



State of Connecticut

# Medicaid Long-Term Care Demand Projections

State of Connecticut  
Department of Social Services  
July 30, 2021

# Contents

- 1. Project Overview..... 1
  - Progress Since July 2019 Report..... 1
  - Limitations..... 1
- 2. Data..... 3
- 3. NF and HCBS Definitions..... 5
- 4. Labor Market Areas ..... 6
- 5. State Population Projections ..... 9
- 6. Analysis ..... 10
- 7. Acknowledgements..... 14
- 8. Feedback and Comments ..... 15
- 9. HCBS Portion of NF LOC Comparison – September 2017 Data versus September 2018 Data 16
- 10. Town Examples ..... 17
  - Example 1: Town of Southington..... 17
  - Example 2: Town of Hartford..... 20
- 11. Qlik Guide ..... 21
  - Qlik Model Overview ..... 21
  - How to Filter ..... 23
  - How to Unfilter..... 24

- How to Switch Pages .....25
- How to Sort .....25
- 12. Nursing Facility COVID-19 Impact Addendum.....27
  - Data .....27
  - NF Census Estimates.....27
  - Additional Variables.....29
  - Interpreting Results .....30
  - Limitations.....30

# 1

## Project Overview

As part of an on-going effort, the State of Connecticut (CT or the State) has been actively engaged in rebalancing their Medicaid long-term care (LTC) services from institutional nursing facility (NF) settings, toward more emphasis on home- and community-based services (HCBS) settings. In support of the State's Rebalancing Plan, the State has contracted with Mercer Government Human Services Consulting (Mercer), as part of Mercer Health & Benefits LLC, to assist in the development of projections by town of the supply and demand of LTC services between 2020 and 2040. The State's goal is to enhance the awareness of setting choice among LTC consumers and LTC service providers by providing these stakeholders with relevant information as they navigate through the myriad of options available to them. The analysis presented in this report is expected to be updated periodically as more current information becomes available.

Success in rebalancing LTC services is commonly measured by the proportion of HCBS users out of all recipients eligible for either NF or HCBS services; the higher the proportion, the more successful the state.

### Progress Since July 2019 Report

The State has invested a significant amount of resources toward creating an environment where Medicaid recipients with a nursing facility level of care (NF LOC) designation are aware of their options, including the option of receiving HCBS. The State aspires to be a leader at the national level in terms of providing LTC services in the home. Since the previous report (released July 2019 and using cost year 2017 cost reports), the State has seen an increase in the ratio of HCBS users to all long-term services and supports users of 1.0% across the State (67.6% to 68.6%). Details are illustrated in Section 9 of this report.

The July 2019 report contained statewide HCBS ratio targets through 2040, which were separately determined by demographic category (age, gender, Labor Market Area), and based on levels demonstrated to be achievable by the experience in other states. The July 2019 statewide HCBS ratio target for 2040 was 78.8%, which was calculated using the 2017 Aged, Blind and Disabled (ABD) Medicaid population prevalence by demographic category. Similar methods were used to develop HCBS ratio targets through 2040 using the 2018 ABD Medicaid population prevalence by demographic category. The projected statewide HCBS ratio target for 2040 is 81.5%.

### Limitations

The projections in this report have been prepared for the Connecticut Department of Social Services (DSS). Mercer understands DSS will be making this report publicly available. To the extent that

information in this report is made available to third parties, the entire report should be made available. Other users of this report and the accompanying data should have knowledge of the State's Medicaid program including, but not limited to, the State's ongoing rebalancing efforts of long-term care services. This report and accompanying data should be considered in its entirety and users of the data and projections in this report must, in order to avoid misinterpretation of the information, have a sufficient level of understanding and expertise in LTC services and health care modeling.

Town-level projections necessarily involve projections with low numbers of persons in certain projection age/gender cells. Any projection involving such low numbers is subject to significant statistical fluctuation. Towns with no NFs will generally have data showing no, or very few, persons residing in NFs; such persons who were previously residents of the town will have necessarily migrated to other towns. When such a person moves to an NF, his or her address becomes the address of the NF, thereby making that person a resident of the town with the NF. The totality of such movements gives the impression of little to no apparent demand in towns with few or no NFs.

The information presented in this report includes projections of future contingent events. Not all possible contingencies are considered. For example, changes to Medicaid eligibility due to legislation or economic circumstance could have a significant effect on the number of persons who use NF or HCBS. In addition, changes in types of medical services available could alter the portion of recipients who would be eligible for NF or HCBS. Improvements in mortality beyond that anticipated in the census projections could lead to different proportions of recipients of advanced ages.

Mercer has used and relied upon including, but not limited to, eligibility, claims, labor market, nursing facility, population projections data and information supplied by the State and its vendors. The suppliers of data are solely responsible for its validity and completeness. Mercer has reviewed the data and information for internal consistency and reasonableness, but Mercer did not audit it. All estimates are based upon the information available at a point in time and are subject to unforeseen and random events. Therefore, any projection must be interpreted as having a likely range of variability from the estimate. The estimates in this report were created using data prior to the Coronavirus Disease 2019 (COVID-19) pandemic and no adjustments were made for the impact of COVID-19. Any estimate or projection may not be used or relied upon by any other party or for any other purpose than for which it was issued by Mercer. Mercer expressly disclaims responsibility, liability, or both for any reliance on this communication by third parties or the consequences of any unauthorized use.

Mercer is available to answer any questions on this material contained in this report, or to provide explanations or further details, as may be appropriate. Please contact Charles Lassiter or Bradley Horman, ASA, MAAA at [Charles.Lassiter@mercerc.com](mailto:Charles.Lassiter@mercerc.com) and [Bradley.Horman@mercerc.com](mailto:Bradley.Horman@mercerc.com). Mercer is not aware of any direct or indirect financial interest or relationship, including investments or other services that could create a conflict of interest that would impair the objectivity of Mercer's work.

## 2 Data

Mercer relied on several data sources in the development of these projections. Mercer reviewed the data for reasonability and consistency, but did not audit it. Data elements include the following listed in the table below.

| Data   | Source  | Use  |
|--|---|--|
| Population projections (August 31, 2017 edition) | CT State Data Center at the Map and Geographic Information Center | Town-level State population projections by age group and gender. Starting from the 2010 Census, projections are shown for 2020, 2025, 2030, 2035, and 2040.  |
| Labor Market Areas                               | CT Department of Labor  | Aggregation of towns for projections.  |
| NF Cost Reports                                  | DSS   | Information from the NFs on utilization and staffing.  |
| NF 15-Mile Town Radius                           | DSS   | For each town, MSSQL’s Geography functions were used to determine all towns within a 15-mile radius. In addition to the NFs located in that town, the count of NFs and available beds for “nearby towns” are listed in descending order by number of available beds. |
| CT Claims and Eligibility Data                   | Gainwell, CT’s Medicaid data vendor                               | Classification of Medicaid recipients in the ABD aid category, NF LOC, waiver eligibility, and claims.   |
| ZIP Code to Town Crosswalk                       | CT Economic Resource Center                                       | Translate eligibility and claimant information, which did not have town of the recipient (but did have ZIP code) to town.  |

NF cost report data is as-reported for cost year 2018 (October 1, 2017 through September 30, 2018)<sup>1</sup>. If an NF was open in 2018 but a cost report for 2018 was not available for that NF, then the 2017 cost year report was used instead and “2017” was appended to the end of the facility name in the Appendices. If neither a 2017 nor a 2018 cost year report was available, or if an NF did not report any certified beds, that NF was excluded from the Appendices.

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<sup>1</sup> <https://portal.ct.gov/DSS/Health-And-Home-Care/Medicaid-Nursing-Home-Reimbursement/Nursing-Facility-Cost-Reports/Cost-Report>

The available beds in the NF 15-mile town radius data are based on the last available census for each provider. The census dates reflected in the data in this report range from August 6, 2014 to October 9, 2019, with over 97.0% of the NFs having a census date more recent than August 1, 2019.

The ZIP code to town crosswalk could not distinguish all 169 towns from one another. Accordingly, the following towns are paired in Mercer’s analysis: Cornwall and Warren, Griswold and Lisbon, and Stafford and Union.

Additionally, the following towns in the NF 15-mile town radius data are mapped to larger geographic areas in the population projections. To ensure consistency throughout this report, towns as defined in population projections are used in the Appendices.

| 15-Mile Radius Town | Population Projection Town |
|---------------------|----------------------------|
| • Cobalt            | • East Hampton             |
| • Danielson         | • Killingly                |
| • Dayville          | • Killingly                |
| • Forestville       | • Bristol                  |
| • Kensington        | • Berlin                   |
| • Moodus            | • East Haddam              |
| • Mystic            | • Stonington               |
| • Niantic           | • East Lyme                |
| • Norwichtown       | • Norwich                  |
| • Plantsville       | • Southington              |
| • Rockville         | • Vernon                   |
| • Southport         | • Fairfield                |
| • Stafford Springs  | • Stafford-Union           |
| • Storrs            | • Mansfield                |
| • Uncasville        | • Montville                |
| • Willmantic        | • Windham                  |

### 3

## NF and HCBS Definitions

Another common point of necessary clarification when examining statistics nationally or between states is how NF and HCBS are defined. Typically, NF and HCBS together make up what is known as NF LOC. This designation for a Medicaid recipient means the person in question has, according to the State-specific assessments, met the conditions necessary to receive NF services. NF and HCBS together combine to NF LOC because people can choose to receive LTC services either in an institution or HCBS setting.

Setting of care (either NF or HCBS) is defined in the analysis for each recipient on a month-by-month basis according to the following definitions:

| Setting of Care | Definition  |
|-----------------|---|
| NF              | If the Assignment Plan Code in the State's eligibility file is populated with "NHOME" and the enrollee used some form of NF or waiver services during the month, the person was counted as being NF for that particular month.  |
| HCBS            | For all remaining enrollees, Mercer has included unique monthly participant counts of all individuals with utilization of HCBS home health services, including adult day care, personal care assistant, or targeted case management (TCM) regardless of their level of utilization. Traditionally, the State has included TCM recipients with their HCBS participant counts, even though TCM is a State Plan service, not a waiver service. |



# 4 Labor Market Areas

There are 169 towns in Connecticut, many with relatively small populations and no NFs. Accordingly, the analysis of NFs by town needs to be augmented by analysis on aggregations of towns. Based on discussions with the Connecticut Department of Labor, Mercer decided to include analyses of each of the nine Connecticut Labor Market Areas. The towns that comprise the Connecticut Labor Market Areas are shown in the table in this section.

The Connecticut Labor Market Areas are based on towns that share a high degree of social and economic integration, as based on employment and related commuting. The Labor Market Area shares many characteristics with the New England City and Town Area (NECTA), which is a geographic and statistical entity defined by the United States Office of Management and Budget. The NECTA is used only for the states in the New England area of the United States; areas based on aggregations of counties are used in the other states. Each NECTA has a core urban area with at least 10,000 persons, as well as adjacent towns that have a high degree of social and economic integration with the core urban area as measured by commuting and employment. NECTAs are classified as either metropolitan NECTAs (urban core of at least 50,000 persons) or micropolitan NECTAs (urban core of at least 10,000, but less than 50,000 persons). Individual NECTAs may be comprised of towns from more than one state, but the Connecticut Labor Market Areas consist only of towns in CT.

| Labor Market Area           | Town  |  |
|-----------------------------|---|--|
| Bridgeport-Stamford-Norwalk | <ul style="list-style-type: none"> <li>• Ansonia</li> <li>• Bridgeport</li> <li>• Darien</li> <li>• Derby</li> <li>• Easton</li> <li>• Fairfield</li> <li>• Greenwich</li> <li>• Milford</li> <li>• Monroe</li> <li>• New Canaan</li> <li>• Newtown</li> <li>• Norwalk</li> <li>• Oxford</li> </ul> | <ul style="list-style-type: none"> <li>• Redding</li> <li>• Ridgefield</li> <li>• Seymour</li> <li>• Shelton</li> <li>• Southbury</li> <li>• Stamford</li> <li>• Stratford</li> <li>• Trumbull</li> <li>• Weston</li> <li>• Westport</li> <li>• Wilton</li> <li>• Woodbridge</li> <li>• Danbury</li> </ul> |
| Danbury                     | <ul style="list-style-type: none"> <li>• Bethel</li> <li>• Bridgewater</li> <li>• Brookfield</li> </ul>   | <ul style="list-style-type: none"> <li>• New Fairfield</li> <li>• New Milford</li> <li>• Sherman</li> </ul>  |

| Labor Market Area                    | Town   |  |
|--------------------------------------|--|--|
| Enfield                              | <ul style="list-style-type: none"> <li>• East Windsor</li> <li>• Enfield</li> <li>• Somers</li> </ul>  | <ul style="list-style-type: none"> <li>• Suffield</li> <li>• Windsor Locks</li> </ul>  |
| Hartford-West Hartford-East Hartford | <ul style="list-style-type: none"> <li>• Andover</li> <li>• Ashford</li> <li>• Avon</li> <li>• Barkhamsted</li> <li>• Berlin</li> <li>• Bloomfield</li> <li>• Bolton</li> <li>• Bristol</li> <li>• Burlington</li> <li>• Canton</li> <li>• Colchester</li> <li>• Columbia</li> <li>• Coventry</li> <li>• Cromwell</li> <li>• East Granby</li> <li>• East Haddam</li> <li>• East Hampton</li> <li>• East Hartford</li> <li>• Ellington</li> <li>• Farmington</li> <li>• Glastonbury</li> <li>• Granby</li> <li>• Haddam</li> <li>• Hartford</li> <li>• Hartland</li> <li>• Harwinton</li> </ul> | <ul style="list-style-type: none"> <li>• Hebron</li> <li>• Lebanon</li> <li>• Manchester</li> <li>• Mansfield</li> <li>• Marlborough</li> <li>• Middlefield</li> <li>• Middletown</li> <li>• New Britain</li> <li>• New Hartford</li> <li>• Newington</li> <li>• Plainville</li> <li>• Plymouth</li> <li>• Portland</li> <li>• Rocky Hill</li> <li>• Simsbury</li> <li>• South Windsor</li> <li>• Southington</li> <li>• Stafford-Union</li> <li>• Thomaston</li> <li>• Tolland</li> <li>• Vernon</li> <li>• West Hartford</li> <li>• Wethersfield</li> <li>• Willington</li> <li>• Windsor</li> </ul> |
| New Haven                            | <ul style="list-style-type: none"> <li>• Bethany</li> <li>• Branford</li> <li>• Cheshire</li> <li>• Chester</li> <li>• Clinton</li> <li>• Deep River</li> <li>• Durham</li> <li>• East Haven</li> <li>• Essex</li> <li>• Guilford</li> <li>• Hamden</li> </ul>   | <ul style="list-style-type: none"> <li>• Killingworth</li> <li>• Madison</li> <li>• Meriden</li> <li>• New Haven</li> <li>• North Branford</li> <li>• North Haven</li> <li>• Old Saybrook</li> <li>• Orange</li> <li>• Wallingford</li> <li>• West Haven</li> <li>• Westbrook</li> </ul>   |

| Labor Market Area     | Town   |  |
|-----------------------|--|--|
| Norwich-New London    | <ul style="list-style-type: none"> <li>• Bozrah</li> <li>• Canterbury</li> <li>• East Lyme</li> <li>• Franklin</li> <li>• Griswold-Lisbon</li> <li>• Groton</li> <li>• Ledyard</li> <li>• Lyme</li> <li>• Montville</li> <li>• New London</li> </ul> | <ul style="list-style-type: none"> <li>• North Stonington</li> <li>• Norwich</li> <li>• Old Lyme</li> <li>• Preston</li> <li>• Salem</li> <li>• Sprague</li> <li>• Stonington</li> <li>• Voluntown</li> <li>• Waterford</li> </ul> |
| Torrington            | <ul style="list-style-type: none"> <li>• Bethlehem</li> <li>• Canaan</li> <li>• Colebrook</li> <li>• Cornwall-Warren</li> <li>• Goshen</li> <li>• Kent</li> <li>• Litchfield</li> <li>• Morris</li> <li>• Norfolk</li> </ul>                         | <ul style="list-style-type: none"> <li>• North Canaan</li> <li>• Roxbury</li> <li>• Salisbury</li> <li>• Sharon</li> <li>• Torrington</li> <li>• Washington</li> <li>• Winchester</li> <li>• Woodbury</li> </ul>                   |
| Waterbury             | <ul style="list-style-type: none"> <li>• Beacon Falls</li> <li>• Middlebury</li> <li>• Naugatuck</li> <li>• Prospect</li> </ul>  | <ul style="list-style-type: none"> <li>• Waterbury</li> <li>• Watertown</li> <li>• Wolcott</li> </ul>  |
| Willimantic-Danielson | <ul style="list-style-type: none"> <li>• Brooklyn</li> <li>• Chaplin</li> <li>• Eastford</li> <li>• Hampton</li> <li>• Killingly</li> <li>• Plainfield</li> <li>• Pomfret</li> </ul>   | <ul style="list-style-type: none"> <li>• Putnam</li> <li>• Scotland</li> <li>• Sterling</li> <li>• Thompson</li> <li>• Windham</li> <li>• Woodstock</li> </ul>   |

## 5

# State Population Projections

Population projections were developed by the Connecticut State Data Center at the Map and Geographic Information Center. These are town-level projections by age group and gender. Data from the 2010 Census is the starting point, with projections for 2015, 2020, 2025, 2030, 2035, and 2040.

Below are additional details regarding the development of the population projections, including methodology.<sup>2</sup>

The population projections provide general statistical projections of the population by sex and five-year age cohort from 2015 to 2040. The projections are based on birth and mortality data from the Connecticut Department of Public Health, migration data from the US Census Bureau Population Estimates and American Community Survey, and population data from the US Census Bureau Decennial Census. These projections provide population projections for individuals who are residents of Connecticut. These projections are intended to guide planning, analysis, and decision making in the State and are reviewed on an annual basis to compare projections to the latest administrative and survey data available to identify if there are any significant deviations from the projected population to the observed population for Connecticut.

1. These projections are based on an annual average of the resident population of Connecticut. Resident population is defined as those persons who usually reside in Connecticut (where they live and sleep most of the time). Individuals who reside in another state but either own property or work remotely in Connecticut are not included in these population projections.
2. The projections are based on statistical models, which utilize historical birth, mortality, and migration data to inform the model and the actual population numbers can be influenced by economic policy, individual decisions, and other aspects which are not accounted for in the model.

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<sup>2</sup> <https://ctsdsc.uconn.edu/2015-to-2040-population-projections-town-level/> (downloadable data and methodology is included below the interactive map/data visualization).

# 6

## Analysis

The overarching process for developing this projection is as follows:

- Project the population of the State by age and gender.
- Project the proportion of the State population that is Medicaid-eligible ABD.
- Project the proportion of the ABD population that is NF LOC.
- Project the proportion of the NF LOC population using HCBS services.

This process was conducted at the Labor Market Area level and projected on the individual towns in the labor markets, then aggregated at the statewide level.

As previously stated, Mercer was able to utilize population projections developed by the Connecticut State Data Center by age, gender, and town, through 2040. These projections include town-by-town, in-migration and out-migration. Mercer assumed, by town, a constant ABD and NF LOC incidence rate by age and gender. As the projection goes toward 2040, the natural aging of the population leads to a higher proportion of the town population expected to be NF LOC.

As stated in the November 2012 report, the historical NF/HCBS mix in the State had been moving toward HCBS at approximately 0.50% to 0.75% per year, absent the impact of State-led initiatives. This shift, combined with the aging of the population and higher NF LOC incidence rates, which acts against NF/HCBS mix, leads the State to a projected NF/HCBS mix of 68.6% in 2025, absent the impact of State-led initiatives. This 68.6% figure used the 2018 ABD Medicaid population prevalence. In the 2011 ABD Medicaid population prevalence, this amount was 57.6%.

In Mercer's examination of the historical data, Mercer found that, beginning in early 2011, there was a significant acceleration in the NF/HCBS mix as a result of the following State-led initiatives:

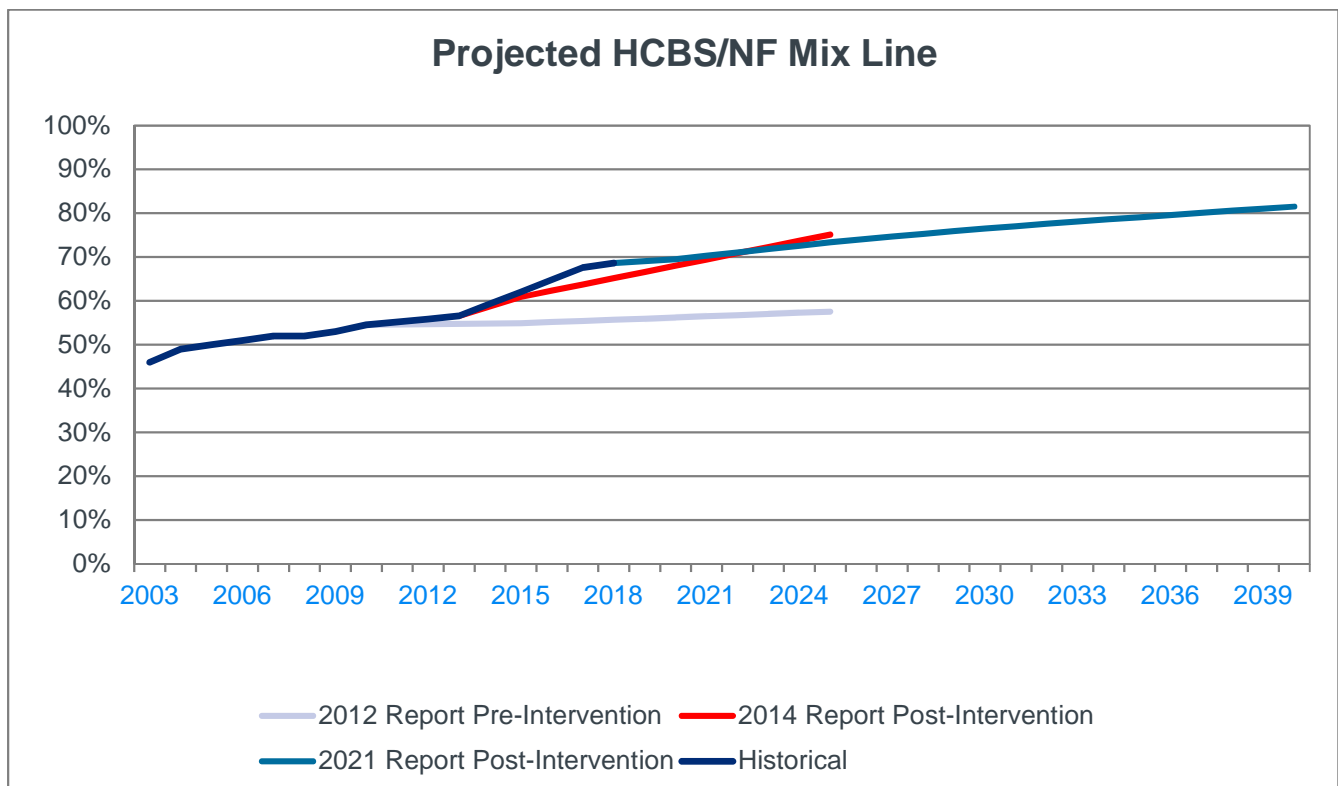
- Community First Choice
- Money Follows the Person Grant
- Hospital Discharge Planning
- NF Closure Model

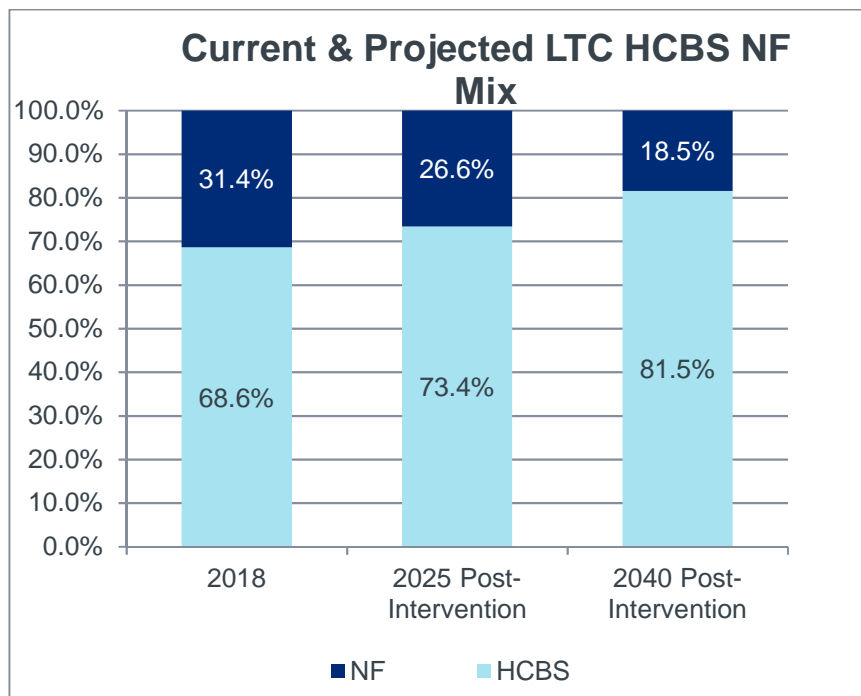
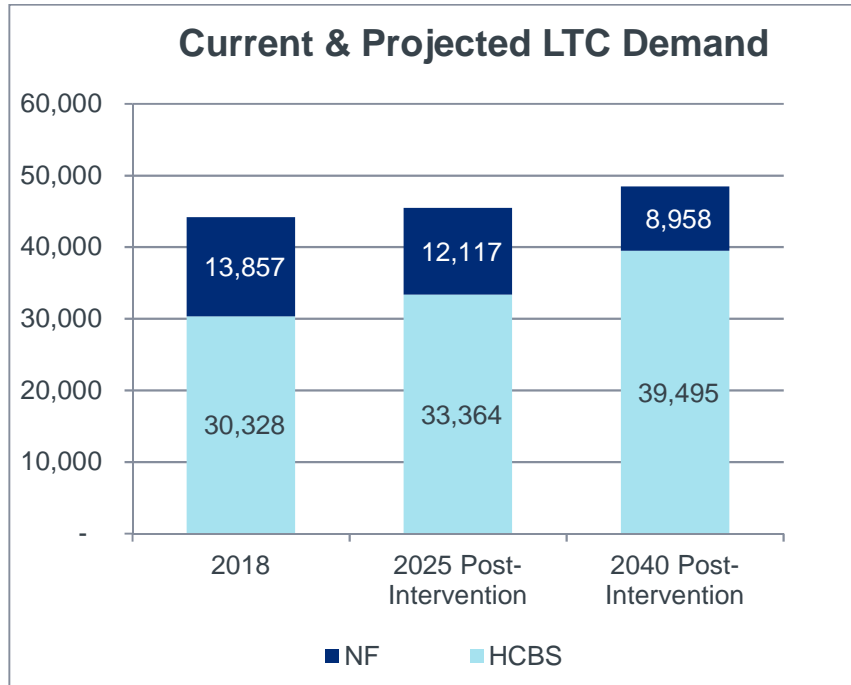
- Long-Term NF Diversion
- Pre-Admission Screening Resident Review

By incorporating the impact of these initiatives into modeling the projected NF/HCBS mix at the statewide level, it is expected to increase proportionately to 81.5% by the year 2040. The final NF/HCBS mix is consistent with HCBS levels currently being achieved in other states. The proportionate increases were developed at the age, gender, and Labor Market Area level. These projections of future NF/HCBS levels presume the State will continue to use current initiatives and will utilize additional initiatives in future years in order to achieve the projected 2040 HCBS levels.

Some labor markets, as illustrated in the labor market templates, were either far behind or far ahead of the statewide average. The HCBS ratios in those markets grew faster or slower than the statewide average depending on how much movement was possible, considering the starting points.

Another element of the modeling includes projecting the demand for NF and HCBS workers as this shift in NF/HCBS mix occurs. The worker supply and demand reported assumes a constant proportion by town of NF/HCBS highlighted work groups throughout the projection. As the population ages and the number of users shifts from NF to HCBS, the worker supply and demand shifts accordingly by town based on the number of people expected to need care under the specific settings.





The chart labeled “Projected NF/HCBS Mix Line” demonstrates the initial projections from the August 2014 LTC report, the actual observed mix of NF and HCBS between 2010 and 2018, as well as the updated projections based on progress as of the end of 2018.

The charts labeled “Current & Projected LTC Demand” and “Current & Projected LTC NF/HCBS Mix” highlight the number of LTC users and the corresponding NF/HCBS mix. Both the 2025 and 2040 projections reflect post State-led initiatives HCBS growth assumptions.



## 7

# Acknowledgements

On behalf of DSS, Mercer would like to thank the following who provided essential data and policy guidance needed for the completion of this and prior reports.

Patrick Flaherty, Connecticut Department of Labor  
Michael Howser, Connecticut State Data Center at the Map and Geographic Information Center  
Dawn Lambert, DSS  
Christopher Lavigne, DSS  
Nicole Godburn, DSS  
Karen Law, DSS  
Sandra Ouellette, DSS  
Kathleen Shaughnessy, DSS  
Barbara Parks Wolf, Office of Policy and Management  
Rich Wysocki, DSS

# 8

## Feedback and Comments

Should you have any questions regarding the content of this report, or have suggestions on how to improve the report during future updates, please contact Dawn Lambert at [dawn.lambert@ct.gov](mailto:dawn.lambert@ct.gov).

# 9

## **HCBS Portion of NF LOC Comparison – September 2017 Data versus September 2018 Data**

| Recipients of HCBS as a Portion of NFLOC - 2017 vs. 2018 |              |              |                 |              |              |                 |              |             |
|--|--------------|--------------|-----------------|--------------|--------------|-----------------|--------------|-------------|
| 2017   |              |              | 2018            |              |              | Difference      |              |             |
| Age  | Male         | Female       | Age             | Male         | Female       | Age             | Male         | Female      |
| <b>Statewide</b>   |              |              |                 |              |              |                 |              |             |
| 0-64   | 89.8%        | 89.8%        | 0-64            | 91.8%        | 91.7%        | 0-64            | 2.0%         | 1.9%        |
| 65-69  | 66.1%        | 74.1%        | 65-69           | 66.4%        | 74.9%        | 65-69           | 0.3%         | 0.8%        |
| 70-74  | 60.4%        | 72.1%        | 70-74           | 61.5%        | 72.8%        | 70-74           | 1.2%         | 0.6%        |
| 75-79  | 56.9%        | 67.3%        | 75-79           | 56.3%        | 67.2%        | 75-79           | -0.6%        | -0.2%       |
| 80-84  | 51.9%        | 56.9%        | 80-84           | 53.4%        | 58.8%        | 80-84           | 1.5%         | 1.9%        |
| 85+  | 40.0%        | 37.5%        | 85+             | 40.7%        | 39.7%        | 85+             | 0.6%         | 2.2%        |
| <b>Subtotal</b>  | <b>73.6%</b> | <b>63.9%</b> | <b>Subtotal</b> | <b>74.2%</b> | <b>65.2%</b> | <b>Subtotal</b> | <b>0.6%</b>  | <b>1.3%</b> |
| <b>Total</b>   | <b>67.6%</b> |              | <b>Total</b>    | <b>68.6%</b> |              | <b>Total</b>    | <b>1.0%</b>  |             |
| <b>Bridgeport-Stamford-Norwalk</b>                       |              |              |                 |              |              |                 |              |             |
| 0-64   | 89.7%        | 89.4%        | 0-64            | 91.7%        | 91.4%        | 0-64            | 2.0%         | 2.0%        |
| 65-69  | 66.8%        | 74.9%        | 65-69           | 67.8%        | 77.0%        | 65-69           | 1.0%         | 2.1%        |
| 70-74  | 57.1%        | 66.8%        | 70-74           | 58.1%        | 69.4%        | 70-74           | 0.9%         | 2.6%        |
| 75-79  | 53.9%        | 64.7%        | 75-79           | 53.5%        | 66.2%        | 75-79           | -0.4%        | 1.4%        |
| 80-84  | 48.6%        | 56.1%        | 80-84           | 53.0%        | 59.8%        | 80-84           | 4.4%         | 3.6%        |
| 85+  | 39.8%        | 36.7%        | 85+             | 38.6%        | 39.3%        | 85+             | -1.2%        | 2.6%        |
| <b>Subtotal</b>  | <b>71.0%</b> | <b>61.0%</b> | <b>Subtotal</b> | <b>71.6%</b> | <b>62.8%</b> | <b>Subtotal</b> | <b>0.6%</b>  | <b>1.8%</b> |
| <b>Total</b>   | <b>64.6%</b> |              | <b>Total</b>    | <b>66.0%</b> |              | <b>Total</b>    | <b>1.4%</b>  |             |
| <b>Danbury</b>   |              |              |                 |              |              |                 |              |             |
| 0-64   | 88.9%        | 87.2%        | 0-64            | 89.2%        | 87.1%        | 0-64            | 0.3%         | -0.1%       |
| 65-69  | 80.4%        | 74.6%        | 65-69           | 63.7%        | 77.1%        | 65-69           | -16.7%       | 2.6%        |
| 70-74  | 79.0%        | 80.3%        | 70-74           | 76.4%        | 75.7%        | 70-74           | -2.6%        | -4.6%       |
| 75-79  | 62.9%        | 76.5%        | 75-79           | 65.9%        | 77.6%        | 75-79           | 3.0%         | 1.1%        |
| 80-84  | 56.3%        | 57.1%        | 80-84           | 52.0%        | 54.8%        | 80-84           | -4.3%        | -2.3%       |
| 85+  | 38.6%        | 39.5%        | 85+             | 40.2%        | 41.2%        | 85+             | 1.6%         | 1.7%        |
| <b>Subtotal</b>  | <b>72.3%</b> | <b>61.7%</b> | <b>Subtotal</b> | <b>71.4%</b> | <b>62.4%</b> | <b>Subtotal</b> | <b>-0.9%</b> | <b>0.7%</b> |
| <b>Total</b>   | <b>65.2%</b> |              | <b>Total</b>    | <b>65.5%</b> |              | <b>Total</b>    | <b>0.2%</b>  |             |
| <b>Enfield</b>   |              |              |                 |              |              |                 |              |             |
| 0-64   | 85.9%        | 81.7%        | 0-64            | 87.6%        | 84.3%        | 0-64            | 1.7%         | 2.6%        |
| 65-69  | 42.6%        | 66.5%        | 65-69           | 45.5%        | 65.6%        | 65-69           | 2.9%         | -0.9%       |
| 70-74  | 37.0%        | 49.5%        | 70-74           | 42.8%        | 57.0%        | 70-74           | 5.8%         | 7.5%        |
| 75-79  | 36.2%        | 52.1%        | 75-79           | 48.2%        | 53.4%        | 75-79           | 12.0%        | 1.3%        |
| 80-84  | 38.5%        | 43.6%        | 80-84           | 35.5%        | 39.8%        | 80-84           | -3.0%        | -3.7%       |
| 85+  | 32.0%        | 23.2%        | 85+             | 27.7%        | 30.4%        | 85+             | -4.2%        | 7.2%        |
| <b>Subtotal</b>  | <b>64.9%</b> | <b>51.0%</b> | <b>Subtotal</b> | <b>65.2%</b> | <b>54.6%</b> | <b>Subtotal</b> | <b>0.4%</b>  | <b>3.7%</b> |
| <b>Total</b>   | <b>56.3%</b> |              | <b>Total</b>    | <b>58.7%</b> |              | <b>Total</b>    | <b>2.4%</b>  |             |
| <b>Hartford-West Hartford-East Hartford</b>              |              |              |                 |              |              |                 |              |             |
| 0-64   | 87.9%        | 88.8%        | 0-64            | 89.9%        | 90.4%        | 0-64            | 2.0%         | 1.7%        |
| 65-69  | 65.0%        | 74.5%        | 65-69           | 65.9%        | 74.1%        | 65-69           | 0.8%         | -0.3%       |
| 70-74  | 59.3%        | 73.1%        | 70-74           | 60.3%        | 72.3%        | 70-74           | 1.0%         | -0.8%       |
| 75-79  | 57.1%        | 69.1%        | 75-79           | 56.2%        | 67.4%        | 75-79           | -0.9%        | -1.7%       |
| 80-84  | 56.7%        | 59.7%        | 80-84           | 57.3%        | 60.3%        | 80-84           | 0.6%         | 0.6%        |
| 85+  | 42.2%        | 38.2%        | 85+             | 42.0%        | 40.5%        | 85+             | -0.1%        | 2.4%        |
| <b>Subtotal</b>  | <b>72.6%</b> | <b>64.4%</b> | <b>Subtotal</b> | <b>73.1%</b> | <b>65.0%</b> | <b>Subtotal</b> | <b>0.5%</b>  | <b>0.6%</b> |
| <b>Total</b>   | <b>67.6%</b> |              | <b>Total</b>    | <b>68.1%</b> |              | <b>Total</b>    | <b>0.6%</b>  |             |

| Recipients of HCBS as a Portion of NFLOC - 2017 vs. 2018 |              |              |                 |              |              |                 |             |             |
|--|--------------|--------------|-----------------|--------------|--------------|-----------------|-------------|-------------|
| 2017   |              |              | 2018            |              |              | Difference      |             |             |
| Age  | Male         | Female       | Age             | Male         | Female       | Age             | Male        | Female      |
| <b>New Haven</b>   |              |              |                 |              |              |                 |             |             |
| 0-64   | 91.7%        | 91.7%        | 0-64            | 94.2%        | 93.8%        | 0-64            | 2.4%        | 2.1%        |
| 65-69  | 67.3%        | 72.2%        | 65-69           | 66.0%        | 73.2%        | 65-69           | -1.3%       | 1.0%        |
| 70-74  | 61.7%        | 72.4%        | 70-74           | 62.5%        | 73.3%        | 70-74           | 0.7%        | 1.0%        |
| 75-79  | 53.1%        | 66.8%        | 75-79           | 54.4%        | 65.2%        | 75-79           | 1.4%        | -1.7%       |
| 80-84  | 44.6%        | 59.2%        | 80-84           | 45.0%        | 60.7%        | 80-84           | 0.4%        | 1.5%        |
| 85+  | 36.8%        | 37.9%        | 85+             | 38.8%        | 39.7%        | 85+             | 2.1%        | 1.9%        |
| <b>Subtotal</b>  | <b>75.7%</b> | <b>66.9%</b> | <b>Subtotal</b> | <b>76.5%</b> | <b>67.9%</b> | <b>Subtotal</b> | <b>0.8%</b> | <b>1.0%</b> |
| <b>Total</b>   | <b>70.4%</b> |              | <b>Total</b>    | <b>71.3%</b> |              | <b>Total</b>    | <b>0.9%</b> |             |
| <b>Norwich-New London</b>                                |              |              |                 |              |              |                 |             |             |
| 0-64   | 92.6%        | 90.5%        | 0-64            | 93.5%        | 93.3%        | 0-64            | 0.9%        | 2.8%        |
| 65-69  | 64.1%        | 70.9%        | 65-69           | 67.4%        | 72.2%        | 65-69           | 3.3%        | 1.2%        |
| 70-74  | 58.3%        | 66.1%        | 70-74           | 62.0%        | 69.6%        | 70-74           | 3.6%        | 3.5%        |
| 75-79  | 56.6%        | 61.2%        | 75-79           | 51.6%        | 62.0%        | 75-79           | -5.0%       | 0.8%        |
| 80-84  | 54.2%        | 44.1%        | 80-84           | 58.1%        | 51.9%        | 80-84           | 3.9%        | 7.7%        |
| 85+  | 39.4%        | 33.9%        | 85+             | 41.2%        | 35.8%        | 85+             | 1.9%        | 1.9%        |
| <b>Subtotal</b>  | <b>76.8%</b> | <b>63.6%</b> | <b>Subtotal</b> | <b>77.5%</b> | <b>66.1%</b> | <b>Subtotal</b> | <b>0.6%</b> | <b>2.6%</b> |
| <b>Total</b>   | <b>68.9%</b> |              | <b>Total</b>    | <b>70.6%</b> |              | <b>Total</b>    | <b>1.8%</b> |             |
| <b>Torrington</b>  |              |              |                 |              |              |                 |             |             |
| 0-64   | 88.6%        | 92.0%        | 0-64            | 92.3%        | 93.7%        | 0-64            | 3.7%        | 1.8%        |
| 65-69  | 70.6%        | 69.3%        | 65-69           | 68.6%        | 71.1%        | 65-69           | -2.0%       | 1.8%        |
| 70-74  | 50.5%        | 73.1%        | 70-74           | 60.1%        | 73.2%        | 70-74           | 9.7%        | 0.1%        |
| 75-79  | 51.4%        | 61.9%        | 75-79           | 46.0%        | 59.0%        | 75-79           | -5.4%       | -2.9%       |
| 80-84  | 45.2%        | 41.5%        | 80-84           | 49.0%        | 49.0%        | 80-84           | 3.7%        | 7.5%        |
| 85+  | 26.3%        | 37.1%        | 85+             | 23.6%        | 37.4%        | 85+             | -2.7%       | 0.3%        |
| <b>Subtotal</b>  | <b>69.7%</b> | <b>59.8%</b> | <b>Subtotal</b> | <b>70.6%</b> | <b>61.7%</b> | <b>Subtotal</b> | <b>0.9%</b> | <b>1.9%</b> |
| <b>Total</b>   | <b>63.5%</b> |              | <b>Total</b>    | <b>65.1%</b> |              | <b>Total</b>    | <b>1.6%</b> |             |
| <b>Waterbury</b>   |              |              |                 |              |              |                 |             |             |
| 0-64   | 89.1%        | 89.0%        | 0-64            | 92.2%        | 90.9%        | 0-64            | 3.0%        | 1.9%        |
| 65-69  | 70.7%        | 77.9%        | 65-69           | 70.3%        | 80.1%        | 65-69           | -0.4%       | 2.2%        |
| 70-74  | 69.8%        | 83.2%        | 70-74           | 69.5%        | 82.5%        | 70-74           | -0.3%       | -0.7%       |
| 75-79  | 72.3%        | 74.3%        | 75-79           | 71.0%        | 78.6%        | 75-79           | -1.3%       | 4.2%        |
| 80-84  | 60.4%        | 66.9%        | 80-84           | 61.9%        | 68.5%        | 80-84           | 1.4%        | 1.6%        |
| 85+  | 52.9%        | 49.4%        | 85+             | 58.2%        | 52.6%        | 85+             | 5.3%        | 3.2%        |
| <b>Subtotal</b>  | <b>78.2%</b> | <b>71.3%</b> | <b>Subtotal</b> | <b>80.0%</b> | <b>73.8%</b> | <b>Subtotal</b> | <b>1.8%</b> | <b>2.5%</b> |
| <b>Total</b>   | <b>73.9%</b> |              | <b>Total</b>    | <b>76.1%</b> |              | <b>Total</b>    | <b>2.3%</b> |             |
| <b>Willimantic-Danielson</b>                             |              |              |                 |              |              |                 |             |             |
| 0-64   | 94.3%        | 93.0%        | 0-64            | 95.0%        | 95.2%        | 0-64            | 0.6%        | 2.2%        |
| 65-69  | 58.1%        | 80.2%        | 65-69           | 65.8%        | 78.1%        | 65-69           | 7.7%        | -2.1%       |
| 70-74  | 69.8%        | 72.4%        | 70-74           | 68.6%        | 75.0%        | 70-74           | -1.3%       | 2.6%        |
| 75-79  | 62.2%        | 58.3%        | 75-79           | 59.0%        | 59.4%        | 75-79           | -3.3%       | 1.1%        |
| 80-84  | 42.0%        | 40.2%        | 80-84           | 46.2%        | 40.8%        | 80-84           | 4.2%        | 0.6%        |
| 85+  | 28.7%        | 21.9%        | 85+             | 36.9%        | 20.3%        | 85+             | 8.2%        | -1.7%       |
| <b>Subtotal</b>  | <b>76.8%</b> | <b>57.2%</b> | <b>Subtotal</b> | <b>77.6%</b> | <b>57.5%</b> | <b>Subtotal</b> | <b>0.8%</b> | <b>0.3%</b> |
| <b>Total</b>   | <b>64.5%</b> |              | <b>Total</b>    | <b>65.0%</b> |              | <b>Total</b>    | <b>0.5%</b> |             |

# 10

## Town Examples

This section will review two town examples to illustrate the type of qualitative analysis that could be done using this report. The first town, Southington, will also include page and table references to assist the reader with using this report.

### Example 1: Town of Southington

This section of the report goes through the results of the town of Southington, pointing out particular items. The user may find it useful to have the pages on hand when reading this section of the report.

The first page shows several key statistics for the town, including:

- **Cost Report Data (Page 1, Tables A, B, F, G, and H):** This section shows 2018 NF Cost Report data for Southington. There are three NFs, with 400 beds. Occupancy rates were high across all facilities, totaling 392 residents. Private pay, which includes persons with individual LTC insurance, is a higher portion of days in Southington (18.7%) compared to the statewide average of 10.3%. For example, LiveWell Connecticut had 31.7% of resident days utilized by persons covered by private pay. The total resident days utilized by Medicaid recipients were 65.8% for the town of Southington, which is lower than the statewide average of 73.6%.
- **Workers per Eight-Hour Day (Page 1, Tables C and D):** This section continues with 2018 NF Cost Report data on NF staffing levels. For the three Southington NFs, the total licensed staff (the combination of registered nurses and licensed practical nurses/licensed vocational nurses) amounts to 64.2 workers per eight-hour day. Food service workers were 33.2 workers per eight-hour day. Certified nursing assistant (CNA) workers were 156.4 per eight-hour day. NFs in the town of Southington average 21.4 licensed workers per eight-hour day and 52.1 CNA workers per eight-hour day. For the Summit at Plantsville NF, there are 84.6 workers per day.
- **Census Population Projection (Pages 2 and 3):** This contains the population projections for 2020, 2025, 2030, 2035, and 2040. This section also contains demographic breakdowns between the five-year projections. Population projections were developed by the Connecticut State Data Center at the Map and Geographic Information Center. These are town-level projections by age group and gender. Data from the 2010 Census is the starting point, with projections for 2020, 2025, 2030, 2035, and 2040.
- **Nearby Towns (Page 1, Table L):** This section lists nearby towns with NFs. The nearby towns are within 15 miles of Southington. The counts of nursing home and available beds by town are shown in decreasing order ranked by number of available beds. Twenty-two towns are listed as nearby to Southington and fall within a 15-mile radius of Southington that include at least one NF. These 22 towns include 22 NFs and 1,029 available beds.

The second and third pages show population counts, as well as demographic breakdowns between the projections excluding and including the State initiatives.

- **ABD (Pages 2 and 3):** This is the number of ABD Medicaid recipients by age and gender. These statistics come from October 2017 through September 2018 Department of Social Services eligibility and claims data.

The number of Medicaid recipients in the ABD category in a given town is driven not only by age and disability status, but also by income and assets.

For October 2017 through September 2018 (the 12-month period of data that corresponds with the 2018 cost year NF cost reports), the average number of ABD in Southington, as portion of total population, is 1.6% (Page 3, Tables A, B and C show this broken out by gender, but not combined), considerably lower than the statewide average of 2.5%. Although Southington has a smaller percentage of ABD population as compared to statewide, there are numerous similarities to the statewide pattern. Female ABD recipients outnumber their male counterparts for the age bands over 65. As people are aging, this gender difference is widening. Aging also plays a significant role in the portion of the population that is ABD. For those aged 65–69, only 2.1% of men and 2.4% of women are ABD. The percentages generally increase with age. For those aged 85 and over, 8.7% of men and 18.8% of women are Medicaid ABD. As described earlier, Mercer’s projections assumed, by town, a constant ABD incidence rate by age and gender. Because of the aging population and difference in mortality rates among men and women, especially for older populations, the projected ABD population as a portion of the total population increases steadily, going from 1.6% in 2020 to 1.9% in 2040.

- **NF LOC (Pages 2 and 3, Tables D, E, and F):** This includes the number of NF LOC recipients and, on the following page, the NF LOC as a portion of ABD.

In similar fashion, the average number of recipients at NF LOC is shown and the NF LOC as a portion of ABD was calculated for the same October 2017 through September 2018 time period.

Nearly two-thirds (65.8%) of the ABD is NF LOC in total for Southington. Again, aging is dominating the number of NF LOC as a portion of ABD. For males 0–64, 56.7% of ABD is NF LOC, and 44.0% are NF LOC for females 0–64. The percentages increase sharply after age 75, reaching 87.6% for men and 88.1% of women ages 85 and over. Similar to the ABD projection, the number of NF LOC is projected to grow steadily through year 2040, even as NF LOC incidence rates are assumed constant by age and gender. Both the ABD and NF LOC projections are the same when comparing projections absent State initiatives and projections including State initiatives.

- **NF LOC/NF/HCBS (Pages 2 and 3, Tables G-L):** The count of NF recipients and HCBS recipients as a portion of NFLOC.

In the town of Southington, the NF/HCBS mix averaged 47.7% of NF LOC members in an HCBS setting between October 2017 and September 2018, which is significantly lower than the statewide average of 68.6%. There are, on average, 243 persons using NF and 222 persons using HCBS.

Absent the State-led initiatives, the projected HCBS as a portion of NF LOC mix is expected to be 44.9% by 2040, with the aging of the population overcoming the slower movement toward HCBS within the age and gender cohorts. By incorporating the impact of State-led initiatives into the modeling, the projected HCBS as a portion of NF LOC mix is expected to increase to 66.7% by year 2040. Also by year 2040, the number of NF recipients is projected to decrease to 184, while HCBS recipients are projected to increase to 368.

Beginning on the fourth page of the Southington town template, displayed are several workforce statistics for 2018 and projected statistics to 2020, 2025, 2030, 2035, and 2040 with and without the impact of the State's initiatives, reference below as the projection period.

The first section, noted "Nursing Facility — Beds", gives an account of the total NF bed supply and demand over the projection period. Notice the total supply remains the same throughout the projection period; this is predicated on the assumption that no new facilities will be built. The assumption that supply remains the same throughout the projection period holds for each of the individual workforce projections. This document answers the question of what the projected workforce demand would be, considering the potential growth in demand for services, with no growth in supply.

Each of the individual workforce projections first projects total supply, then the calculated Medicaid portion of the supply. The difference between the Medicaid portion and the Medicaid demand is the supply excess (deficiency).

Focusing on the "Nursing Facility Beds Supply and Demand" (Page 4, Table A) for the town of Southington, in 2025, absent any State-led initiatives, there is projected to be a deficiency in NF bed supply. Of the current beds, 65.8%, or 263, are the Medicaid portion of the supply. The projected 2040 utilization absent any State-led initiatives is 304, resulting in a supply deficiency of 41 beds. However, when examining the impact including the State's initiatives for 2040 utilization, the demand is 184, resulting in a supply excess of 80 beds, indicating that, in Southington, the projected impact of the State's initiatives is outpacing the aging of the population.

The following is an account of how some of the summary statistics are calculated:

- **NF Beds Total Supply:** Equal to the total number of certified beds.
- **NF Licensed Staff Total Supply:** Equal to the total number of licensed workers per eight-hour day.
- **NF CNA Staff Total Supply:** Equal to the total number of CNA workers per eight-hour day.
- **NF Laundry Service Staff Total Supply:** Equal to the total number of laundry service workers per eight-hour day.

For the home- and community-based worker categories (personal care assistant and home health aides) the total annual hours utilized divided by 1,500 assumed hours worked per year was used to



calculate the number of workers. To calculate the number of workers required for adult day care, a patient to staff ratio of 7:1 was used.

## **Example 2: Town of Hartford**

The town of Hartford has five NFs with 802 total certified beds. The occupancy rates across the facilities average 63.6%, which is notably lower than the statewide average of 85.6%. Hartford has a much lower proportion of private-pay NF utilization (2.4%) when compared to Southington (18.7%) and when compared to the statewide average (10.3%). When comparing Hartford to Southington, one key statistic to examine is that in 2018 Hartford had an approximate 280 bed excess, while Southington had only a 20 bed excess. After the implementation of the State's initiatives, Southington is expected to have an 80 bed excess, while Hartford will have a 493 bed excess. What could be deduced from that information is Hartford has a younger NF population, who may be more likely to choose to receive LTC services in the community, which accounts for their projected excess in NF beds. Southington, on the other hand, has a much smaller and older NF population, which makes it more difficult for the town to keep up with the demand of NF services, although the State-led initiatives to encourage the use of LTC services in the community helps to address this demand.


# 11

## Qlik Guide

### Qlik Model Overview

Mercer created a dashboard on the Qlik environment allowing the user the functionality to navigate and compare data across towns, labor market areas, and statewide estimates. The data used to generate the automated dashboards in the Qlik environment are from the LTC Demand Report, which uses 2018 NF cost report data reported as of December 11, 2019, Medicaid claims and eligibility data incurred through December 2019, and census projections through 2040. In the Qlik application, the user will find four customizable pages that can be filtered by selecting a labor market and/or town from the state map, searching for a specific labor market/town using the search feature, or making a selection from a list.

The LTC Demand Qlik Model has four interactive base sheets that allow the user to visualize and analyze the data in tables and charts across the state of Connecticut. The first page of the Qlik application summarizes the NF cost report data submitted for calendar year 2018. The second page displays the population projections for different levels of care (LOCs) such as ABD, NF LOC, and HCBS. The third page provides a comparison of population projections for the different LOCs. The fourth page displays the total current and projected supply and demand for different services and healthcare workers throughout the State. Mercer created a similar but simplified dashboard called *Connecticut LTC Demand Report Town Level* that hosts all town level data on a single sheet shown in the screenshot below. Filtering for this additional dashboard is similar to the original dashboard, but only provides data visualization for a single town.



**Connecticut LTC Demand Report 2018**  
*Data last loaded: Oct 19, 2020, 7:38 AM*  
*Published: May 20, 2021, 12:51 PM*  
*Published to: CT Long-Term Care Demand Model*

📄 Sheets   📌 Bookmarks   📺 Stories

▼ Public sheets (4)




Page 1 - Nursing  
Facility Cost ...



Page 2 -  
Population ...



Page 3 -  
Population ...




Page 4 - Supply  
and Demand



**Connecticut LTC Demand Report Town Level 2018**  
*Data last loaded: Oct 23, 2020, 6:56 AM*  
*Published: May 20, 2021, 12:52 PM*  
*Published to: CT Long-Term Care Demand Model*

📄 Sheets   📌 Bookmarks   📺 Stories

▼ Public sheets (1)



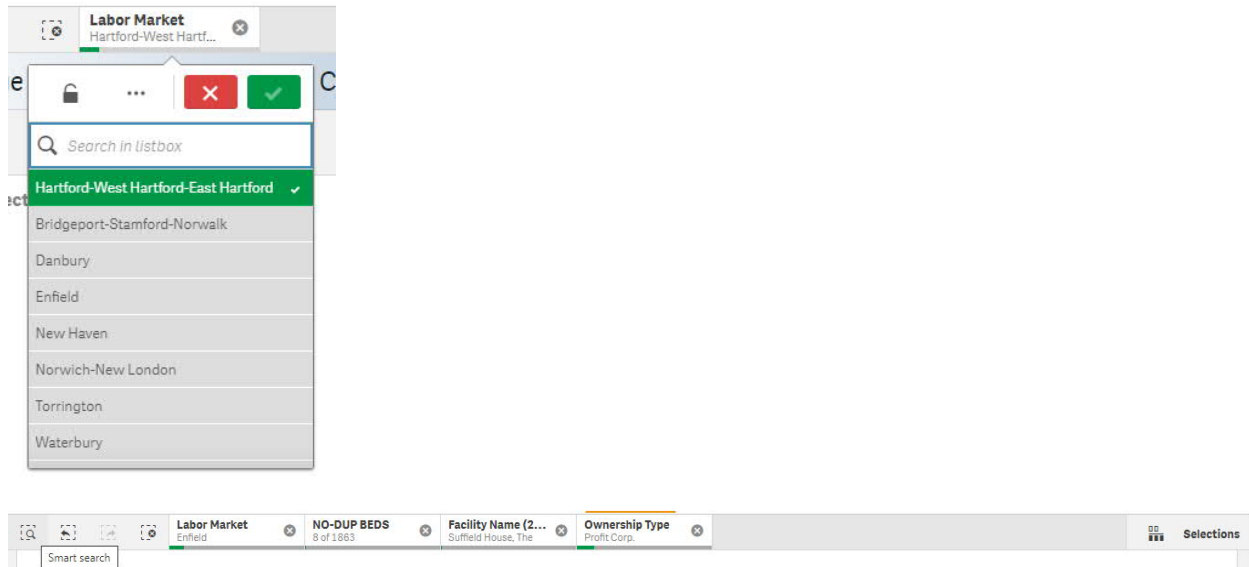
Town Level Report

The information presented in this document serves as a guide for the user to navigate through the Qlik environment. Mercer is available to answer any questions on the material contained in this document, or to provide explanations or further details, as may be appropriate. Mercer is not aware of any direct or indirect financial interest or relationship, including investments or other services that could create a conflict of interest that would impair the objectivity of Mercer’s work.

## How to Filter

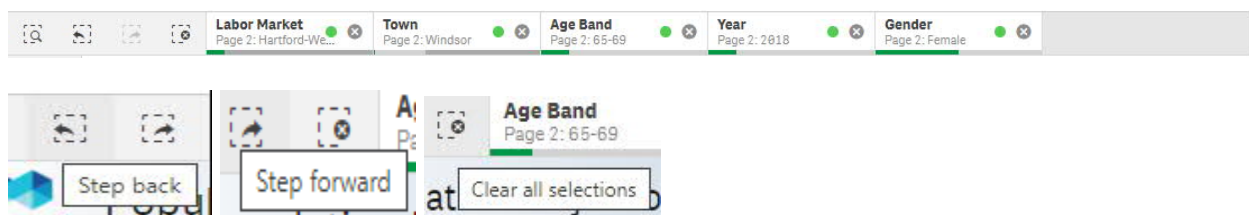
Each sheet includes an interactive map allowing the user to select unique labor markets and towns. The user has the option to select individual or groups of labor markets and/or towns on the map. The user also has the option to search a specific town on the Town-Level search box to the right of the map. Additionally, the user can filter the pages on the following data fields: Labor Market, Town, Facility Name, Ownership Type, DUP and NO-DUP beds, Age Band, Year, and Gender. These filters can either be selected on the tables, searched in the Smart Search, or in the Listbox. Not all data fields are available for every page of the report. When selecting the filters, users must keep in mind, the selected filters apply **only** to the active sheet. Once the user switches pages (see the How to Switch Pages section), they must reselect the items they want to filter for each page. All selected filters will be displayed on the Selections bar at the top of the page.

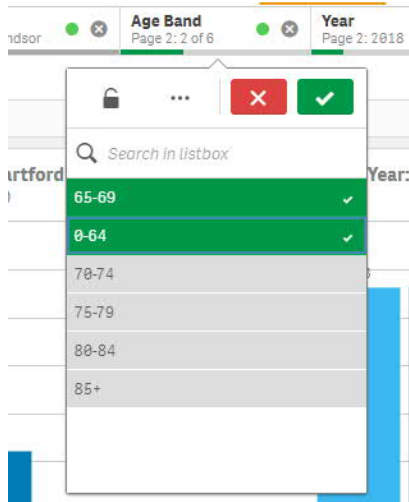
The screenshot shows a web interface for filtering data. On the left, a map of Connecticut is divided into labor market regions, each with a different color and label: Torrington (orange), Hartford-West Hartford-East Hartford (light blue), Enfield (pink), Willimantic-Danielson (light orange), Danbury (red), Waterbury (pink), New Haven (green), and Norwich-New London (yellow-green). A scale bar indicates 20 km. Below the map is a note: "Note: Select Labor Market or Town(s) from the map to filter to that Labor Market or Town(s) Data Objects G and J contain State Totals and will not be filtered." On the right, there is a search box labeled "Town" and a list of towns: Andover, Ansonia, Ashford, Avon, Barkhamsted, Beacon Falls, Berlin, Bethany, Bethel, and Bethlehem. A "Next Sheet" button is located at the top right of the interface.



## How to Unfilter

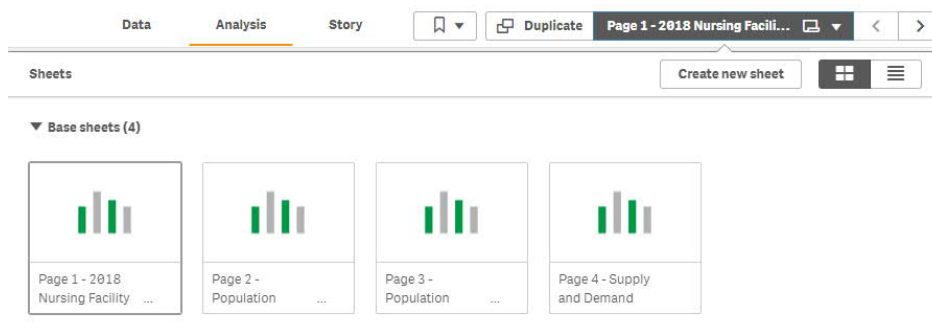
The user has several options when deciding to remove their selected filters. The user can remove the selected filters in the Selections bar by clicking the “X” next to the displayed filter. The user can also remove individual filters by clicking the “Step Back” box, or undo that action by clicking the “Step Forward” box. If the user wants to remove all filters, they can click the “X” or “Clear all Selections” box in the Selections bar. When selecting multiple Labor Markets or Towns, users can remove a particular selection by clicking on the current filter category on the filter bar. A list of currently selected items will be shown in green. Users can remove an individual selection in green by clicking on the selected item to unselect. After unselecting, users must click the green check mark button to apply the selection. Once the user switches between pages, the filters will automatically be reset.





## How to Switch Pages

Each page includes a series of dimensions, measures, and an interactive map of Connecticut that will allow the user to filter and adjust the data according to the user's preference. The user can switch between the pages of the report by using the left or right arrows to the right of the Page drop down box. Once the user switches between the pages, new filters will need to be selected as filtering does not apply across multiple pages.



## How to Sort

The user can sort individual columns by selecting the headers in the tables and a down arrow will appear underneath the column name. The user can also sort multiple dimensions and fields in the Selections box located on the far right of the Selections bar. On this page, the user can sort the displayed data to their preference. All selections made will appear in the Selections bar (in default state). The user can select all or remove selections by clicking the three dots and then selecting "Select all" or "Clear selection".

**State Totals**  
A. Projections Absent State Initiatives for Aged, Blind, and Disabled

| Age Band      | 2018 DSS Elig Male | 2018 DSS Elig Female | 2020 Male     | 2020 Female   | 2025 Male     | 2025 Female   | 2030 Male     | 2030 Female   | 2035 Male     | 2035 Female   | 2040 Male     | 2040 Female   |
|---------------|--------------------|----------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| <b>Totals</b> | <b>36,038</b>      | <b>53,473</b>        | <b>36,396</b> | <b>53,733</b> | <b>37,537</b> | <b>55,083</b> | <b>38,502</b> | <b>56,710</b> | <b>38,893</b> | <b>57,697</b> | <b>38,828</b> | <b>57,786</b> |
| 0-64          | 21,404             | 20,714               | 21,445        | 20,746        | 21,551        | 20,853        | 21,711        | 20,976        | 21,914        | 21,112        | 22,140        | 21,245        |
| 65-69         | 2,752              | 10,595               | 2,683         | 10,265        | 2,607         | 9,832         | 2,814         | 10,172        | 3,073         | 11,035        | 3,106         | 11,483        |
| 70-74         | 4,295              | 6,327                | 4,421         | 6,472         | 4,782         | 6,812         | 4,757         | 6,813         | 4,531         | 6,448         | 4,381         | 6,227         |
| 75-79         | 3,167              | 5,846                | 3,304         | 6,111         | 3,464         | 6,344         | 3,700         | 6,602         | 3,604         | 6,509         | 3,383         | 6,072         |
| 80-84         | 2,439              | 5,230                | 2,558         | 5,387         | 2,865         | 6,000         | 2,986         | 6,277         | 3,163         | 6,521         | 3,064         | 6,446         |

*2018 data is based on current data and not on projections. Projections With State Initiatives and Projections Absent State Initiatives will be the same at the ABD level and the NFLOC level. State Initiatives are targeted at members at the HCBS and NF level.*

**Selections**

No selections applied

Selections (in default state)

No selections applied

Apply selections from the fields below to explore the associations in your data. The selections that you make in the sheet are also

App dimensions  Show fields

| # of Res This Report | ABD_Proj.Geography - ...          | Age Band | Amount \$ | Availability      | Available |
|----------------------|-----------------------------------|----------|-----------|-------------------|-----------|
| 0                    | Bridgeport-Stamford-Norwalk       | 0-64     | -40158    | -286.851580694524 |           |
| 9                    | Danbury                           | 65-69    | -32690    | -241.14853283117  |           |
| 11                   | Enfield                           | 70-74    | -10532    | -236.0366759735   |           |
| 22                   | Hartford-West Hartford-East Ha... | 75-79    | -9925     | -219.50389584695  |           |
| 27                   | New Haven                         | 80-84    | -6134     | -218.74995000561  |           |
| 29                   | Norwich-New London                | 85+      | -5811     | -205.22892109182  |           |

Selections

Clear selection

Select all

Select possible

Select alternative

Select excluded

80-84

## 12

# Nursing Facility COVID-19 Impact Addendum

This document is provided to help the DSS and other stakeholders in the NF community plan for 2021 and beyond in light of the COVID-19 pandemic. DSS retained Mercer to provide actuarial and consulting services for the Connecticut LTC Demand Report as well as a one-year short-term projection of NF census counts in October 2020 in light of the COVID-19 pandemic. DSS requested that Mercer provide estimates under four different scenarios and specifically requested estimates with a COVID-19 vaccine and a second wave of the COVID-19 pandemic. This document seeks to align the short-term projections in light of the COVID-19 pandemic with the Connecticut LTC Demand Report, which has projections to the year 2040.

### Data

Mercer primarily used current data sources from the Connecticut NF Census Reports to develop and track the NF projections. Centers for Disease Control data, publications from medical schools, Mathematica's Connecticut long-term care facilities report<sup>3</sup>, and literature from other healthcare professionals were used to identify additional factors. Emerging data is likely to change with the benefit of additional time and improved reporting. The suppliers of data are solely responsible for its validity and completeness. Mercer reviewed the data and information for consistency and reasonableness, but did not audit it. It is important to have an understanding of the impact that underlying data can have on the projections. All estimates are based upon the information and data available at the time of this report.

### NF Census Estimates

DSS requested Mercer provide census estimates for April 2021 and October 2021 under four different scenarios. The fourth scenario projected the NF census if a vaccine was available around December 2020 and a second wave of the COVID-19 pandemic occurred around late 2020 to early 2021 for the NFs.

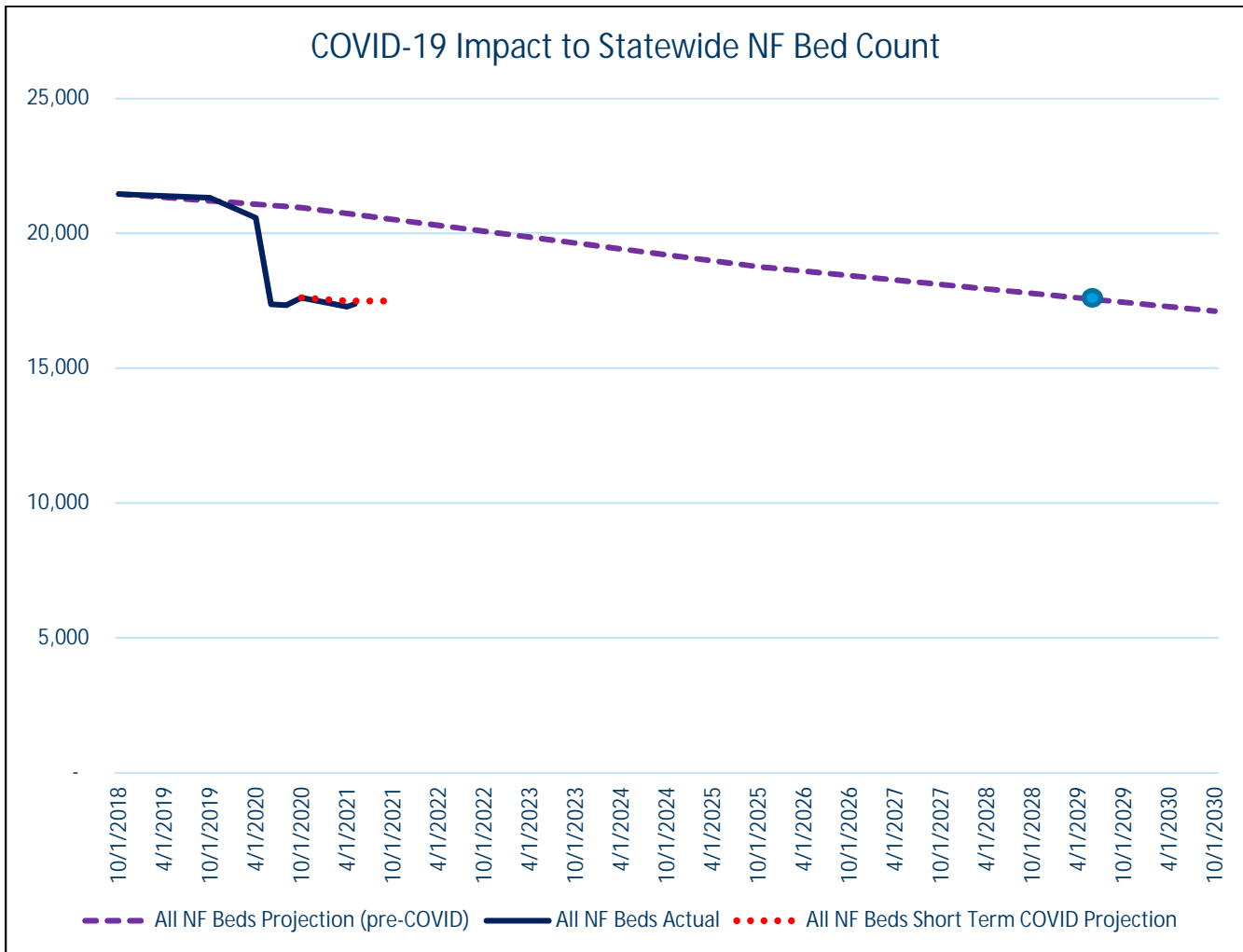
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<sup>3</sup> <https://www.mathematica.org/our-publications-and-findings/publications/fr-a-study-of-the-covid-19-outbreak-and-response-in-connecticut-long-term-care-facilities>



| Scenario                                      | April 2021 | October 2021 |
|---|------------|--------------|
| 4. Vaccine in December 2020, With Second Wave | 17,490     | 17,500       |

As can be seen in the chart below, the short-term COVID-19 projection has tracked fairly closely to the actual reported census counts through April 2021. The deviation from the original LTC Demand Report projections (dashed purple line) indicates there has been a significant reduction in the NF census due to COVID-19. The current NF bed count is where Mercer expected the bed count to be around 2029 (light blue dot in the chart below). If this reduction was assumed to be entirely from persistent effects, it would have advanced the projection approximately seven to eight years. However, Mercer recommends using caution since some of the effects of COVID-19 include short-term impacts that could slightly increase the NF bed count in the short-term before the downward trend continues.



Noting many of the effects of the pandemic are persistent, the LTC Demand Report may continue to be used with the understanding the projected figures will likely occur a few years earlier than originally anticipated.

There was some disproportionate impact of COVID-19 to the Labor Market Areas as is illustrated in the table below:

| May 2021 as a Percentage of September 2018 Bed Count by Labor Market |               |               |            |
|--|---------------|---------------|------------|
| Labor Market   | Sep 2018      | May 2021      | Percentage |
| Bridgeport-Stamford-Norwalk  | 4,681         | 3,559         | 76%        |
| Danbury  | 847           | 685           | 81%        |
| Enfield  | 490           | 423           | 86%        |
| Hartford-West Hartford-East Hartford                                 | 7,537         | 6,456         | 86%        |
| New Haven  | 3,786         | 3,128         | 83%        |
| Norwich-New London   | 1,371         | 1,075         | 78%        |
| Torrington   | 708           | 541           | 76%        |
| Waterbury  | 1,263         | 817           | 65%        |
| Willimantic-Danielson  | 775           | 702           | 91%        |
| <b>State Total</b>   | <b>21,458</b> | <b>17,386</b> | <b>81%</b> |

For Labor Market Areas with larger reductions in bed count (such as Waterbury, Torrington, and Bridgeport-Stamford-Norwalk) projections likely have advanced more than the statewide figures. Likewise, Labor Market Areas with smaller reductions in bed count would expect to have less advancement than the statewide figures.

### Additional Variables

Mercer considered additional implicit variables as part of this analysis that informed the short-term projection methodology. Estimates for additional variables for a long-term projection were not included in the LTC Demand Report. These additional variables include both persistent and temporary factors impacting the number of individuals at a NF. Examples of persistent factor variables would include a large reduction in waiting lists for NF and family members with increased capacity (either due to location or ability to work from home) to care for a family member in a home- and community-based services setting. An example of a temporary factor variable would be family members returning to full-time work and having reduced capacity to care for a family member. Mercer expects there are a mix of both persistent and temporary variables impacting long-term projections. The temporary variables may have little to no impact in a couple of years, but the persistent variables will likely impact results for years or decades.

## Interpreting Results

Within the Qlik dashboards, there are tables that would not be expected to change due to COVID-19. Many of the tables and charts document figures from 2018 cost reports and these point-in-time estimates are historical information.

Other tables in the Qlik dashboards are projections into the future and should include some modification due to the impact of COVID-19. As noted above, it appears the long-term projections have advanced approximately seven to eight years if based on entirely persistent effects. Due to the uncertainty of persistent and temporary effects, Mercer recommends viewing future projections as a range occurring from five to 10 years earlier than originally projected. For example, in the Qlik dashboards, on Page 2, table H, the following figures are displayed for NFLOC – Nursing Facility (NF) Males age 85+ with State Initiatives:

| Age Band | 2018 DSS Eligible Male | 2020 Male | 2025 Male | 2030 Male | 2035 Male | 2040 Male |
|----------|------------------------|-----------|-----------|-----------|-----------|-----------|
| 85+      | 1,252                  | 1,195     | 1,064     | 1,039     | 1,026     | 943       |

To estimate the expected number of 85+ Males in a NF in 2030, a user would need to advance the projection five years and 10 years into the future (between the 2035 and the 2040 figures). This would place the expected number of 85+ Males in a NF in 2030 as somewhere between 1,026 and 943 range.

It is expected that Labor Market Areas with a larger reduction in bed count would have advanced projections beyond the 5–10 year range. Caution should be used in estimating the impact to future projections, especially when using small numbers.

Pages 2–4 in the Qlik dashboards contain projections into the future and adjustments may be performed for these tables. Page 1 contains historical cost report information and should not be adjusted. Tables J and K on page 1 do contain projections, but are not granular enough to allow adjustments to be made.

As is noted in Section 1 of this report, all estimates are based upon the information available at a point in time and are subject to unforeseen and random events. Therefore, any projection must be interpreted as having a likely range of variability from the estimate. Additionally, Town-level projections necessarily involve projections with low numbers of persons in certain projection age/gender cells. Any projection involving such low numbers is subject to significant statistical fluctuation.

## Limitations

Mercer expressly disclaims responsibility, liability or both for any reliance on this communication by third parties or the consequences of any unauthorized use. It is important that readers have an understanding of the Connecticut LTC Demand Report and the relationship of different payer types.

This addendum should not be relied upon in isolation and should be reviewed along with the full Connecticut LTC Demand Report. Reliance on estimates derived from historical data sources may not be a good predictor of future experience, especially when social behavior and policy are involved.

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