32,672	34,975	1,016
Post-Acute Care	29.3%	30.1%	30.8%	31.5%	30.5%	30.2%	0.9%
Home Health Agency	14.1%	14.9%	14.8%	16.0%	16.7%	17.1%	3.1%
Skilled Nursing Facility	14.1%	14.1%	14.7%	13.7%	12.2%	11.4%	-2.8%
Inpatient Rehabilitation Facility	1.0%	1.1%	1.2%	1.7%	1.5%	1.6%	0.6%
Long-Term Acute Care Hospital	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%

***Data Source:** *Altarum analysis of Connecticut Hospital Inpatient Discharge Data*

Table A15 Age-Adjusted Trends in Post-Acute Care Utilization by Setting and Payer, FY 2017 to FY 2022*

	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	Change
Medicare							
Total Discharges	164,962	167,839	168,792	169,313	152,946	156,462	-8,500
Post-Acute Care	39.4%	40.7%	41.8%	40.8%	40.3%	41.4%	2.0%
Home Health Agency	20.2%	21.2%	22.5%	21.7%	22.8%	24.8%	4.5%
Skilled Nursing Facility	17.8%	18.2%	18.0%	17.3%	15.9%	15.0%	-2.8%
Inpatient Rehabilitation Facility	1.0%	0.9%	0.9%	1.2%	1.1%	1.2%	0.2%
Long-Term Acute Care Hospital	0.4%	0.4%	0.4%	0.5%	0.5%	0.5%	0.1%
Private							
Total Discharges	121,498	118,651	117,896	116,843	106,736	107,946	-13,552
Post-Acute Care	25.3%	25.7%	25.7%	24.2%	21.7%	21.1%	-4.2%
Home Health Agency	15.3%	15.6%	15.9%	14.5%	13.1%	13.7%	-1.5%
Skilled Nursing Facility	8.9%	8.9%	8.7%	8.4%	7.0%	6.0%	-3.0%
Inpatient Rehabilitation Facility	0.7%	0.8%	0.7%	0.9%	1.1%	1.1%	0.3%
Long-Term Acute Care Hospital	0.4%	0.3%	0.4%	0.4%	0.4%	0.4%	0.0%
Medicaid							
Total Discharges	99,571	95,517	93,081	93,328	91,704	93,128	-6,443
Post-Acute Care	32.5%	33.3%	34.1%	33.4%	33.6%	34.4%	1.9%
Home Health Agency	18.6%	18.4%	19.7%	18.9%	19.8%	21.2%	2.7%
Skilled Nursing Facility	12.9%	13.9%	13.4%	13.2%	12.6%	11.8%	-1.1%
Inpatient Rehabilitation Facility	0.8%	0.7%	0.9%	0.9%	1.0%	0.9%	0.1%
Long-Term Acute Care Hospital	0.2%	0.2%	0.2%	0.4%	0.3%	0.4%	0.1%
Other Payer							
Total Discharges	13,297	13,995	14,016	15,025	15,094	15,918	2,621
Post-Acute Care	19.7%	19.6%	20.7%	20.3%	20.6%	22.0%	2.3%
Home Health Agency	12.7%	11.9%	12.5%	12.4%	12.3%	13.6%	0.9%
Skilled Nursing Facility	6.1%	6.7%	7.3%	7.0%	7.1%	7.0%	0.9%
Inpatient Rehabilitation Facility	0.6%	0.8%	0.6%	0.6%	0.9%	1.0%	0.4%
Long-Term Acute Care Hospital	0.3%	0.3%	0.3%	0.3%	0.3%	0.4%	0.1%

***Data Source:** *Altarum analysis of Connecticut Hospital Inpatient Discharge Data*

Table A16 Age-Adjusted Trends in Post-Acute Care Utilization by Setting and Race/Ethnicity, FY 2017 to FY 2022*

	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	Change
Non-Hispanic White							
Total Discharges	273,242	269,750	265,265	263,300	237,635	239,936	-33,306
Post-Acute Care	33.1%	34.1%	34.5%	33.8%	32.8%	33.1%	-0.1%
Home Health Agency	16.9%	17.8%	18.3%	17.9%	18.3%	19.1%	2.2%
Skilled Nursing Facility	15.0%	15.0%	14.9%	14.3%	12.9%	12.4%	-2.6%
Inpatient Rehabilitation Facility	0.9%	0.9%	0.9%	1.2%	1.2%	1.3%	0.3%
Long-Term Acute Care Hospital	0.4%	0.3%	0.4%	0.4%	0.4%	0.4%	0.0%
Black or African American							
Total Discharges	49,714	48,377	47,945	48,147	46,377	46,639	-3,075
Post-Acute Care	35.9%	37.4%	38.2%	37.8%	36.1%	38.2%	2.3%
Home Health Agency	19.3%	20.1%	20.6%	20.0%	20.5%	23.0%	3.7%
Skilled Nursing Facility	15.2%	15.8%	16.2%	16.1%	13.8%	13.5%	-1.7%
Inpatient Rehabilitation Facility	1.1%	1.2%	1.1%	1.3%	1.4%	1.4%	0.3%
Long-Term Acute Care Hospital	0.3%	0.3%	0.3%	0.4%	0.4%	0.3%	0.0%
Hispanic or Latine							
Total Discharges	48,583	48,879	51,724	54,314	53,680	55,811	7,228
Post-Acute Care	32.6%	34.0%	34.2%	34.1%	32.8%	33.5%	0.9%
Home Health Agency	20.8%	21.8%	22.0%	21.4%	21.4%	22.9%	2.1%
Skilled Nursing Facility	10.9%	11.3%	11.2%	11.5%	10.2%	9.5%	-1.3%
Inpatient Rehabilitation Facility	0.6%	0.7%	0.7%	0.8%	0.9%	0.7%	0.1%
Long-Term Acute Care Hospital	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.0%
Another Race or Ethnicity							
Total Discharges	27,662	28,853	28,679	28,603	28,612	30,904	3,242
Post-Acute Care	30.1%	31.0%	31.1%	30.2%	29.4%	29.2%	-0.9%
Home Health Agency	16.6%	17.1%	17.2%	16.5%	17.2%	18.1%	1.5%
Skilled Nursing Facility	12.4%	12.7%	12.6%	11.9%	10.5%	9.5%	-2.8%
Inpatient Rehabilitation Facility	0.8%	0.9%	0.9%	1.2%	1.2%	1.2%	0.4%
Long-Term Acute Care Hospital	0.3%	0.4%	0.4%	0.5%	0.4%	0.4%	0.1%

***Data Source:** *Altarum analysis of Connecticut Hospital Inpatient Discharge Data*

Appendix 2:
RESPONSES TO PUBLIC COMMENT

Introduction

OHS solicited input from experts and the broader public through a multipronged approach. First, OHS convened a series of advisory committee meetings comprising diverse practitioners with deep expertise in the practice areas covered in this report, as well as a listening session with the broader public on the report more generally. Subsequently, OHS disseminated a draft report for public comment and received 17 responses.

We would like to extend our sincere gratitude to all stakeholders who provided feedback during the public comment period. Your valuable insights and perspectives have been instrumental in shaping the final report. The input received has significantly strengthened the quality and depth of our analysis, ensuring that the report more accurately reflects the needs and priorities of the health care community in Connecticut. We made numerous revisions to the text to correct inaccuracies and add needed context. We have also analyzed more recent utilization data for hospitals, emergency departments, and outpatient surgery centers. Below, we provide more detailed responses to recommendations for more substantive changes to the report.

Chapter 3: Acute Care

Commenters suggested the bed need calculations should use staffed beds instead of licensed beds to measure hospital capacity.

The bed need methodology uses licensed beds to measure capacity instead of staffed beds because hospitals could make additional licensed beds available and staff them to accommodate increased demand for services. However, we acknowledge some hospitals in PSAs have consistently fewer staffed beds than licensed beds, whereas other hospitals in the same PSA experience greater difficulty meeting demand with their current bed need allocations. To accommodate such situations, OHS will consider trends in staffed beds in the CON application process, as described in revisions to Section 3.2.6.

Commenters asked OHS to exclude some beds from bed-need calculations (e.g., beds in locked units) because these beds cannot be converted to accommodate demand for other service lines.

To provide hospitals with greater flexibility, OHS will consider the number of beds in a hospital's locked units in reviewing a hospital's CON application, as described in revisions to Section 3.2.6.

Commenters noted adjusted bed need for pre-pandemic discharge trends would be inappropriate because discharged are declining but patient days are increasing, indicating patients require longer stays.

We have updated all bed need calculations with the most recent data, and confirmed patient days have increased as patient days declined. We have removed the discharge adjustment factor from all bed need calculations.

Commenters requested that OHS be flexible in reviewing CON applications, particularly by considering changes in health care delivery models, so that bed need calculations do not hinder the addition of necessary licensed beds.

OHS acknowledges that bed need calculations are one of many considerations in reviewing CON applications. Other considerations are described in Subsection 3.2.6.

Comments noted the population of Connecticut is aging and utilizes healthcare services at a greater rate. The increased utilization of an aging population is not captured in a static model.

We appreciate the emphasis placed on changes in the population and demographics over time. As the plan is updated biennially, OHS will continue to update the projections based on any deviations from expected trends that may be due to demographic changes of the CT population. OHS welcomes feedback on strategies to account for rising acuity beyond the weighted average of patient days by service line and age group.

Commenters suggested we add new content to explain patient boarding in EDs, and asked that boarding be considered as part of the hospital bed CON process.

Subsection 3.3.4.3 describes ED boarding in more detail, and ED boarding was added as a consideration in the CON review process in Subsection 3.2.6.

Commenters asked that OHS consider revising the definition of ED wait times to include the time patients wait for treatment. The current definition is based on when the patient leaves the waiting room.

We appreciate this comment. OHS looks forward to continuing to work with ED Boarding and Crowding Work Group to improve data collection on patient experiences in EDs.

Chapter 4: Outpatient Surgery

Several commenters noted cesarean sections are not performed in outpatient settings.

Public comments on the outpatient surgery analysis led us to reexamine our methodology, which revealed our previous analysis had included some inpatient surgeries. We resolved the error, and separated OSFs from other outpatient settings, like physicians' offices and federally qualified health centers. These changes are reflected in Section 4.6.

Commenters asked that OHS recognize that surgical case time can vary significantly when considering CON applications.

Section 4.7.3 assures that OHS will consider "unique populations, specific clinical needs, or performance of time intensive procedures" when reviewing CON applications.

Commenters questioned whether a recommendation about expanded data collection for ambulatory surgery was necessary, given they already supply patient race and ethnicity data to the state.

We agreed with this comment and removed the recommendation.

Chapter 5: Imaging and New Technology

Commenters raised data quality concerns about the analysis of current imaging capacity and utilization.

Based on stakeholder input, we more closely examined scanner data from OHS inventory data and excluded a few observations with utilization figures that exceeded reasonable levels. Additionally, scanner threshold categories were revised to differentiate between fixed hospital-based scanners, fixed outpatient scanners, and mobile scanners in all settings.

Stakeholder input on whether the 75th percentile was an appropriate threshold for capacity varied, so we did not alter this threshold. OHS welcomes stakeholder input alternative approaches to measuring scanner capacity for consideration in future FSP reports.