

UTILIZATION MANAGEMENT FOR ADULT MEMBERS

Executive Summary & Analysis by Level of Care

Calendar Year 2018: January-December 2018 - Submitted March 1, 2019





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A Beacon Health Options-CT Dashboard

This report was created by Beacon Health Options on behalf of the CT Behavioral Health Partnership. However the opinions, conclusions, and recommendations contained herein are solely those of Beacon Health Options, and may not represent those of DSS, DMHAS, and DCF.

UTILIZATION REPORT FOR ADULT MEMBERS

Calendar Year 2018: January-December 2018

Reports
Used:



General Overview

On at least a semiannual basis, the reports mutually agreed upon in Exhibit E of the CT BHP contract are submitted to the State for review. The shift to semiannual reports was designed to minimize noise created by quarter-to-quarter fluctuations that do not reflect a true trend in the data. The March deliverable serves as the annual report and covers four consecutive years of utilization data. The September deliverable covers 10 consecutive quarters with a focused analysis on the two most recent quarters, but may include the past four if there is information necessary to review that had not been analyzed previously.

This report focuses on the utilization management portion of these reports, evidenced in the 4A series, which reviews utilization statistics such as admissions per 1,000 members (Admits/1,000), days per 1,000 members (Days/1,000), and average length of stay (ALOS).

Within this interactive report, all utilization data is available via drop-down filters, but the narrative highlights the areas of interest related to certain utilization trends. In some cases, demographic breakouts are available to enhance the understanding of utilization. Additionally, the narrative identifies the underlying factors, which drive the trends and associated programmatic responses taken by Beacon Health Options to impact/mitigate or support the trend. Beacon also presents recommendations to address remaining challenges and reports progress related to these planned recommendations. The areas of focus for this deliverable are listed on the following page.

Methodology

The data contained in this report are based on authorization admissions and are refreshed for each subsequent set of updates during the year. Due to changes in eligibility, the results for each quarter or year may change from the previously reported values. The reports and analyses for all levels of care are affected by this change. Please note that utilization metrics may change with the refresh of the data. Therefore, the reader should be cautious when interpreting the latest quarter of data. The contractor will monitor the post-refresh changes closely. If warranted, methodology will be revisited.

The methodology for membership totals remains unchanged. For the Total Membership counts, each member is only counted once per quarter, even if he/she changes eligibility groups or experiences gaps in eligibility. For instance, if a member changes benefit groups within the quarter, that member is included in the totals for each benefit group, but only once for the total membership. This methodology is referred to in the graphs as "Unique Membership". For the benefit groups, members are counted in each group in which they were eligible during the time period (quarter or year). This means that the individual benefit group membership counts cannot be added to obtain an overall total, since members can shift between benefit groups.

The methodology for calculating age has changed, resulting in a slight shift in adult and youth membership totals. Previous to this report, counts for adults and youth were based on if a member met that age criteria during the time period. This meant that youth who were both 17 and 18 years old in a quarter were counted in both the adult and youth totals. In order to allow for the drill-down of demographic and age information, it was required that members be counted in only one group during a time period. Age group is now based on the age that a member was for the majority of the time period (quarter or year). Other demographics such as gender and race/ethnicity are based on the most recently updated eligibility. These demographics will update as needed as we want to report on the most accurate gender or race/ethnicity that a member identifies with.

Additionally, while unchanged from previous reporting periods, it is worth noting that the per 1,000 measures compare the utilization rates of the population to the population's "member months". This means that when viewing the Admits/1,000 of HUSKY D members the rate is based on the number of admissions within the HUSKY D population, not the entire adult population. This helps to analyze which populations are potentially more chronic, acute, or in need.

EXECUTIVE SUMMARY FOR ADULT MEMBERS

Calendar Year 2018: January-December 2018



Total Membership

Since the change in eligibility criteria implemented in 2015, Connecticut Medicaid membership including duals has remained stable with a yearly change of no more than 1.5%. All members, including dually eligible members, decreased slightly from 2017 (from 975,577 to 975,346). However, all members without duals had an almost 1% increase from 2017 to 2018, which was offset by a 6% decrease in adult members with duals which may have been impacted by data reporting/processing issues.^[1]

Adult members, including duals, continue to comprise 63% of the total Medicaid membership. In 2018, there were 617,684 adult members, including dually eligible members. This represents a 0.2% decrease from 2017, which was again driven by the reduction in adult dual membership. Statewide, the population decreased 0.4%^[2] in 2018, and the unemployment rate fell every month, reaching just 4.0% in December, the lowest unemployment rate since 2001.^[3] In other states, Medicaid membership has decreased due to population reduction and an economic boom that increased the number of people receiving employer-sponsored insurance.^[4] However, similar reductions in CT Medicaid membership have not transpired. One possible explanation for why Connecticut did not see a greater reduction in Medicaid membership is that in 2017, the uninsured rate went up for the first time since the implementation of the Affordable Care Act.^[5] It is therefore possible that in 2018 the uninsured rate began to decrease again, which may have offset other potential reductions in membership.

Please see the accompanying Tableau dashboards to view graphical representations of the data presented here, as well as to use filters to segment the data in different ways.

Membership Demographics

The overall demographic makeup of the CT Medicaid population has shifted slightly in the past four years. Membership by gender has remained consistent, as female adults without dual membership continue to constitute approximately 56% of the population, while males comprise 44%. Age group demographics have shifted slightly in the past four years toward an older population. 25-34 year-olds are still the largest group, at 26.8% of the adult non-dual population in 2018, while the 18-24 and 45-54 year-old age groups both decreased by about 1% since 2015. Meanwhile, the 55-64 year-old and 65+ age groups have each increased over the past four years. While not dramatic, these shifts do indicate a slightly older Medicaid population, which can impact utilization, lengths of stay, and overall Medicaid spending.

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In 2018, more than one quarter of the adult Medicaid population (27.2%) is categorized as Unknown race/ethnicity.

Racial and ethnic demographics have changed more appreciably since 2016. As noted in the CY 2017 and Q1/Q2 2018 deliverables, changes to the ImpaCT system used to manage member eligibility have led to a significant increase in members identifying as "Unknown" race/ethnicity. In 2018, the group identified as Unknown continued to rise, up a further 10% from 2017. In 2018, more than one quarter of the adult Medicaid population (27.2%) is categorized as Unknown race/ethnicity. Beacon's investigations have revealed that this is a true unknown, as members are not required to choose a race/ethnicity when applying for Medicaid. There are concerns that having such a large unknown will hinder efforts at tracking utilization and outcomes to identify and reduce health disparities, as we cannot know if the unknowns are evenly distributed among racial and ethnic groups or if certain groups are more likely to opt out of responding. Beacon understands that our state partners share our concerns and are discussing potential solutions.

^[1] Dually eligible adult membership initially dropped steeply in Q1 '18, as many members lost dual eligibility at end of 2017. Dual membership fell again in Q2, increased in Q3 but fell again in Q4. Beacon consulted with DSS and learned from CHN via DSS that Deloitte was not consistently sending over the most recent third party liability information on members. This issue was resolved in September 2018 but while the weekly file has increased in members, it is not back to originals numbers seen in mid-2017.

^[2] US Census Bureau (2018). "Quick Facts: Connecticut." Retrieved from [census.gov/quickfacts/ct](https://www.census.gov/quickfacts/ct)

^[3] Connecticut Department of Labor (2019). "Labor Market Information: State of Connecticut vs. United States Unemployment Rate." Retrieved from ctdol.state.ct.us/lmi/unemprateCTUS.asp

^[4] Firth, Shannon (2018). "Medicaid Enrollment Dips by 1.1 Million." MedPage Today 24 Oct. 2018. Retrieved from [medpagetoday.com/publichealthpolicy/medicaid/75895](https://www.medpagetoday.com/publichealthpolicy/medicaid/75895)

^[5] Andrews, Ellen (2018). "Connecticut's uninsured rate up, reversing four-year trend." CT Health Policy 12 Sept. 2018. Retrieved from cthealthpolicy.org/index.php/2018/09/12/connecticuts-uninsured-rate-up-reversing-four-year-trend/

In 2018, White members continue to be the largest racial/ethnic group (34.4%) despite a further 3% decline from 2017. The Unknown group is the second largest racial/ethnic group again for 2018. The Hispanic and Black groups remained stable, at 19.2% and 14.7% of the Medicaid population without duals, respectively. Members identifying as Asian (2.8%) and Other Races (1.7%) continue to remain steady and represent a small portion of the non-dual Medicaid population.

Benefit Membership

HUSKY D continues to be the largest benefit group for adult Medicaid members, increasing by 3.8% over the past year to 310,996 members (or 53.2% of all adult Medicaid members without dual eligibility). Over the same time period, HUSKY A membership decreased 12.3% and now accounts for 38.2% of adult members (223,365 members), down from 42.3% in 2017. HUSKY C (ABD/Single) increased 3.8% to 41,932 members in 2018 (7.2% of all adult non-dual members), while other non-dual benefit groups remained stable. These trends have important implications for utilization, as HUSKY D and HUSKY C (ABD/Single) tend to be the highest utilizing groups.

Starting on January 1, 2018, the income eligibility level for HUSKY A changed from 155% to 138% of Federal Poverty Level (FPL) and letters alerted impacted members that they would lose eligibility. On July 1st, eligibility returned to its previous level of 155% FPL; however, it is

likely that many who were formerly enrolled in HUSKY A did not know they were again eligible, did not re-enroll, or waited to re-enroll so that they have not yet been added back to membership rolls. There was an increase in HUSKY A membership in Q3 '18, after the eligibility requirements returned to their former levels, but membership dropped again in Q4 '18. By Q4 '18, there were nearly 7,000 fewer HUSKY A members than in Q4 '17. It will be important to see if the HUSKY A population begins to return to pre-eligibility change levels in 2019, or if there are other factors contributing to the decrease in HUSKY A membership. One possible other factor could be the low unemployment rate, as adults who qualified for HUSKY A may have been able to find employment with health benefits.

HUSKY D is the largest single benefit group overall and for most demographic groups. Approximately 68% of adult males without duals and 54.3% of White adults had HUSKY D in 2018. HUSKY D was the largest benefit group for every age group except 35-44 (which had the most in HUSKY A), and 65+ (which had the most in HUSKY C [ABD/Single]). Despite overall declines in HUSKY A membership, HUSKY A still covers 49.7% of females, 57.8% of 35-44 year-olds, and is the top benefit group for females 25-34 and 35-44, suggesting that HUSKY A continues to provide necessary medical coverage for mothers and their children.

In concordance with the 6% decline in dual membership, all dual benefit groups had a decrease in membership in 2018. HUSKY C (ABD/Dual) continues to be the largest dual benefit group, accounting for 69% of all adult dual members. The adult dual population continues to be older (58.7% were 65+), female (61.3%), and White (59.1%). Demographic trends remained stable in 2018, showing that all demographic groups decreased in dual membership fairly consistently in 2018.

Inpatient Psychiatric Hospital Utilization

Annual discharge volume from inpatient psychiatric hospitals (in and out-of-state, but excluding State facilities) has remained unchanged over the past four years, with 10,548 discharges in 2018 for all members without duals. Discharges remained stable by age group, with 25-34 year olds continuing to have the most discharges (3,169 in 2018; 30% of total). Males also continue to have slightly more discharges than females (54.3% for males vs. 45.7% for females), and White adults continue to have the most discharges of all racial and ethnic groups (40.3% of discharges). Males and whites are disproportionately overrepresented in inpatient stays, as males represent 44% of the adult Medicaid non-dual population but have 53% of inpatient discharges, while 34% of the adult Medicaid non-dual population are White and have 40% of inpatient discharges.

HUSKY D members have the highest percentage of discharges (69.8%) of adult non-dual members, followed by HUSKY A (15.7%) and HUSKY C (ABD/Single) (14.1%). Annual trends show the same pattern as the quarterly trends Beacon previously reported. HUSKY D inpatient discharges increased 16% from 2017 (including a ten-quarter high of 71.6% of all inpatient discharges in Q4 '18), while the overall HUSKY D population increased by about 4%. Similarly, HUSKY A inpatient discharges decreased 35% from 2017 to 2018, while the overall HUSKY A population decreased by 12% over the same time period.

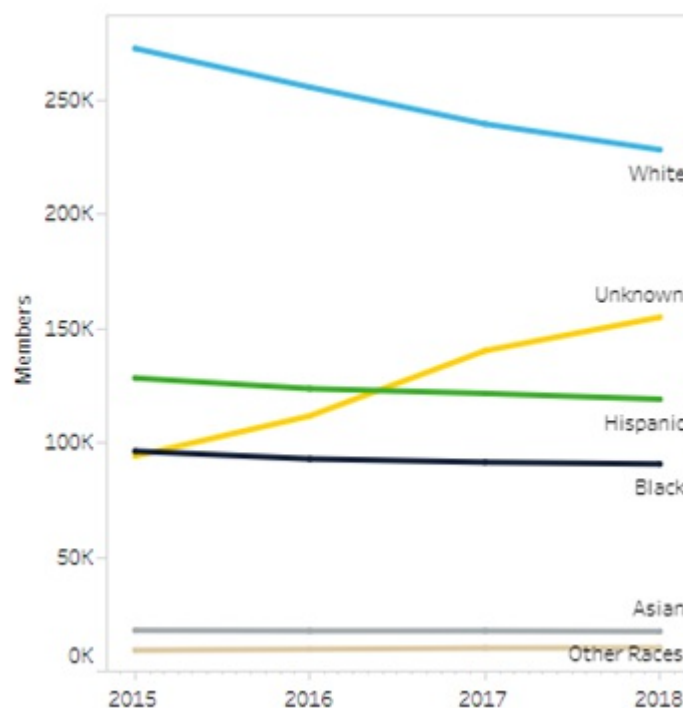


Figure 1: Adult Medicaid Population by Race/Ethnicity, 2015-18

Males and whites are disproportionately overrepresented in inpatient stays, as males represent 44% of the adult Medicaid non-dual population but have 53% of inpatient discharges, while 34% of the adult Medicaid non-dual population are White and have 40% of inpatient discharges.

As noted in the previous semi-annual deliverable, therefore, membership changes alone cannot account for the increase in HUSKY D and decrease in HUSKY A inpatient utilization. Previously, Beacon hypothesized that a change in severity, accounted for by an increase in the percent of HUSKY D members with a primary schizophrenia diagnosis, could explain this shift in utilization. From 2017 to 2018, the percentage of HUSKY D inpatient stays for schizophrenia increased from 22.8% to 25%, while the percentage of HUSKY A inpatient stays for schizophrenia decreased from 19% to 13.5%. [6] Also, the HUSKY D population has a rate of homelessness (7.1%) that is nearly 50% more than that of the total adult Medicaid population (4.9%). This metric highlights the social issues that may compound health issues and cause increasing utilization among the HUSKY D membership.

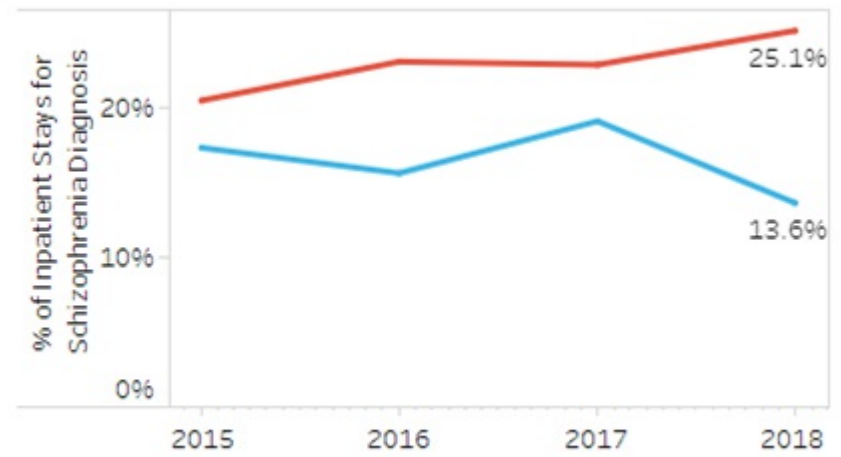


Figure 2: Percent of Inpatient Stays for Schizophrenia Diagnosis by Benefit Group, 2015-18

From 2016 to 2018, inpatient discharges with a primary diagnosis of schizophrenia/psychotic disorder increased from 25.9% to 27.2%. In 2018, members with a primary diagnosis of schizophrenia/psychotic disorder had an ALOS more than three (3) days higher than the statewide average.

The average length of stay (ALOS) increased by 0.6 days from 8.9 days in 2017 to 9.5 days in 2018. The ALOS has increased approximately 0.5 days each year since 2015. This overall increase may be driven by many factors, including system change and pressures that reduce post-discharge options. Additionally, there appears to be an increase in the acuity of the inpatient population as evidenced by an increase in the percent of discharges accounted for by members with a primary diagnosis of schizophrenia/psychotic disorder. From 2016 to 2018, inpatient discharges with a primary diagnosis of schizophrenia/psychotic disorder increased from 25.9% to 27.2%. [6] In 2018, members with a primary diagnosis of schizophrenia/psychotic disorder had an ALOS more than three (3) days higher than the statewide average. The ALOS for members with a primary diagnosis of schizophrenia/psychotic disorder (12.8 days) is longer than for major depression (7.8 days) or bipolar disorder (8.9 days) diagnoses. This rise in schizophrenia discharges certainly had an impact on rising ALOS.

By age group, ALOS remained fairly stable from 2017 to 2018, with older groups having the longest lengths of stay (65+ at 13.2 days and 55-65 at 11.1 days), likely due to age-related medical comorbidities and overall duration of psychiatric diagnoses, among other factors. The other age groups ranged from 8.8 days for the 35-44 year-old age group to 9.7 days for the 18-24 year-old age group. ALOS increased by about half a day for both males and females in 2018, with males having an ALOS of 9.6 days and females 9.4 days.

The ALOS increased steadily by one half to a full day for all racial and ethnic groups except Asian adults, who had a slight decrease from 13 days to 12.7 days. The ALOS for the Asian adult population remains the highest ALOS of any racial or ethnic group. As mentioned in the prior semi-annual deliverable, Asian members have low behavioral health inpatient utilization (only 105 discharges in 2018), which may mean that they have had fewer prior services before an inpatient stay and therefore need a longer length of stay to stabilize. All other racial and ethnic groups have ALOS clustered between 8.4 days (other races) and 9.8 days (Black members).

The average length of stay is largely stable among most benefit groups, except for HUSKY C (LTC/Single), which increased by 5 days from 14.1 days in 2017 to 19 days in 2018. HUSKY C (ABD/Single) has the second longest ALOS of 11.5 days for 2018. As noted in previous deliverables, this is consistent with the composition of the HUSKY C populations based on eligibility criteria, as HUSKY C tends to be an older population with more chronic conditions. HUSKY D members had an ALOS of 9.5 days for 2018, which is the average for all groups. HUSKY A (7.7 days) and HUSKY B (5.8 days) had the lowest ALOS of all benefit groups in 2018.

In-state PAR hospitals, which excludes the Hospital for Special Care, Prospect Rockville Hospital's eating disorder unit, Natchaug Hospital, and Sharon Hospital, accounted for 10,232 discharges in 2018. More than a third (35.6%) of these discharges came from the three largest facilities: Yale New Haven Hospital (1,354 discharges), Hartford Hospital (1,239 discharges), and St. Vincent's Medical Center (1,051 discharges).

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[6] Note: this data comes from the Adult Inpatient Data Dashboard. The data feeding this dashboard is updated weekly, and data updates may impact prior weeks' numbers as well, so any numbers reported from the Adult Inpatient Data Dashboard in this deliverable may differ slightly from the numbers currently shown on the dashboard.

Prospect Manchester added a geriatric unit and Prospect Waterbury shifted former adolescent beds to adults, so both hospitals increased their capacity and their total discharges in 2018. Johnson and Memorial Hospital and the Hospital of Central Connecticut each had approximately 100 fewer discharges in 2018 than in 2017. Johnson and Memorial's decrease in discharge volume can be attributed to a reduction in staffing and temporary room closures. The Hospital of Central Connecticut had a nearly three-day increase in ALOS, which may explain the reduction in discharges.

The ALOS for in-state PAR hospitals in 2018 was 9.4 days, an increase of more than half a day from 2017. The two largest hospitals by total discharges, Yale New Haven and Hartford Hospital, had an ALOS three (3) and two (2) days above the state average, respectively. Hartford Hospital has made some changes clinically and at the system level, which may bring down their ALOS in the future. Yale's longer ALOS may be driven by the greater proportion of utilization by patients with schizophrenia (39.2% at Yale vs. 27.2% statewide).^[7] With Hartford Hospital and Yale New Haven Hospital removed, the statewide ALOS drops to 8.6 days. Most providers had an increase in ALOS in 2018. The Hospital of Central Connecticut had the highest ALOS at 14.3 days, up nearly 3 days from 2017. The Hospital of Central Connecticut also has one of the lowest readmission rates (1.6% vs. the state average of 4.3%).

The biggest reductions in ALOS occurred at Danbury Hospital (down almost 2 days to 8.8 days) and Prospect Waterbury Hospital (down 1 day to 10.9 days). Danbury's referrals to state beds have reduced this year, and since waiting for state beds tends to incur longer wait times, their decrease in ALOS is expected. Waterbury Hospital implemented several strategies to reduce length of stay, including improved collaboration with key community providers.

Per the data shared with providers as part of the Provider Analysis and Reporting (PAR) Program, the 7-day readmission rates increased slightly in Q1 and Q2 '18 to 5.4% and dropped to a ten

quarter low of 4.3% in Q3 and Q4 '18.^[7] The 30-day readmission rate for Q1 and Q2 '18 increased to 16.1%, but reduced to 15.2% during Q3 and Q4 '17. All three (3) providers with notably long ALOS in 2018 (Hartford Hospital, Yale New Haven Hospital, and the Hospital of Central CT) had lower than average 7- and 30-day readmission rates.

Since the ALOS for inpatient utilization has increased each of the past four years, logic would expect a corresponding decrease in discharges, since fewer people would be moving through the system in a year. However, discharges have remained flat over the past four years. As noted in the previous semi-annual deliverable, increases in the HUSKY D population (who tend to have a longer ALOS) and decreases in the HUSKY A population (who tend to have shorter ALOS), may explain some of the utilization trends. Additionally, Beacon's data shows only the Medicaid utilization. Usually, not all of the inpatient beds at a hospital are used for Medicaid patients. Therefore, if inpatient utilization by people with private insurance has decreased, hospitals may have shifted more of the private beds over to Medicaid to accommodate the need. Moreover, ongoing system changes such as; timely access to state, intermediate and residential beds; homelessness; probate hearings; may be slowly growing the ALOS over time.

Recommendation 1: Continue Adult Inpatient PAR Program

Regional Network Managers continued to conduct Provider Analysis and Reporting (PAR) meetings with the adult inpatient psychiatric hospitals during CY 2018. Clinical and Medical Affairs staff from Beacon are able to participate in PAR discussions as needed. These conversations provide an important forum to understand the varied clinical philosophies, community resources, treatment approaches, and cultural influences at each hospital and within each community. Understanding a provider's performance within this context furthers our ability to shape provider practice via the PAR program.

	2016	2018	2015	2017
BRIDGEPORT HOSPITAL INC	439	502	396	498
BRISTOL HOSPITAL INC	401	372	441	356
CHARLOTTE HUNGERFORD	230	220	198	191
DANBURY HOSPITAL	220	245	220	212
DAY KIMBALL HOSPITAL	261	266	262	265
GRIFFIN HOSPITAL	281	373	273	322
HARTFORD HOSPITAL	1,281	1,239	1,386	1,276
HOSPITAL OF CENTRAL CT	390	370	440	465
JOHNSON MEMORIAL HOSPITAL	398	279	271	391
LAWRENCE & MEMORIAL HOSP.	315	372	336	318
MIDDLESEX HOSPITAL	335	401	382	388
NORWALK HOSPITAL ASSOCIATION	237	177	186	243
PROSPECT MANCHESTER HOSP.	531	580	572	484
PROSPECT WATERBURY INC	320	474	336	364
ST FRANCIS HOSP. & MED. CTR	724	729	710	769
ST VINCENTS MEDICAL CENTER	1,034	1,051	1,080	1,066
ST. MARYS HOSPITAL INC	458	356	448	414
STAMFORD HOSPITAL	304	298	239	276
STATE OF CT J. D. HOSPITAL	259	248	278	238
WILLIAM W. BACKUS HOSPITAL	385	326	318	363
YALE NEW HAVEN HOSPITAL	1,430	1,354	1,552	1,332
Grand Total	10,233	10,232	10,324	10,231

Figure 3: Inpatient Discharges by PAR Hospital, 2015-18

^[7] Note: this data comes from the Adult Inpatient Data Dashboard. The data feeding this dashboard is updated weekly, and data updates may impact prior weeks' numbers as well, so any numbers reported from the Adult Inpatient Data Dashboard in this deliverable may differ slightly from the numbers currently shown on the dashboard.

As in previous PAR cycles, there remains notable variation in ALOS and readmission rates across the network. PAR discussions in 2018 continued to focus on barriers and best practices for attaining and/or maintaining efficient length of stay and low readmission rates. Factors influencing these metrics were identified by the hospitals as follows: staffing shortages across disciplines; breakdown in adherence to protocols; timely access to state, intermediate and residential beds; homelessness; probate hearings; Electro-convulsive therapy (ECT); and members with schizophrenia/ psychotic disorders and geriatric population. The wait for state beds has increased by more than 5 days in the past year, from 61.7 days in 2017 to 67 days in 2018, while the acute ALOS only increased .4 days (8.4 days to 8.8 days) in the same time period. As noted in Recommendation 3 below, Beacon will start tracking wait times for Residential Rehab starting in Q1 '19.

To further improve efficiencies across hospital systems, PAR meetings and statewide workgroups were convened to promote new and existing initiatives and best practices. The October 2018 adult inpatient workgroup meeting provided opportunity for meaningful dialogue with a targeted focus on expanding access to Medication Assisted Treatment (MAT) for members with an Opioid Use Disorder (OUD) while on an inpatient psychiatric unit as well as promoting OD prevention including prescription of Narcan. Hospital-specific OUD/AUD data showed evidence of missed opportunities for screening for these diagnoses, highlighting the need for universal screening and subsequent evidence-based treatment.

Hospital-specific OUD/AUD data showed evidence of missed opportunities for screening for these diagnoses, highlighting the need for universal screening and subsequent evidence-based treatment.

Lastly, there remains expressed interest by hospitals in the social determinants of health (SDOH), with particular focus on individuals' needs related to housing, transportation and food insecurity. These factors tend to be drivers of emergency and inpatient services and can exacerbate hospital LOS and readmission rates. Hence, providers are interested in considering collaborations with Beacon that may support members and providers in addressing SDOH as a systems approach to improving quality of care.

Recommendation 2: Modify Inpatient Bypass Program

Beacon continues to offer an Adult Inpatient Bypass Program and we continue to measure Bypass status based on ALOS (≤ 8.2), 7-day readmission rates ($\leq 6\%$) and discharge form completion rate (90% form completion within 2 business days). In Q3 & Q4 '18 Beacon made significant progress towards an IPF PAR case-mix predictive model. Through multiple stakeholder inputs, Beacon utilized a number of different episode-level demographic, social determinant, utilization, expenditure, diagnosis, and severity variables with calendar year discharge dates 2016-2017 to predict total length of stay. Two final separate predictive models were developed for children (<18 years of age) and adults (18+ years of age). The predictive model used data from the PAR reports, authorizations, and claims to provide a comprehensive dataset. In operationalizing the variables of interest (i.e., predictors), new methodologies were created in order to fully capture possible predictors of length of stay. Beacon trained, validated, and tested the predictive models for both youth and adults. Several different predictive models were explored and assessed for possible inclusion, however, a backward elimination multiple linear regression was selected as the final predictive model with strong fit statistics.

Through multiple stakeholder inputs, Beacon utilized a number of different episode-level demographic, social determinant, utilization, expenditure, diagnosis, and severity variables with calendar year discharge dates 2016-2017 to predict total length of stay.

Significant Predictor	Categories
Age Category	18-24 25-34 35-44 45-54 55-64 65+
Chronic Conditions (Count)	- Mental Health - Medical - Substance Use
Discharge to Residential Rehab	Yes/No
ECT During IPF Stay	Yes/No
ED Visits (Count)	- Behavioral Health - Medical
Homeless Indicator	Yes/No
Overstay (Yes/No)	- Awaiting State Hospital - None
Total Claims Cost for Primary Diagnosis in prior 12-months (CCS Categories)	- Adjustment Disorders - Alcohol Use Disorders - Conduct Disorders - Dementia - Developmental Disorders - Disorders of Infancy - Mood Disorders - Personality Disorders - Psychosis - Substance Use Disorders - Suicide History - Screening & History
Total IPF Days in prior-12 months	

This refinement of the current bypass structure through case-mix adjustment was introduced to a subset of the providers during the adult inpatient workgroup. The basic premise of the case mix initiative is to create a more equitable LOS evaluative process by capturing the clinical complexity of members treated within inpatient facilities and generating an expected LOS accordingly for these individuals. These newly proposed bypass metrics will expand from three to six and include: LOS difference, LOS improvement/maintenance, 7-day readmit, BH ED visit with 7-days post IPF discharge, discharge form and bed tracking completion rates.

Results of the predictive model were presented to the State Partners during the November 29, 2018 Core Executive Meeting. Additional State Partner and Provider Workgroup meetings will be held in Q1 and Q2 of 2019 to review how the predictive model applies to Q1 to Q3 2018 IPF PAR discharges at the provider level. Furthermore, the impact

Figure 4: Significant Predictor Variables for Adult IPF PAR Case-Mix Predictive Model

of the new bypass metrics and point system will be reviewed with stakeholders in upcoming workgroup meetings.

Recommendation 3: Tracking of Adult Overstay Reasons

With the increase in the length of stay, Beacon has begun increased tracking of the reasons for adult members remaining in the hospital beyond the acute portion of their stay. Starting in Q1 2019, Clinical Care Managers are now able to track if members are remaining in care awaiting beds for various locations and/or services--skilled nursing facility, state beds, adult group homes, residential rehabilitation, and receiving services from the Department of Developmental Services. This will allow Beacon and our State Partners to better understand where delays are occurring within the system in order to strategize ways to address the barriers and impact LOS.

Recommendation 4: Identify UM Strategies to Address Increase in ALOS

The team recognizes and is concerned with the increase in the average length of stay. While a portion of the increase is due to the awaiting of state beds and other locations and/or services, we believe that there is a portion where we can be impactful and will propose recommendations to address. We will present the additional recommendations within 60 to 90 days.

Inpatient Detoxification – Hospital Utilization

Inpatient Detoxification in the Hospital (IPDH) continues to be utilized mainly by White males, 45-54 years old, and in the HUSKY D benefit group. As expected due to the greater medical risks involved with alcohol detoxification, hospital detoxification discharges were mostly for alcohol use (95.2%). Discharges remained stable in 2018 at 3,613 discharges for 2,138 unique members—suggesting many repeat utilizers. [8] Due to detoxification protocols, the annual ALOS remained steady with only a slight increase to 5.5 days. While there are certainly situations where members enter detoxification with significant medical issues and longer lengths of stay, the leaving Against Medical Advice (AMA) rate (8.1%) likely offsets those outliers, keeping the ALOS stable.

Adults aged 45-54 years old are disproportionately overrepresented in the Inpatient Detoxification—Hospital service class, as they represent 17% of the total adult Medicaid population and 34.1% of the IPDH population. Adults in the 55-64 year-old age group are also overrepresented with 13.8% of the adult Medicaid population and 24.3% of IPDH discharges. ALOS varies the most by age group with the 45-54 year-olds (5.8 days) and the 55-64 year-olds (5.9 days) having slightly longer hospital-based detoxification stays on average.

Discharges for both males and females increased slightly in 2018, though males still comprise 71.9% of the IPDH discharges. Males are notably disproportionately overrepresented, at 44.2% of the total adult Medicaid population and nearly 72% of IPDH discharges. Discharges remained stable across racial and ethnic groups. White members still have the most discharges (54.7%), and are also disproportionately overrepresented as they make up only 34.4% of the total adult Medicaid population. In 2018, 83.7% of discharges from IPDH were HUSKY D members, an increase of more than 8% from 2017. HUSKY D is overrepresented with 53.2% of the total adult Medicaid population and nearly 84% of the IPDH discharges.

The top three providers for IPDH in 2018 were Yale New Haven Hospital (786 discharges), St. Francis Hospital (466 discharges), and Bridgeport Hospital (261 discharges). In 2018, hospitals ranged from an ALOS of 3.9 days (St. Francis Hospital) to 9.9 days (Middlesex Hospital). Only Middlesex Hospital had an ALOS of more than one day greater than the statewide average of 5.5 days. Middlesex Hospital had nine (9) members with stays of 10 or more days, and these outliers increased Middlesex Hospital's ALOS by more than 4 days from 2017 to 2018. As stated in the previous semi-annual deliverable, most hospitals providing inpatient detoxification do not complete the discharge form, so members may have been discharged prior to the last date Beacon has on file, which would reduce the average length of stay.

From the data shared in the Provider Analysis and Reporting (PAR) Program, the total 7-day readmission rates for all in-state IPDH providers (excluding state facilities) was 8.9% for 2018. [8] The readmission rate increased a full percentage point from 8.4% in Q1 and Q2 '18 to 9.4% in Q3 and Q4 '18. The 30-day readmission rate rose to 29.2% statewide for 2018 after a ten quarter high of 30.5% in Q3 and Q4 '18.

Recommendation 5: Continue Hospital-based Detoxification PAR Program with high-volume facilities

PAR meetings were held in the second half of the year with the two highest volume providers, St. Francis and Yale. The focus of the PAR meetings was on increasing utilization of Medication Assisted Treatment (MAT) for both Alcohol Use Disorder (AUD) and Opioid Use Disorder (OUD). In recent months, Yale and Trinity Health have both invested in new Addiction Medicine expertise and resources, with the goal of expanding access to MAT across the hospital. Key to this practice change is forging new provider relationships within and beyond established catchment and geographical boundaries to ensure access to MAT for all individuals across the continuum of care. As such, Beacon has collaborated with the Medical Directors of the Addiction Medicine Services to establish referral pathways from the hospital to outpatient MAT. This work will continue in 2019.

The focus of the PAR meetings was on increasing utilization of Medication Assisted Treatment (MAT) for both Alcohol Use Disorder (AUD) and Opioid Use Disorder (OUD).

[8] Note: this data comes from the Adult Inpatient Data Dashboard. The data feeding this dashboard is updated weekly, and data updates may impact prior weeks' numbers as well, so any numbers reported from the Adult Inpatient Data Dashboard in this deliverable may differ slightly from the numbers currently shown on the dashboard.

Inpatient Detoxification – Freestanding Utilization

Inpatient Detoxification at Freestanding Centers (IPDF) continues to be utilized mainly by White males in the HUSKY D benefit group. IPDF serves a younger population than IPDH. In 2018, discharges were mainly for alcohol (47.7%) or opioid (41.7%) withdrawal. Discharges remained stable in 2018 at 11,247. There are limited beds for IPDF and most facilities usually operate at full capacity, so it is not surprising that discharges have remained steady despite the ongoing opioid epidemic. The ALOS also remained stable at 4.3 days in 2018. The ALOS was 4.0 days for opioid withdrawal (with a 20.2% AMA rate) and 4.5 days for alcohol withdrawal (with a 14.2% AMA rate).^[9] An increase in induction to Medication Assisted Treatment (MAT) could result in changes in the ALOS for opioid withdrawal, but we are not yet sure what those changes may be.

Discharges remained fairly stable across age groups, with small increases for 35-44 year-olds and 55-64 year-olds. Members in the 25-34 year-old age group had the most discharges (36.3%) in 2018, which is a disproportional overrepresentation when compared with their 26.8% share of the total adult Medicaid population. The ALOS remained stable across age groups, with the exception of the 65+ age group, which increased half a day to 5.5 days, likely due to more medical complications requiring more time to stabilize.

By gender, men had more discharges (70.8%) than females, which is again a disproportional overrepresentation of males. The ALOS was 4.3 days for both males and females. Discharges remained stable across racial and ethnic groups, with White members having the most discharges (51.6%)—again, a disproportional overrepresentation compared with white members' proportion of the total population (34.4%). HUSKY D continues to account for the vast majority (85.4%) of discharges from IPDF, with HUSKY A (10.8%) and HUSKY C (ABD/Single) (3.7%) having much lower volumes. As in each of the past four years, ALOS was nearly identical across benefit groups at 4.2 to 4.3 days.

Like in 2017, the seven in-state inpatient freestanding detox providers accounted for 11,222 discharges in 2018. The largest provider over each of the past four years was Intercommunity, which had 2,666 discharges (23.8%) in 2018. Recovery Network of Programs had the second highest number of discharges (1,838, or 16.4% of the total) in 2018. Because treatment is protocol driven, there is little variance among providers for ALOS. In 2018, ALOS ranged from 3.7 days at both Cornell Scott-Hill Health and Intercommunity to 4.9 days at both Stonington Behavioral Health and Midwestern CT Council on Alcoholism.

The 7-day readmission rates for all in-state freestanding detoxification providers increased each year from 2015 to 2018.

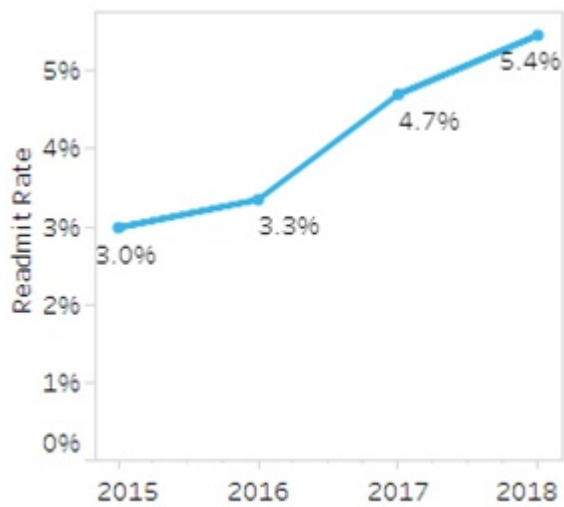


Figure 5: 7-Day Readmission Rates for In-State Freestanding Detox Providers, 2015-18

From the data shared in the Provider Analysis and Reporting (PAR) Program, the 7-day readmission rates for all in-state freestanding detoxification providers increased each year from 2015 to 2018.^[9] The statewide 7-day readmission rate was 5.4% in 2018, including a high of 5.8% in Q3 and Q4 '18. The 30-day free-standing detox readmission rate increased each year from 2015 to 2017 and remained nearly flat at a statewide rate of 18.9% in 2018. The majority of discharges (76.0% of 7-day readmissions and 61.7% of 30-day readmissions) are readmitting to a different provider.

Recommendation 6: Continue Provider Workgroup Meetings and PAR Program

During 2018, Beacon continued to meet with the freestanding detoxification facilities to engage in discussions about the PAR measures used in Inpatient Medical Detox dashboards which include ALOS, readmissions, AMA rates, discharge form completion, and connect to care rates. While the ALOS range is relatively small, the 7-day readmission rate and AMA rate vary across the network. In addition to reviewing the aforementioned metrics, RNMs also gathered information on emerging best practices, relationships with community providers, and barriers impacting readmissions and connection to care post detox.

During PAR meetings, Regional Network Managers were able to leverage data to highlight the need for a different, evidenced-based treatment philosophy to manage individuals with Opioid Use Disorder (OUD). Induction onto a Medication Assisted Treatment (MAT) option while in detox, such as methadone or buprenorphine, is best practice when treating opioid addiction. Having the data to support this conversation and to show the high AMA rates of members with a primary diagnosis of OUD when compared to those with a primary diagnosis of Alcohol Use Disorder has strengthened provider interest in shifting treatment philosophies and even taking action to operationalize a new approach.

^[9] Note: this data comes from the Adult Inpatient Data Dashboard. The data feeding this dashboard is updated weekly, and data updates may impact prior weeks' numbers as well, so any numbers reported from the Adult Inpatient Data Dashboard in this deliverable may differ slightly from the numbers currently shown on the dashboard.

While there is variability amongst the seven free-standings in readiness to operationalize treatment and continuum change, all received the same message that was well supported by individual data and all were open to next steps in addressing the raised concerns. At a recent provider workgroup meeting, providers were encouraged to share best practices, successes, and areas of improvement with one another in an effort to promote MAT across the network. There has been notable interest from providers to continue this forum and to partner in ways to improve practices.

In an effort to provide a deeper dive into MAT-related data, four new data measures were introduced to the Free-Standing providers at the November workgroup: 1) Connection to MAT post discharge from Withdrawal Management, 2) Connection to MAT by Medication Type, 3) MAT Induction Rates and 4) Multiple Withdrawal Management Episodes within past 365 days at the same provider. Federal regulations under 42-CFR creates barriers to sharing data on readmissions to other, vs. the same, provider where the bulk of the readmissions occur. Beacon and the State should continue to seek solutions that would allow for the sharing of relevant clinically useful data either through collecting releases for information sharing at intake, and/or continuing to seek modifications to current regulations.

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Lastly, to further support standardization of comprehensive MAT education and induction while in the withdrawal management LOC, Beacon, DSS, and DMHAS have partnered with two centrally located providers, InterCommunity and Rushford, to launch the Changing Pathways pilot in Q4 '18. The goal of the Changing Pathways Pilot is to "change pathways" to recovery for the members with OUD from a taper-to-zero protocol to induction on one of three evidence-based MAT options, i.e. buprenorphine, methadone or naltrexone, with a seamless transition from inpatient withdrawal management/detox to outpatient MAT.

While in the short-term, efforts will be focused on these two pilot providers, the long-term goal is to disseminate a best practices/lessons learned toolkit to the remaining withdrawal management providers coupled with the development and monitoring of various MAT metrics to be able to track progress. This will be the focus of Beacon's next statewide workgroup. This initiative will be reviewed in detail within our Performance Target summary.

Recommendation 7: Increase Focus on Readmissions and Changing Pathways

In November 2018, IPDF authorization requests were moved to a registration process whereby providers receive five (5) units/day upon submission of the initial request. Initial requests for members who are readmitting within 30 days of discharge from an IPDF pend for clinical review, which allows for increased conversations with providers about efforts to engage members in discussions about the MAT options and trying a different pathway this time.

Home Health Utilization

Admissions (authorization initiations) for Medication Administration decreased slightly in 2018, with only HUSKY D members having an increase. HUSKY D now has the highest volume of Medication Administration Admissions (842), followed by HUSKY C (ABD/Single) (603) and HUSKY C (ABD/Dual) (554). For the HUSKY C (ABD/Single) and HUSKY C (ABD/Dual) groups, 55-64 year-olds had the most admissions (189 and 155, respectively). For HUSKY D, 25-34 year-olds had the most admissions (250), and for HUSKY A, 18-24 year-olds had the most admissions (67). As mentioned in the prior deliverable, there has been a shift in the population receiving the Medication Administration service, since it used to be mostly 55-64 year-old HUSKY C (all types) members. Throughout 2018, the shift continued and now HUSKY D has the most admissions, and most of HUSKY D's utilizers are young (18-34 years old).

Despite a slight uptick in Q4 '17, the twice daily (BID rate) for Medication Administration has continued to remain significantly lower than in prior years (around 20% in 2014). Once daily (QD) administration has increased slightly over the same time frame. Notably, even while fewer members have Medication Administration services multiple times per day, the ED rate (29.5% in Q1 '18 and 28.2% in Q2 '18) and IP rate (9.5% in Q1 '18 and 8.2% in Q2 '18) have continued to decrease over time.

Start of Care/Resumption of Care authorizations continue to replace Skilled Nursing authorizations. The use of a Skilled Nursing visit is now limited to a once weekly pre-pour of medications, in home wound care for members receiving behavioral health services, or a full nursing assessment in the event of a change in condition. Utilization of Skilled Nursing has declined to just 115 admissions for members including duals in 2018. Utilization for Start of Care/Resumption of Care increased for every benefit group from 2017. Since Skilled Nursing and Start of Care/Resumption of Care are authorized in conjunction with Medication Administration, the trends by benefit and age group are the same as for Medication Administration.

Utilization of Skilled Nursing has declined to just 115 admissions for members including duals in 2018.

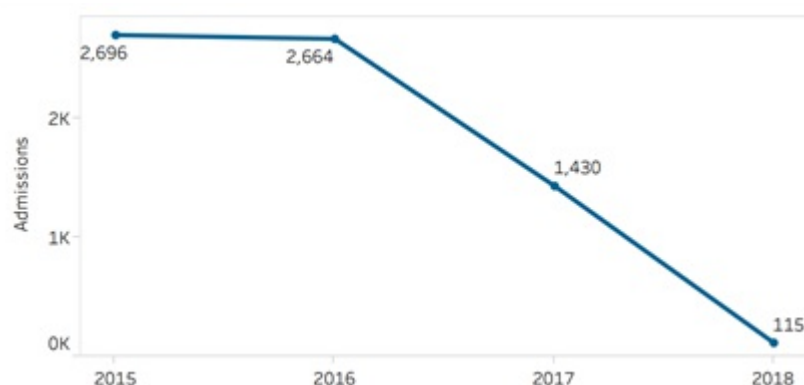


Figure 6: Skilled Nursing Authorizations, 2015-18



Figure 7: Start/Resumption of Care Authorizations, 2017-18

Home Health Prompting, Home Health Aide, Med Box and Med Tech requests for new authorizations have been exceptionally low with fewer than 40 admissions apiece in 2018. Med Box and Med Tech services are often utilized through the medical ASO and/or the waiver programs.

Recommendation 8: Continue Home Health Bypass Program

Beacon continued the Bypass and Bypass Plus Program for home health agencies in 2018. The Bypass Program provides administrative relief for Home Health agencies while promoting practice change that will benefit members and improve the efficiency of Home Health services. The agencies on bypass are authorized for longer periods of time, thus decreasing the number of concurrent reviews required for an episode of care. The Bypass Program eligibility criteria continues to be achievement of a BID medication administration target rate and emergency department visit rate.

Beacon held a statewide Home Health provider meeting in November 2018 and presented the most recent claims data (Q2 '18), which included performance on the Bypass metrics. Nine (9) of the 19 Bypass-eligible Home Health providers were meeting the targets to be included in the Bypass Plus program, six (6) providers were included in the Bypass program, one (1) provider was at risk due to missing the metrics for the first quarter and three (3) providers were not included in the Bypass due to missing the metrics. All providers excluded from the Bypass program or at risk of being removed from the Bypass program were encouraged to work closely with Beacon staff around best practices identified by other providers. In addition to the Bypass program, other topics were covered, such as ways to safely manage opioids/controlled substances in the home and the 485 prescriber sign off. A presentation on the Zero Suicide Framework was also completed, which resulted in increased interest in having more in-depth presentations on each of the components of the Framework.

Beacon continues to review opportunities to enhance the Bypass Program parameters to further incentivize agencies to decrease member reliance on homecare services. One change being considered would be to incentivize providers who are meeting a specific QD rate in addition to the already identified BID and ED rate. A final proposal will be presented following the next run of the claims data in February 2019.

Lower Level of Care Utilization

Outpatient admissions for adults have continued to increase year over year, rising to 118,679 admits in 2018 (21 admits/1,000). Outpatient admissions continue to represent the vast majority (80%) of all admissions to Lower Levels of Care.

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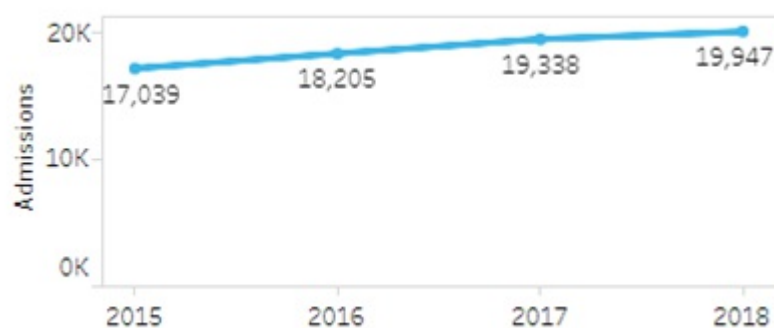


Figure 8: Adult Outpatient Admissions, 2015-18

Most other service classes decreased slightly while admits/1,000 decreased or remained flat, suggesting true decreases in utilization, not just a reduction in population size. Intensive Outpatient (IOP) was the second most utilized Lower Level of Care, with 19,947 admissions in 2018, followed by Methadone Maintenance with 5,328 admissions and Partial Hospitalization (PHP) with 4,840 admissions. Methadone Maintenance admissions decreased from 5,875 in 2017 to 5,328 in 2018. Beacon has hypothesized that more providers are recommending alternative MAT, such as buprenorphine, to methadone, but we do not yet have the data to test that assumption. IOP admissions increased due to sixteen (16) new IOP programs opening statewide in 2018.

Enhanced Care Clinics (ECCs)

The total non-ECC registration volume (inclusive of both adults and youth) continues to steadily increase over time, while the total ECC volume has slightly declined. In 2018, non-ECC registrations constituted 88.6% of all outpatient registrations. ECC volume decreased by more than 1,500 registrations to 18,668 registrations in 2018. Adult ECC volume decreased by 8.3% to 9,742 registrations in 2018.

In 2018, non-ECC registrations constituted 88.6% of all outpatient registrations.

In 2018, the 95% access standard was met for all three access types for ECCs (Routine, Urgent and Emergent). For adults in 2018, routine standards were met 99.3% of the time, urgent were met 98.1% of the time, and emergent were met 100% of the time. Across all outpatient evaluations, ECCs continue to have higher rates of meeting the 95% access standard than non-ECC clinics as expected based on the level of attention given to the access standards by the ECCs but the non-ECC clinics continue to demonstrate a strong performance without added incentives.

Recommendation 9: Assess ECC initiative

Over the past year, there were many meetings held to discuss an ECC Redesign that addresses the operationalization of ECC program metrics, incorporation of value based payment methodologies, and opportunities to broaden the initiative. These discussions remain ongoing. During the September Operations Subcommittee, an open invitation for feedback on ECC redesign was given to providers. While the subsequent Operations Subcommittee meetings have not generated any additional feedback, the CT BHP ECC team remains open to provider input.