PERFORMANCE TARGET (PT) #1
Frequent Visitors to the Emergency Department
CALENDAR YEAR 2014

IMPROVING OUTCOMES & REDUCING UTILIZATION THROUGH INTENSIVE CARE MANAGEMENT, PEER SUPPORT, & SYSTEMS INTERVENTION

Submitted: December 31, 2014
Identification of Emergency Department Super Users and Reduction of Adult Emergency Department (ED) Utilization and Recidivism at Select Hospitals
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I. Executive Summary

Increasing use of the Emergency Department (ED) is a national and international concern. However, few hospitals have developed methods of identifying those who use the ED the most or interventions to facilitate use of more appropriate community based services. The episodic nature of frequent visiting suggests that to be most effective, tools allowing early, real time, accurate prediction of who will become a frequent visitor should be developed. Since frequent or high users often account for a disproportionately high share of ED visits, there are many advantages to focusing on this population.

VO and the CTBHP developed an Intensive Care Manager/Peer Support Intervention (ICM/PEER) to intervene with the top 2% of BH ED Frequent visitors, defined as those with 7 or more ED visits in a 6 month period where there was a BH diagnosis as primary or secondary on the ED claim. Five hospitals were selected for participation in this pilot based on their numbers of ED frequent visitors. The five hospitals are Backus Hospital, Bristol Hospital, Hartford Hospital, St. Francis Hospital and Medical Center, and Yale New Haven Hospital. The goals of the intervention were to reduce the percentage of BH ED visits accounted for by Frequent Visitors, reduce BH ED Readmission Rates, and improve connections to care following an ED visit. The ICM/PEER model was developed based on two evidence-based care strategies; Motivational Interviewing (MI) and Wraparound or WRAP.

The development/enhancement of Community Care Teams (CCT) was a second strategy employed in conjunction with the ICM/PEER Intervention to better serve frequent visitors to the ED. CCTs bring hospital EDs together with key community resources to engage in client specific planning and coordination. VO is learning that to be successful a CCT must have high level buy-in, commitment and participation from multiple hospital departments (including the ED) and key community agencies and support networks. Keys to success have included successful negotiation of legal issues related to implementing a broad release of information for all CCT participants, resources and key players to lead the CCT and provide organizational support, and access to technology for timely information sharing related to care planning and coordination.

A sub goal of the PT was to identify the “High Users” of both inpatient care and the ED defined as the top 10% of highest utilizers of both services. There was significantly less overlap between these populations than originally anticipated with a minority of those that visit the ED (26%) being high users of the hospital and just over half of those that are hospitalized (53%) being high users of the ED. For now, it is suggested that separate strategies for dealing with Inpatient or ED High Users is the best approach.

The current study confirmed previous research indicating that most frequent visitors do not persist in their frequent use of the ED. Further detailed study of both persistent and episodic frequent visitors is indicated.
A major goal of the PT was to explore patterns of BH ED Frequent visitor utilization, ED readmission rates, and ED connect to care rates across hospitals in Connecticut. VO developed or enhanced measures of connection to care (CTC) that were partially based on HEDIS specifications but modified to account for non-Medicaid DMHAS funded services. Individual hospital ED readmission and connect to care rates showed a significant degree of variation suggesting opportunities for improvement among those with higher rates of readmission or lower CTC. Although volume of ED visits at a particular hospital was suspected to play some role in differential rates, no statistical relationship was found between volume and percentage of ED visits accounted for by BH ED Frequent Visitors.

A high degree of variation in hospital rates of connect to care following an ED visit was also observed indicating still further opportunities for improvement. The high level of statistical relationship between 7 & 30 day Connect to Care (r = .89) suggests that work at discharge to successfully improve 7 day connections to care is likely to have a similar impact on 30 day rates. Similarly, modest negative relationships between connect to care at 7 & 30 days and readmissions in the same time period suggest that improved connections to care may reduce readmission rates.

A geo-map of CT BH ED Frequent Visitors to the ED confirmed what the literature found regarding most frequent visitors living in the general vicinity of the ED.

The clients that have Opted-In to the ED Frequent Visitor pilot generally follow the demographics of the larger sample of ED frequent visitors and little evidence of any type of recruitment selection bias was evident. Most (roughly 60%) of those that have opted in are males, in their early forties, half with a substance use disorder, 60% with transportation issues and nearly half (44%) homeless or at high risk of homelessness. The SF-12 results confirmed a high rate of mental health challenges (1.5 to over 2 standard deviations below the mean) and below average physical health status of those participating in the PT.

A further goal of the PT was the development of a method of tracking ambulatory follow-up with primary care following a BH ED visit. VO has researched and proposes using an “attribution” methodology that “attributes” members to primary care physicians (PCPs) or primary care medical homes (PCMHs) by tracking specific CPT and revenue codes typically associated with primary care procedures. Finally, an intervention to address primary care follow-up from BH ED visits may have merit in reducing ED readmissions, improving health, and promoting integrated care. VO believes that an intervention to improve primary care follow-up should engage CHN and/or Behavioral Health Homes in collaboration, expand the CCT team to include primary care providers, embed care navigators in the local provider community, establish a health information exchange to promote collaboration and integration, and consider the development of urgent care behavioral health centers in the vicinity of hospital EDs.

A geo-map of CT BH ED Frequent Visitors to the ED confirmed what the literature found regarding most frequent visitors living in the general vicinity of the ED.
II. Purpose and Goals

The 2014 Performance Target (PT) # 1—Identification of Emergency Department super users and Reduction of Adult Emergency Department (ED) Utilization and Recidivism at Select Hospitals, was developed as a follow-up to the 2013 Performance Target regarding Inpatient and ED Utilization. The focus was upon the most frequent visitors to the ED for behavioral health (BH) crises and was to include a further description and analysis of this sub-population of ED visitors. Given the lack of intervention for Youth and to improve the readability of the report, it has been divided into Adult and Child/Youth Reports.

- Reduce frequent visitors overall utilization of the ED.
- Improve their connections to care.
- Reduce their rate of re-admitting to the ED.

Other goals were focused on developing a series of reports for youth and adults that could be used for ongoing monitoring of the system and each hospital provider. These reports were designed to focus on rates of frequent visitors, connection to care following an ED visit and ED readmission rates by hospital. Supplemental goals included developing measures of connection to primary as well specialty BH care, identifying interventions to improve primary care follow-up, and a methodology to assess the outcome of such interventions. Unfortunately, DSS was unable to supply the codes necessary to accurately identify the primary care practitioners in the claims data and the analyses associated with connections to primary care could not be conducted.

Finally, the target included an evaluation of “High Users” of both inpatient and ED care. Here too, the interest was in understanding the population that is a high utilizer of both levels of care and understanding the patterns of utilization across facilities and hospital systems.

This PT included three community based interventions for Adults; 1) An ICM/PEER Intervention, 2) Development/Enhancement of Community Care Teams, and 3) an ED Psycho-educational Campaign regarding prescription drug abuse. There was not a comparable intervention for Youth. Given the lack of an intervention for youth and to improve the readability of the report it has been divided into Youth and Adult Sections. Throughout this report, excerpts of the final Performance Target Agreement are repeated in bold, as a means of better connecting this narrative to the deliverables under the PT.
III. Introduction

LITERATURE REVIEW

Between 1996 and 2006, the United States saw a dramatic 36% increase in emergency department visits (LaCalle & Rabin, 2010). Other reports (Lewis, 2010) indicate that increasing ED utilization is an international concern. Many efforts to reduce the rate of ED utilization have focused on so-called “super-users” or “frequent visitors”, as they typically account for a disproportionate share of ED visits. For example, LaCalle and Rabin (2010) found that frequent users, in their definition accounting for 4.5% to 8% of ED visitors, were responsible for between 21% and 28% of all visits. Despite the concern with ED utilization, Boudreaux et al. (2011) found that less than 20% of EDs at academic medical centers had developed methods of identifying frequent visitors.

Individuals visit the ED for many reasons including medical complaints, mental health or substance abuse crises, and sometimes to address basic needs such as food and shelter. Evaluations of the characteristics of frequent visitors have demonstrated that mental health and substance abuse diagnoses are common among this group. Nationally, 1 of every 20 ED visits is due to a psychiatric emergency (Boudreaux et al., 2011). Vandyk and colleagues (Vandyk et al., 2013) reported that 90% of frequent ED visitors had at least 1 psychiatric diagnosis. In general, psychiatric frequent visitors tend to be younger, unemployed, and have transient living accommodations. The most common psychiatric diagnoses were for psychotic disorders, affective disorders, personality disorders, and substance abuse. Although minorities are disproportionately over-represented in those who visit the ED with ambulatory care sensitive medical conditions such as asthma, COPD, and diabetes (Oster & Bindman, 2003), this pattern does not appear to hold for frequent ED visitors defined by their rate of BH ED visits. In absolute numbers, the majority of BH ED frequent visitors are white. Frequent visitors are also more likely to be publically insured and on Medicaid or Medicare (Oster & Bindman, 2003). Swenson, et al. (2012) found that when the addresses of frequent ED visitors were geo-mapped, 90% resided in the city where the ED was located. This suggests that convenience may be at least one factor contributing to high ED utilization.

Several studies have looked at ED frequent visitor’s patterns of ED use over time and found that in most cases the pattern of use is not stable (LaCalle & Rabin 2010; Lewis, 2010; and Guerts et al., 2012). This finding is not surprising since most methods of identifying frequent users select an outlier group of highest users during an index period of time. Due to regression to the mean, frequent visitors identified in this way are unlikely to sustain high rates of utilization even without intervention (see below — frequency distribution of frequent admissions adapted from Lewis, 2010). The chart below shows that prior to and following the index period, the rate of frequent admissions is significantly lower than during the index period or “intensive year”. This suggests that efforts to intervene
There may be at least two different kinds of frequent visitors, those that resume a less frequent pattern of visiting the ED and those that are persistent in frequent use.

With frequent visitors would benefit from being able to identify them prior to reaching their peak utilization in order to effectively reduce visits. LaCalle & Rubin (2010) also reported that of individuals that meet criteria as a frequent visitor for two consecutive years, 56% are likely to persist in this pattern of use. This suggests that there may be at least two different kinds of frequent visitors, episodic visitors that resume a less frequent pattern of visiting the ED, and those that are persistent in frequent use.

Still other research supports the theory that the population of ED frequent visitors is not homogeneous. Ruger, Richter, & Spitznagel (2004) found that the very highest users that persist in their frequent use of the ED may have adequate connections to care but visit the ED for other, primarily socioeconomic, reasons.

Several studies reported efforts to intervene with frequent visitors with limited success (Hansagi, Edhag, & Allebeck, 1991; O’Shea, Collins, & Pezzullo, 1984; Pope, et al., 2000). Frequent visitors may be among the “hard to treat” that disengage from services and do not follow after-care plans (Vandyk, 2013).

**BRIEF SUMMARY OF 2013 INPATIENT & ED PT (ED SECTION)**

During Calendar Year 2013, VO completed an analysis of ED and Inpatient Utilization in fulfillment of one of the 2013 contracted performance targets. The analysis reviewed Medicaid claims for service during calendar years 2011 and 2012 and documented that there were over one (1) million ED visits by children and adults with the majority of those visits (834,305) made by adults. The 2013 PT also determined that adult BH ED visits had gone up 21% between 2011 and 2012 and that child BH ED utilization had increased by 30% over the same time period. Only a portion of the adult increase was due to increased membership. The penetration rate for adult BH ED visits had increased by 11% during the same time period.
The vast majority of the adult ED visits (641,289 or 77%) had only a medical diagnosis on the claim and no behavioral health diagnosis. For children, the preponderance of medical visits was even more pronounced with 93% of ED visits classified as medical and 7% classified as BH. For adults, as compared to children, there were many more ED visits for behavioral health reasons (193,016 vs. 21,328) and a greater percentage of total visits with either a primary or secondary behavioral health diagnosis (23% vs. 7%). Given the significantly higher percentage and numbers of BH ED visits by adults, the primary focus of the 2014 ED Performance Target was on the adult population. A further summary of the Adult 2013 PT relevant to the 2014 study is provided below.

The 2013 study also explored adult ED utilization by demographics and clinical features, and made comparisons across three broad cohorts: 1) Adult Medicaid Members, 2) BH Cohort—Members who utilized a Medicaid BH service at any time over the 2-year period, and 3) DMHAS BH Cohort—Members who utilized a Medicaid BH service as well as any DMHAS funded programs/services at any time during the 2-year period. Although adults comprise 53% of Medicaid members they account for 73% of members that utilize BH services. This is consistent with the typical developmental course of BH disorders that often arise during late adolescence or early adulthood and the fact that children and adolescents use fewer behavioral health services because they seldom seek care on their own. Of adults that had a BH ED visit, 54% visited the ED once, 19% visited twice, and 27% visited three (3) or more times.

A Member level analysis determined that of the 414,739 Adult Medicaid Members identified in the 2 year study period, 177,548 used at least one BH service and 73,147 members visited the ED with a BH diagnosis on the ED claim. Women were more likely to visit the ED for Medical reasons and men were more likely to have ED visits with a primary BH diagnosis on the claim. Men were even more likely to be among the group that visited the ED for BH reasons multiple times. Caucasians were most likely to visit the ED for BH reasons and were disproportionately over-represented in comparison to their base rate in Medicaid. Hispanic, African American, and Asian adults utilized the ED at rates below their base rate for the Medicaid population. This finding is contrary to what has been reported in the literature regarding racial and ethnic utilization of the ED for selected medical diagnoses where minorities use the ED at disproportionally higher rates (see literature review above).

The diagnostic profile of adults that visit the ED paralleled what was found in the literature with high rates of substance abuse, psychotic disorders, affective disorders and personality disorders. There were also higher rates of comorbid asthma and chronic obstructive pulmonary disorder among ED visitors vs. those that utilize BH services without visiting the ED.

Individuals that are unstably housed or homeless are also more likely to visit the ED for BH reasons. Although 3.6% of the Medicaid population were identified as homeless they represent 8.5% of those that have 1 BH ED visit, 12.7% of those that have 2 BH ED visits, and 20% of those that have 3 or more BH ED visits. Most Medicaid members that are homeless are from the Husky D program (73%).

Women were more likely to visit the ED for Medical reasons and men were more likely to have ED visits with a primary BH diagnosis.
IV. Methodology for 2014 Performance Target

A. DESCRIPTION OF THE DATA SET
   i. GENERAL DESCRIPTION

Medicaid claims data from several different time periods between July 2011 and December of 2014 were accessed to complete this performance target.

- The primary analyses focused on Medicaid Claims for calendar year 2013.

- For the purposes of establishing a baseline in evaluating the effectiveness of the interventions delivered during this PT, Medicaid Claims data dating back to July of 2011 were also accessed. Although VO began receiving adult Medicaid data in January of 2011, the initial transfers of data during the first six months of the adult contract were problematic and it was determined that there were enough questions about the accuracy and completeness of this data that it should not be used in subsequent analyses. By July of 2011 initial issues with the transfer of adult claims had been resolved.

- For the purposes of evaluating the patterns of ED use over time by ED Frequent Visitors, Medicaid Claims for the six month periods preceding (January to June 2013) and following (January to June 2014) the index period (July to December 2013) were accessed.

- Finally, to assist in the implementation of the ICM/Peer and CCT Interventions, reports of frequent visitors for each hospital participating in the PT were updated monthly with Medicaid claims data through December, 2014.

**EXCLUSIONS**

Certain analyses required exclusion of members with either dual eligibility (Medicare and Medicaid) an insufficient time period of Medicaid eligibility, or with certain diagnoses.

- Dual members were excluded from all analyses requiring computation of connect to care outcome measures. For the 2% ED frequent visitor intervention group, Dual members were excluded because the connect to care outcome measure requires having access to all claims, and access to Medicare claims is not currently available.

- For comparisons of BH ED frequent visitor utilization across the three time periods (index 6 months of July to December 2013 to the prior and following 6-month time periods), individuals with less than 120 days of eligibility were removed from the prior and following 6-month time periods in order to differentiate lower utilization due to lack of eligibility from lower utilization due to a change in behavior. A total of 74 members were excluded from the 6 months prior to the index period and 46 were excluded from the 6 months after the index period.

- Dual members were not excluded from the BH inpatient and ED 10% analyses, and no members were excluded from this group based on loss of eligibility.

- In the 2013 PT, tobacco dependence, a DSM-IV-TR diagnosis was included among the BH diagnoses that would count as either a primary or a secondary diagnosis on an ED claim. Review of the 2013 results suggested that inclusion of tobacco dependence may have over-inflated the number of BH ED visits. For this study, tobacco dependence has been removed from the analysis. This resulted in 34,498 fewer BH ED visits and 22,951 fewer unique members than would have been identified utilizing the prior methodology.
SELECTED VARIABLE DEFINITIONS

**Adult Inpatient High User:** Adult Medicaid member 18 or over that is in the top 10% in frequency of admissions to an inpatient behavioral health facility (see definition below) during the calendar Year 2013. The 10% cutoff for adult inpatient high user was established at 3 admissions.

**Adult ED High User:** Adult Medicaid member 18 or over that is in the top 10% in frequency of BH ED visits (see definition below) during the calendar Year 2013. The 10% cutoff for adult BH ED high users was established at 4 visits.

**Baseline Period:** The period prior to the intervention period that will be the point of comparison for determining if the intervention has made a significant impact in the hypothesized direction. For the evaluation of the ED ICM and Peer intervention, the baseline period is the 3 years (six, [6]month periods prior to July 1, 2014).

**BH Cohort:** The group of Medicaid members that had at least one claim for a BH service at any time during the 2013 Calendar Year.

**BH ED Frequent Visitor:** A frequent visitor to the ED was defined as a Medicaid recipient who visited the ED 7 or more times in a six (6) month period and where there was either a primary or secondary behavioral health diagnosis on each claim.

**Community Care Team (CCT):** A team composed of hospital staff, local community providers, and other stakeholders organized to better serve individuals that are frequent visitors to the ED and/or high users of other behavioral health care services. CCTs utilize systemic and client specific approaches to improve access, engagement, and client outcomes.

**DMHAS Cohort:** Members who utilized a Medicaid BH service and used any DMHAS funded programs/services at any time during the 2-year period.

**Dual Eligible:** A Member who is simultaneously eligible for Medicare and Medicaid.

**ED Connect to Care (CTC):** A hospital based measure of the percentage of all Medicaid members within a defined time period that have a Medicaid claim for an index BH ED visit that is followed by a claim for an acceptable follow-up service (see connect to care methodology for list of acceptable services that have been expanded beyond HEDIS) within a defined follow-up period (7 or 30 days).

A frequent visitor to the ED was defined as a Medicaid recipient who visited the ED 7 or more times in a six (6) month period and where there was either a primary or secondary behavioral health diagnosis on each claim.
**ED Readmission Rate:** For each hospital, the percentage of members with an index BH ED visit that had another BH ED visit within a specified follow-up period (7 days and 30 Days). ED visits where the member is hospitalized or otherwise unavailable for an ED visit are removed from the analysis. Each subsequent ED visit becomes a new index.

**Episodic Frequent Visitor:** A frequent visitor to the ED that did not meet the frequent visitor definition for either the six month prior to, or following the index period.

**High User:** A Medicaid recipient that was in the top 10% of frequency of visits to the ED and admissions to a Psychiatric Inpatient Unit during calendar year 2013.

**Housing Issues:** A measure embedded within the ClientConnect system used by ICMs and Peers to document their assessment, care planning, and care coordination activities with BH ED Frequent Visitors participating in the BH ED Frequent Visitor Pilot. The scale rates each member on the degree to which housing issues are a barrier to accessing care and attaining well-being. Four (4) scores are possible; 0=No barrier, 1=Minimal barrier, 2=Moderate barrier, 3=Significant barrier. Homelessness is rated as a 3. Descriptions for each score are embedded within the ClientConnect System and guide the user.

**Index Period:** The period of 6 months, from July 1 through December 31, 2013 in which frequent visitors were identified.

**Inpatient Admission:** Any member that has a claim for an inpatient behavioral health admission.

**Persistent Frequent Visitor:** A frequent visitor that meets the criteria as a frequent visitor in the six (6) months prior to the index period, during the index period, and the six (6) months following the index period.

**Pilot Hospital:** One of the five Connecticut Hospitals with high numbers of frequent visitors that agreed to participate in the pilot project to reduce ED utilization by frequent visitors at their hospital. The hospitals included Backus Hospital, Bristol Hospital, Hartford Hospital, St. Francis Hospital, & Yale New Haven Hospital. The Hospital of Central Connecticut was among the top hospitals with the most frequent visitors but declined to participate in the project.

**Release of Information (ROI):** A legal document allowing any participant in the community care team to communicate with other community care team members regarding protected health information of a member that has opted in to the program and signed the ROI.

**SF-12 Physical Composite Score:** Is a subscale of the SF-12, a general health survey endorsed by the World Health Organization as a reliable and valid measure of health status. The physical composite score measures an individual’s physical health status on a 0-100 scale with a mean of 50 and a standard deviation of 10.
**SF-12 Mental Composite Score:** A subscale of the SF-12, a general health survey endorsed by the World Health Organization as a reliable and valid measure of health status. The mental composite score measures an individual’s mental health status on a 0-100 scale with a mean of 50 and a standard deviation of 10.

**Substance Use Problem:** A measure embedded within the ClientConnect system used by ICMs and Peers to document their assessment, care planning, and care coordination activities with BH ED Frequent Visitors participating in the BH ED Frequent Visitor Pilot. The scale rates each member on the presence/absence of a substance use problem impacting the clients functioning and is rated as Yes/No.

**Transportation Issues:** A measure embedded within the ClientConnect system used by ICMs and Peers to document their assessment, care planning, and care coordination activities with BH ED Frequent Visitors participating in the BH ED Frequent Visitor Pilot. The scale rates each member on the degree to which transportation issues are a barrier to accessing care and attaining well-being. Three scores are possible; 0=No barrier, 1=Moderate Barrier, 2=Significant Barrier. Descriptions for each score are embedded within the ClientConnect System and guide the user.

**RESEARCH DESIGN/STATISTICAL METHODS**

**Basic Analyses:** Much of the analysis conducted for this PT utilized descriptive statistics comparing percentages on a particular variable or variables (gender, housing status, etc.) across groups or subgroups of individuals (Medicaid Recipients, users of BH services). Where appropriate, statistical significance tests utilizing chi square were conducted to determine if observed and reported differences in rates were meaningful. Where appropriate, simple correlations or Pearson r’s were computed to explore the degree of relationship between variables explored in the study (e.g. relationship between Hospital ED Readmission Rates and Hospital ED Connect to Care Rates). Correlations were tested for significance using the T statistic.

**Evaluation of the ICM/PEER and CCT Interventions:** The original performance target proposed a comparison group methodology in which Connecticut hospitals receiving an ICM/PEER and CCT intervention with frequent visitors to the ED would be compared to other Connecticut hospitals not receiving the intervention on three measures: hospital rate of frequent visitors to the ED, hospital readmission rates of frequent visitors, and hospital connect to care rates of frequent visitors. Over the course of the year, several modifications in the proposed methodology were recommended by VO and approved by the State partners. As suggested by Kate Parr during data warehouse meetings, and recommended by VO and approved by the state partners in the CORE Contract meeting, it was proposed that the methodology in evaluating 2014 PT Performance target #1 be changed to a “rate of visit methodology” vs. a “rate of super user methodology.” The measure of hospital rate of frequent visitors was changed to a measure of “the percentage of all BH ED visits accounted for by the frequent visitors (super users) at targeted hospitals.” This measure of the rate of visits accounted for by frequent visitors would be operative for both the baseline and comparison periods.
A further change in methodology was proposed and accepted by the State Partners in September of 2014. This changed the methodology to a repeated measures design that will compare the baseline rates for each of the five intervention hospitals over a 3 year period (July 2011 through June 2014) to the six-month period during the intervention (July to December 2014). A repeated measures variation of regression analysis will be used to determine if the intervention “turned the curve” or produced a statistically significant deviation from the prior trend line in the hypothesized direction for each hospital and for the hospitals in the aggregate. A continuous piecewise linear regression is a type of splined regression that performs the trend comparison in a single regression formula with a “knot” or “hinge point” at the final period prior to intervention. The pre- and post-intervention regression lines are constrained to share the hinge point. Given the exploratory nature of this evaluation, VO and the state partners agreed to use a p<.10 threshold for determining if the intervention was successful in impacting each of the outcome measures. We will also report outcomes in relation to the p<.05 threshold. Due to the impact of claims lag, this analysis cannot be completed and reported on until May of 2015. Please see Appendix 1 for the description of the methodology that was submitted to CORE and approved on 9/15/14.

ED FREQUENT VISITOR INTERVENTIONS

Explore the feasibility of replicating the ROI processes utilized by other community hospitals that have implemented successful pilot projects in this area of practice.

Work with Hospital Staff and local providers to facilitate the development of Wraparound Plans for the ED intervention cohort.

Collaborate with care managers from CHN and/or ABH when appropriate.

Members who are referred by participating performance target (PT) EDs to VO’s ICM/Peer program often benefit from the case management/support services offered by CHN (Community Health Network) and/or ABH (Advanced Behavioral Health, for members with HUSKY D). Outreach to CHN or ABH is conducted to make initial referrals for case management or reconnect members to case management. CHN is responsible for managing medical care for members with Medicaid and ABH is responsible for managing residential rehabilitation services for members with HUSKY D. In addition to authorizing care, each ASO has a team of intensive case managers who work with high utilizing/high risk members.

There are several reasons the ICM/Peer team may make referrals to CHN and ABH when working with members. In general, the team believes that targeted intensive case management can aid in increasing member connect to care rates and decreasing member ED admissions. Based on our interest in better understanding the overlap between CHN, ABH, and VO ICM/PEER interventions, a system has been developed for tracking CHN and ABH involvement in the CareConnect System.
Below are the criteria for co-management with CHN:

The following medical conditions are not improving/being treated and impact behavioral health functioning:

<table>
<thead>
<tr>
<th>Eating Disorder</th>
<th>High risk Pregnancy-due to depression/substance abuse</th>
</tr>
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<tbody>
<tr>
<td>Medical Detox</td>
<td>Post-partum Depression</td>
</tr>
<tr>
<td>Chronic Pain</td>
<td>COPD- Chronic Obstructive Pulmonary Disease</td>
</tr>
<tr>
<td>Uncontrolled Diabetes</td>
<td>Traumatic Brain Injury</td>
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Below are the criteria for intensive case management (ICM) services with ABH:

Active HUSKY D member who would benefit from any of the following:

- Opioid Agonist Treatment Protocol (OATP): Focused interventions for those who have had repeated admissions to inpatient detoxification services for a primary opioid dependence disorder;

- Acute Care Initiative: Specialized interventions for those with a history of multiple admissions to acute psychiatric care or a lengthy psychiatric hospitalization;

- Alternative to Hospitalization (ATH): Case management staff work collaboratively with the individual and hospital emergency room staff to facilitate access to other treatment options when clinically appropriate.

Many times the ICM/Peer team is able to review the member’s record in CareConnect before scheduling an initial meeting with a member. When contact information for the CHN ICM and/or ABH ICM is contained in the member’s record, the team will ask the member about the support services being provided (by CHN and/or ABH). ABH also supplies DMHAS with a list of all members currently receiving ABH ICM and this list is shared with VO and reviewed before meeting with new members. Once the team has a clear understanding of CHN and ABH involvement, releases of information are signed, if needed, and coordination between ASOs begins. There are times that members are actively being case managed and the ICM/Peer team consults with the assigned ICM to develop next steps. There are also times that the ICM/Peer team refers members to services and once CHN and/or ABH accepts the referral, next steps are developed. Each plan is individualized and member-driven.
The CCT meetings have provided the foundation and forum for coordination of care between the PT pilot hospitals and community service providers. CHN and ABH are on the releases and participate in clinical discussion/planning at each established CCT meeting (New Haven CCT and Hartford CCT). CHN consistently shares pertinent medical information to aid in the connect to care efforts. ABH shares information about past and present ICM services as well as authorizations for residential rehab.

In addition to CCT meetings, regular meetings are held between VO and CHN, and VO and ABH. Clinical managers/administrators from CHN and VO meet bi-weekly to review protocols and procedures related to authorizations and shared cases. During these meetings, ideas are shared about how to better coordinate services for members utilizing the ED frequently, and specifically members identified as “frequent visitors” through the ED PT.

A bi-monthly ICM strategy meeting with ABH regional managers and VO ICMs is held to ensure that transitions are smooth and timely for our shared members within the substance abuse continuum. During these meetings the PTs have been described, and the changes to the VO ICM role explained. For the members that are shared, both non-VO ICM programs seem to have a clear understanding of the division of responsibilities. Consultation and communication amongst VO ICMs and ABH ICMs is necessary to develop action items that are member-specific and well-defined.

In summary, all members need the involved ASOs to collaborate and coordinate care to reduce duplicative efforts and streamline interventions. The members identified through the ED PT tend to have complex needs and therefore require intensive and multi-dimensional approaches to care planning. Each involved ICM understands that sharing information, co-creating care plans, and defining action steps are critical components of supporting members in their journey towards overall health and wellness.

The members identified through the ED PT tend to have complex needs and therefore require intensive and multi-dimensional approaches to care planning.
V. Intensive Care Manager and Peer Community Team (ICM/Peer Team)

In early June, five (5) of the six (6) hospitals with the highest numbers of ED frequent visitors were invited to participate in the ED Frequent Visitor Program. Recognizing that frequent visitors often visit more than one hospital in their local area, the initial plan to approach Yale New Haven Hospital, Hartford Hospital, Bristol Hospital, Hospital of Central Connecticut, and St. Francis Medical Center was designed to keep the intervention more geographically focused vs. going with the top five hospitals that would have included Backus. There were also concerns that the location of Backus would stretch the resources and require more travel time from the Peer/ICM team since they are all based out of Rocky Hill. Initially Yale, Bristol Hospital, Hartford Hospital, and St. Francis Medical Center agreed to participate in the program. The Hospital of Central Connecticut declined to participate so Backus Hospital, was approached and agreed to participate. Thus the final list of participating hospitals was Backus, Bristol, Hartford, St. Francis, and Yale New Haven Hospital.

Teams of Intensive Care Managers, Peer Support Staff and Regional Network Managers were assigned to each hospital in the program. The table below shows each of these assignments.

<table>
<thead>
<tr>
<th>HOSPITAL</th>
<th>ICM</th>
<th>PEER</th>
<th>RNM</th>
<th>SUPERVISOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>ST. FRANCIS</td>
<td>Gillian Stein</td>
<td>Marcus Rivers</td>
<td>Dan Langless</td>
<td>Liz Studinski</td>
</tr>
<tr>
<td>YALE NEW HAVEN</td>
<td>Mike Miarecki</td>
<td>Bob Griffin</td>
<td>Kim Haugabook</td>
<td>Erika Sharillo</td>
</tr>
<tr>
<td>WILLIAM BACKUS</td>
<td>Danielle Christian (starting 1/2015)</td>
<td>Dan Griffin</td>
<td>Samantha Forbes</td>
<td>Kila Hunter</td>
</tr>
<tr>
<td>BRISTOL</td>
<td>Michelle Queen</td>
<td>Karen Kiley</td>
<td>Kate Maldanado</td>
<td>Jen Lombardi</td>
</tr>
<tr>
<td>HARTFORD HOSPITAL</td>
<td>Ben Wertheim</td>
<td>Phil Dee</td>
<td>Dan Langless</td>
<td>Liz Studinski</td>
</tr>
</tbody>
</table>

ValueOptions established the Intensive Care Management/Peer Support (ICM/PEER) program to assist adults who are BH ED Frequent Visitors. The primary goal of the ICM/PS program is to reduce the rate of readmissions of BH ED Frequent Visitors at the five (5) Connecticut Hospital Emergency Departments that had the highest number of visits by Frequent Visitors. The program helps frequent visitors connect to community supports following discharge from the Emergency Department. The ICM/Peer teams work to help members meet their medical, behavioral, and social needs while developing methods to proactively improve wellness and manage disease.
ICM/PEER MODEL

The ICM/Peer team approach to case management is based on the principles of RECOVERY and the premise that individuals are more likely to access appropriate services and remain engaged in treatment when they feel that their needs are understood and met. The ICM coordinates with providers, while the Peer engages the member in supporting self-reliance and offering support with non-traditional services. Both the ICM and Peer utilize principles of Motivational Interviewing (MI) and The WRAParound approach to care management. The model is based on the notion that when individuals fail to connect to care, and thus require repeat visits to the ED, it is usually due to a combination of internal motivational factors, and external systems factors. MI helps to address client motivation, while WRAP attempts to coordinate system resources to better meet client needs.

MI is defined by its developers Miller & Rollnik as “a directive, client-centered counseling style for eliciting behavior change by helping clients to explore and resolve ambivalence.” The approach is guided by the following operating principles adapted from Rollnik & Miller (1995):

- “Motivation to change is elicited from the client, and not imposed from without.
- It is the client’s task, not the counsellor’s, to articulate and resolve his or her ambivalence.
- Direct persuasion is not an effective method for resolving ambivalence.
- The counselling style is generally a quiet and eliciting one. Direct persuasion, aggressive confrontation, and argumentation are the conceptual opposite of motivational interviewing and are explicitly proscribed in this approach.
- The counsellor is directive in helping the client to examine and resolve ambivalence.
- Readiness to change is not a client trait, but a fluctuating product of interpersonal interaction. The therapist is therefore highly attentive and responsive to the client’s motivational signs.
- The therapeutic relationship is more like a partnership or companionship than expert/recipient roles.”

The WRAParound approach to care management is an intensive, individualized care planning and management process. First developed to assist families with children with serious and complex emotional disturbance, the approach has been adapted to serve a broad spectrum of individuals including adults with mental health and substance abuse disorders.
The National Wraparound Initiative defines Wraparound as “an intensive, holistic method of engaging with individuals with complex needs so that they can live in their homes and communities and realize their hopes and dreams.” The Ten Principles of Wraparound are defined below:

1. **Family voice and choice:** the family or the individual drives care and makes key decisions.

2. **Team based:** a team of the client, WRAP facilitator, professionals and natural supports collaborate to achieve goals.

3. **Natural supports:** the ultimate goal of the intervention is for the client to develop a network of natural supports in the community that will assist them with future challenges.

4. **Collaboration:** working together is what produces the best outcomes.

5. **Community-based:** the goal is a productive life in the community and the least restrictive care options that are likely to be successful are pursued.

6. **Culturally competent:** services are provided by culturally competent individuals who have the skills to recognize and respect the behavior, ideas, attitudes, values, beliefs, customs, language, rituals, ceremonies and practices characteristic of a particular group of people.

7. **Individualized:** services are planned to meet the individual needs of the adult member.

8. **Strengths based:** the approach focuses on building upon existing strengths vs. addressing deficiencies.

9. **Persistence:** despite challenges and setbacks, the team continually seeks improved outcomes.

10. **Outcome based:** incorporates measurable goals in the provision of care and is oriented towards what is working and achieving results.

In addition to MI and WRAP principles, the general work philosophy of the ICM/Peer program also includes the following:

**Multi-System:** Services are planned in collaboration with all systems involved in the member’s care. Representatives from all these systems, in concert with the member, collaborate to define the goals, develop a care plan, and identify the necessary resources to implement the plan and provide appropriate support to evaluate progress.
ICM/PEER: ROLES/RESPONSIBILITIES WITHIN THE TEAM

ICM: Intensive Care Managers are licensed behavioral health clinicians. The primary function of the Intensive Care Manager is to support the member's recovery by assessing the barriers to connection to services and working collaboratively to remove barriers once identified. They engage close partnerships with the member, as a key stakeholder in his/her own treatment, as well as with ABH, Local Mental Health Authority/DMHAS staff, Medical ASO staff, consumers/families, and providers.

The role of the Intensive Care Manager (ICM) includes, but is not limited to the following:

- Timely monitoring and reviewing of cases through group and individual supervision.
- Communicating with hospital staff about member’s treatment plan, reviewing hospital records (when possible) for increased understanding of member’s treatment plan.
- Meeting (Peer included) with members to introduce the ICM/Peer program.
- Completing a needs assessment to determine appropriate services and inform the care plan when member has agreed to ICM/Peer services.
- Developing an individualized, member-centric, comprehensive care plan with input from the member. The goals include: recovery and resiliency, decreasing symptomatology and/or increasing functional ability in areas such as self-care, work/school, and family/interpersonal relations in order to reduce barriers to treatment. Consultation with the facility or individual behavioral health providers, family members, PCPs, community agencies, or involved medical practitioners regarding treatment and/or treatment planning issues.
- Organizing and/or attending provider meetings and Community Care team meetings to support member’s care plan.
- Ongoing Communication with the Peer on case developments.
- Documenting all ICM efforts/interventions in the care management system.
- Assessing ICM member outcomes through universally accepted outcome tools and pre-post utilization activity.
- Providing case closure/discharge at the time of completion.
Peer Specialists are certified in the state of Connecticut as Recovery Support Specialists.

**PEER:** Peer Specialists are certified in the state of Connecticut as Recovery Support Specialists. Peer Specialists are parents of children with behavioral health needs and/or adult mental health consumers who provide education and outreach to members and families. They support engagement in treatment, assist in navigating the service system, and identify natural supports. They are also trained in principles of recovery and resilience, motivational interviewing, wraparound services and traditional peer support. Their “lived experience” allows them to connect with members and families in a meaningful way, showing by example that recovery is attainable and hope is essential. Peer Specialists work closely with local peer organizations, such as the National Alliance on Mental Illness (NAMI) and Connecticut Community for Addiction Recovery (CCAR) to promote optimal psychosocial functioning and recovery, and to help coach members to develop optimal self-care management skills.

The role of the Peer includes, but is not limited to the following:

- Timely monitoring and reviewing of cases through group and individual supervision.
- Meeting (ICM included) with members to introduce the ICM/Peer program.
- Supporting the member in the development of an individualized member-driven care plan when a member has agreed to participate in ICM/Peer services.
- Communicating with Supports as desired by the member.
- Referring for traditional and non-traditional support services including CCAR, Alcoholics Anonymous (AA), Hearing Voices Network (HVN), African Caribbean American Parents of Children with Disabilities (AFCAMP), Advocacy Unlimited (AU), and NAMI.
- Attending provider meetings to support the member or bring the member’s perspective to care planning activities.
- Providing ongoing face to face and/or telephonic support/encouragement to members.
- Encouraging self-reliance and self-confidence using motivational interviewing techniques.
- Communicating frequently with ICM on case developments.
- Documenting appropriately in the care management system.
- Completing functional assessment monthly (SF12) to gauge progress.
- Providing case closure/discharge at the time of completion.
KEY STRATEGIES/TECHNIQUES

The Emergency Department (ED) setting is a fast-paced environment, focused on triage and assessment for discharge or transfer. Several strategies were used to address the nature of this environment and to promote collaboration with emergency department staff:

- Introduction of the program to key hospital staff and follow up meetings.
- Creation and dissemination of program information and resource guide.
- Identified Hospital Emergency Department contacts to ensure appropriate member referrals and access to some hospital Electronic Health Records (EHR).
- Use of program eligibility through the hospital Electronic Health Record to triage referrals/track members in the program.
- Each hospital team developed a Referral process to identify eligible members including, but not limited to emails, log books, EHR access, and phone calls.
- Community Care Team meeting attendance to discuss and review plans for frequent visitor members.
- Collaboration between the CHN Nurse Care Managers and/or VO ICM nurses to ensure coordination of care and support for members with complex medical needs.
- Identification of local restaurants, libraries, or provider locations to meet with the members for initial referral or follow up meetings.
- Subcontract with CCAR to assist with support from CCAR program liaison.
- System-level meetings with United Way 211, DMHAS LMHAs in targeted hospital regions, Connecticut Hospital Association, and coordination with Partnership for Stronger Communities Housing Initiatives, to support collaborative efforts.
TRAINING
A full curriculum of training was developed to support the ICM/PEER team. (Please see grid below). Trainings included: Motivational Interviewing (MI) Training Overview and follow up, MI Coaching and Feedback Sessions, VO Health Promoter Training, CCAR Recovery Coach Academy, CONNECT PT training, and Infectious Disease Training. Recommended trainings to assist ICM/Peer teams included WRAP One to One, an online training course that provided a thorough overview of WRAP. Additional training included: Motivational Interviewing to provide an empathic, supportive counseling style that supports the conditions for change. Please see appendices for training curricula and materials.

<table>
<thead>
<tr>
<th>Name of Training</th>
<th>When</th>
<th>Training length</th>
<th>Agency Presenting</th>
<th>Focus of Training</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health Promoter Training</td>
<td>7/21/ &amp; 7/22</td>
<td>2 days</td>
<td>VO National</td>
<td>MI/Chronic Illness/Stages of change</td>
</tr>
<tr>
<td>Recovery Coach</td>
<td>Oct., 2014</td>
<td>5 days</td>
<td>CCAR</td>
<td>Substance Use/Recovery Principles</td>
</tr>
<tr>
<td>CONNECT PT Training</td>
<td>July Tues/Thurs</td>
<td>1 hr. segments</td>
<td>VO CT</td>
<td>PT system training</td>
</tr>
<tr>
<td>Peer Specialist Certification</td>
<td>Jan., 2015</td>
<td>6 weeks</td>
<td>Advocacy Unlimited</td>
<td>State Certification program for Peer staff</td>
</tr>
<tr>
<td>CCAR Services-Recovery</td>
<td>July, 2014</td>
<td>1 day</td>
<td>CCAR</td>
<td>CCAR services and subcontract overview for PT</td>
</tr>
<tr>
<td>Motivational Interviewing</td>
<td>Oct. 23, 2014</td>
<td>1 day</td>
<td>J. Fader, Ph.D</td>
<td>Motivational Interviewing Review</td>
</tr>
<tr>
<td>MI Coaching/Follow up</td>
<td>Oct. 24, 2014</td>
<td>1 day</td>
<td>J. Fader, Ph.D</td>
<td>MI Coaching/Leadership supervision/feedback</td>
</tr>
<tr>
<td>Interactive Hygiene</td>
<td>Nov. 12, 2014</td>
<td>Video</td>
<td>VO CT</td>
<td>Hand washing techniques</td>
</tr>
<tr>
<td>Infectious Disease Training</td>
<td>Dec. 12, 2014</td>
<td>1 hr. segments</td>
<td>H. Pugliese, RN</td>
<td>Infectious Disease Overview</td>
</tr>
</tbody>
</table>

SUPERVISION
There are several weekly and bi-weekly meetings held to offer guidance and support to ICM and Peer staff. Supervision and staff meetings are led by the Clinical Director and the Peer Director. Below is the supervision and meeting schedule developed to ensure that staff members receive timely support and guidance as well as to ensure model/philosophy adherence:

- Weekly/bi-weekly individual supervision with director.
- Weekly/bi-weekly team supervision.
- Weekly ICM/Peer group supervision.
- Weekly Operations meetings are held to discuss documentation, model fidelity, trainings, internal and external communication.
- Weekly Communication meetings are held to ensure that communication across and within departments is clear and consistent. Staff from all departments working on the PTs are represented and are expected to report on progress since the previous meeting and strategies going forward.
OPERATIONS (REFERRAL PROCESS, OPTING IN/OUT)

The engagement process begins with the identification of the member through the established Emergency Department process. A Medicaid member presents to the emergency department and meets eligibility criteria through hospital records or identification on the BH ED Frequent Emergency Department Visitor list, which is distributed monthly. The criteria defines BH ED Frequent Visitors as members who have had seven (7) emergency department visits in six (6) months. Dual members who have Medicaid/Medicare coverage are not included in this performance target.

The ICM/Peer team meets to determine whether to meet with the member and where any meetings should occur. The member may be contacted by phone, in the emergency department, on a unit of the hospital, or in the community post discharge. The team meets initially to introduce the program and to determine member participation. Whether or not the member agrees to participate, they receive contact information and a resource packet.

When the member agrees to the program, they sign an “Opt In/Opt Out” Letter. If they opt in to the program, they also sign Releases of Information, and complete the SF-12 (see Appendix 9) with the Peer Support Specialist. The ICM, Peer and member will develop a plan for next steps. Upon meeting with the member and researching the member’s psycho-social needs, the acuity assessment and care plan are completed by the ICM. The ICM Acuity assessment is an assessment tool developed for the purpose of identifying and understanding each member’s needs and to gauge progress over the course of the ICM/Peer intervention. The SF12 is a standardized basic functional assessment tool that is built in to the electronic case record. The care plan identifies short and long term goals, objectives and time frames to meet the member’s clinical needs. The care plan considers the member’s goals, preferences and desired level of involvement, as well as identifying barriers to meeting the goals or complying with the plan.

If the member chooses to discontinue participation in the program, they will sign and date the “Opt In/Opt Out” letter, or verbalize their desire to discontinue participation in the program.

DISCHARGE

As the member progresses through his/her individualized care plan, the ICM and Peer continually evaluate and document progress via the SF12 assessment process and the VO CONNECT documentation system. To assess discharge readiness, the ICM/Peer consults the treating providers, supports, and the member. The case may be reviewed during individual or group supervision to help inform case closure. A post-program plan is developed to confirm community resources which will continue care. Contact info for the ICM/Peer is included if re-involvement is necessary.
When the member meets discharge criteria and a post-discharge plan has been developed and agreed upon by the care planning team, the ICM/Peer team discharges the member from active status and closes out the case. With the case event expiration completed, the ICM/Peer flag specific to the Emergency Department hospital is retained in the system to provide historical tracking.

Typical reasons for case closure/discharge criteria include:

- Member is assessed to be safely engaged in ongoing treatment. The identified barriers to treatment have been resolved and the member is able to participate in, and benefit from, more standard treatment and management programs without the need for the intensity and support of the ICM/Peer program.
- The member has returned to functional or symptomatic baseline and there is no reasonable expectation of further improvement and the member no longer requests ICM/Peer support.
- Member declines to accept the proposed treatment plan, or a viable alternative, or is unwilling, or unable to participate in the treatment plan or follow appropriate recommendations.
- Member is no longer eligible for Medicaid covered services. (Appropriate transition/coordination of care will be provided by VO to ensure connection with new insurer).
- Ongoing CM services from another resource such as the Medical ASO or ABH are better positioned to address the member’s primary needs. VO’s ICM/Peer may continue involvement as a secondary consultant, as needed.
- Member is not responsive to outreach attempts, supports or referrals.
VI. Description of the CCT Intervention/Process

MODEL/PHILOSOPHY

The operating principles behind the CCT are that repeat admissions to the ED are due to a combination of the following:

- The member not engaging in timely follow-up care due to:
  - No referral obtained.
  - Lack of transportation.
  - Lack of Housing.
  - Inconvenience of the initial appointment (schedule, location, etc.).
  - Lack of motivation for treatment or hope for improvement.
  - Other specific barriers.

- The member engaging in care but the care available is not meeting the member’s needs due to:
  - Lack of Transportation.
  - Lack of Housing.
  - Inconvenience.
  - Lack of sustained motivation or hope for improvement.
  - Lack of collaboration between care entities.
  - Lack of correspondence between member needs and the services included in the care plan.

The Community Care Team (CCT) model was developed to provide patient-centered care and improve outcomes by developing wraparound services through multi-agency partnership and care planning. These teams are usually comprised of local community providers and agencies that deliver authorized and non-authorized services. One of the most important components of the CCT process is communication—between providers, within the hospital departments (medical and behavioral health), between the CCT and the EDs, and with the members.

The theory behind the CCT is that if a person’s immediate needs, which cause them to frequently return to the ED, can be met in more appropriate venues outside of the ED, there will be greater opportunities for recovery and stability. The desired outcome is that the pattern of high utilization of the ED and other services at higher levels of care will be interrupted by the customized care efforts of the local CCT.
In 2012 the Regional Network Managers (RNMs) began to hold “Connect to Care” meetings with both youth and adult provider communities across the state. This effort continued through 2013. Through a variety of sources, including notification by State partners and meetings with providers of adult services in DMHAS Region 2 they discovered that Middlesex Hospital was leading a Community Care Team with a record of successfully convening providers for the purpose of improving outcomes for the area’s most vulnerable individuals. Middlesex was able to substantiate the improved outcomes with data that showed reduced readmissions, value added for participating providers, improved outcomes for patients and cost savings for the hospital. The RNMs quickly identified this as a best practice and set out to share it with other providers, culminating in a statewide presentation on the CCT model by Terri Di Pietro of Middlesex Hospital in January 2014.

This Performance Target requires that VO “develop or enhance Community Care Teams or their equivalent at Select Hospitals.” RNMs have worked with the 5 PT hospitals to develop CCTs or enhance existing meetings to encompass the functions of a CCT. Those efforts are described in detail below.

**THE WILLIAM W. BACKUS HOSPITAL**

An initial meeting was held on June 18, 2014 at Backus Hospital to describe the project, give an overview of expectations around communication, discuss access to the ED and explore the potential for development of a CCT. VO provided Backus with a preview of the frequent visitor data. A follow up meeting was held at Backus a week later to further define operations, ensure that the ICM and Peer Specialist would have access to the units, discuss how the ICM and Peer would be notified when a frequent visitor presented at the ED, and additional procedural details.

Once the project officially started, the ICM and Peer began receiving notification when a frequent visitor appeared at the ED and they were allowed immediate access to the ED. They were also given access to the EHR. This component of the PT was quickly and seamlessly operationalized.

As of July 1, 2014, there were 4 existing collaborative community meetings in southeastern Connecticut. They are the Norwich CCT, New London CCT, SMHA Utilization Review and Backus Case Conference. These meetings, mostly occurring monthly, each focus on a particular identifying criterion (“Homeless” for the CCT’s, “Uninsured/LMHA-involved” for SMHA and “Frequent Visitor/hi-utilizers” for Backus). Although some individuals may meet the criteria for more than one of these meetings, each meeting was established at a different time and for a different reason.

After outreach to the facilitators of each of these meetings, the RNM determined that the Backus Case Conference seemed to be the best option for enhancement into a CCT. Backus’ Case Conference meeting is a monthly meeting that has been in operation for 30 years, run by the Emergency Psychiatric Services Coordinator. Although Backus initially attracted a broad group of community providers, many stopped attending when they were not actively treating any of the patients discussed at the meeting.

Today the meeting is consistently attended by Backus ED and Outpatient staff, Reliance House, Martin House and recently SMHA mobile outreach. The patients selected for review are identified by one of the participating agencies. They may be frequent visitors to the ED, connected to a participating agency, or patients of the outpatient clinic. Discussion tends to be around patient status, use of the ED, and identified needs for services and connection.
This group, however, does not utilize a Release of Information (ROI) which would be necessary for a broader CCT. Reportedly Backus’ compliance department has not seen the need for one; they believe that their meeting is covered under the HIPAA Treatment Payment, Health Care Operations (TPHO) section.

On July 17, the ICM and Peer began to attend the Case Conference and PT Progress meeting that followed. At the PT progress meeting VO and Backus go through the list of frequent visitors and discuss coordination of care plans. (Since there is no group ROI for the Case Conference, frequent visitors are not reviewed there.) To date 30 clients/members have been reviewed.

Subsequently, the RNM and Case Conference facilitator discussed the potential for boosting provider attendance at the case conference and agreed to expand the group to include providers who are involved with those on the frequent visitor list. Due to the large number of frequent visitors with medical issues they determined that Generations, UCFS and CHN should be invited to participate. Eastern Region Service Center (ERSC/ABH) was also included to help coordinate for those patients with substance use. These providers were invited to join the November meeting. The RNM proposed adding a shelter to the group as well.

The RNM drafted a proposed ROI using the Middlesex Hospital ROI as the template. The ROI was discussed at the November 20 meeting and is in the process of submission/review to Backus Hospital’s Forms Committee. In addition, the Regional Manager of BH Services for Eastern Region of Hartford Healthcare suggested that the RNM contact the Vice President of Clinical Services to gain his support for further enhancement of the Case Conference meeting. The RNM and PAR Director were attempting to schedule that meeting in early December.

The RNM will continue to work with leadership at Backus Hospital to enhance the existing Case Conference meeting and to gain approval of an ROI to be utilized at the meeting. Through discussions with other RNMs who are working with other PT hospitals, it became clear that there is a need for a champion who will energetically support the development of a CCT. The Backus CCT champion has not yet been identified.

BRISTOL HOSPITAL

Prior to July 1, 2014 Bristol had a pre-existing Bristol Collaborative meeting, an internal meeting for those on the inpatient psychiatric unit, which included department administration, nursing, the Bristol Counseling Center, VO and the LMHA. The ICM and RNM attended the May 29, 2014 meeting to introduce the idea of converting the meeting to a CCT.

An initial meeting was held on June 13, 2014 at Bristol Hospital with the Director of Behavioral Health, the Care Coordinator and other staff to describe the project, give an overview of expectations around communication, discuss access to the ED and explore the potential for development of a CCT. VO provided a preview of the frequent visitor data.
On June 26, the RNM convened a meeting of hospital staff, community providers and other stakeholders to introduce the CCT model and plans for development. This initial meeting included hospital representation from behavioral health, the ED, medical leadership, DMHAS, the LMHA, local shelter and several other community providers. Once the concept was introduced and there was initial interest, a follow-up meeting with a more targeted group of providers was held to begin discussions to operationalize the CCT. A series of follow-up meetings occurred to operationalize the CCT throughout the summer.

Once the project officially started, the ICM and Peer were allowed immediate access to the ED, but Bristol did not initially implement a process for notifying them when one of the frequent visitors presented at the ED. Notification, therefore, was infrequent and unreliable. A follow up meeting was held on August 8, 2014 to further define operations, and specifically to create a notification process.

The ED Director declined to have the ED staff participate in the notification, but the Admissions Department supervisor agreed to create a flag in their system for the frequent visitors, which enabled the crisis unit to identify the frequent visitors. This process greatly improved the flow of information to the ICM and Peer, and within a short time, they were receiving regular notification when one of the frequent visitors appeared.

An additional problem arose on September 18, 2014, when the ICM was attempting to contact a medical floor to obtain an update and to coordinate a visit to see a member. The ICM received feedback that she should not be contacting the unit directly and instead should be speaking with their case management department. The ICM was able to reach the Director of Case Management, who informed her that she was unaware of the initiative and subsequently the ICM would not be allowed access to the units without a business agreement being in place, despite the ICM and Peer already having had success visiting other members on the same unit.

The RNM outreached to the Behavioral Health Director and Operations Manager who agreed to further investigate. On September 23, 2014 the RNM received an email indicating that a business agreement would need to be signed and in place for ValueOptions staff to have access to the units. The agreement was signed by ValueOptions and forwarded to Bristol Hospital on October 9. Bristol forwarded a signed final copy back on October 20, 2014. With the business agreement in place, the ICM and Peer were allowed access to the medical units.

Concurrently, the hospital began developing a release of information (ROI) specifically for the CCT that would allow discussion among the group of providers that had agreed to be a part of the CCT. At Bristol, the initial targeted population was the members on the VO frequent visitor list. Once the ROI was fully vetted and available, the Peer assigned to Bristol made efforts to have the ROIs signed as she connected with people eligible for the initiative's interventions. The RNM managed the scheduling and facilitation of all meetings related to getting the CCT up and running.
The first CCT meeting at Bristol Hospital was held on September 9, 2014 and they continue to meet. To date they have reviewed 15 clients although the meetings do not yet fully conform to the parameters of a CCT given the absence of ED staff and other key players. The RNM has managed the CCT invites and agendas for the meetings including member lists. The RNM maintained a system documenting minutes and next steps for members discussed. Using secure encryption, the RNM emailed the CCT group the names of members to be discussed at the next CCT meeting, anything additional that would be on the agenda, as well as soft copies of the ROIs so that each entity had access to the document. (Technically the ROI is owned by Bristol Hospital. Once they have it via soft copy they coordinate entering it into that person’s electronic health record at the hospital.)

During the CCT meetings themselves, the RNM manages the agenda and facilitates the meeting. The ICM and Peer share any information they have, as do the providers. The goal is to identify needs and next steps. The group moved to a more specific focus of consistently asking what needs to happen to help these folks stay out of the ED, and if they do re-present, what steps/actions are recommended.

After several CCT meetings, the Director of Behavioral Health asked to have the Director of Case Management invited to the CCT meetings and the invitation was extended. The director of case management participated first on October 28, 2014, at which time she initially seemed reluctant. However, as she obtained a greater understanding of the efforts of both the initiative and the CCT, her involvement increased. During the following CCT on November 11 the director of case management attended again and was much more open and involved, bringing with her one of the social workers who was familiar with many of the members being discussed.

What appeared particularly helpful at Bristol was the sharing of information regarding how other hospitals were conducting their CCTs. A PowerPoint® presentation, a short video, and an ROI template created by Middlesex Hospital were shared with the hospital and members of the CCT.

One of the challenges at Bristol Hospital was that while the behavioral health department was very invested in the CCT process, the ED leadership has not shown as high a degree of commitment. This struggle continues and the RNM and Director of Behavioral Health at Bristol continue to dialogue regarding ways to improve this collaboration.

It is too early in the CCT process to see and measure the impact at this time. That being said, substance abuse was identified as a common theme through all cases that have been discussed in the CCT. Many individuals had complex needs or situations complicated as a result of primarily alcohol use. It was seen to impact their engagement, housing, legal standing, and more.

What appeared particularly helpful at Bristol was the sharing of information regarding how other hospitals were conducting their CCTs.
In hindsight, it would have been helpful to obtain greater investment by the Emergency Department. Given the current structure of the meetings, there is concern that perhaps the CCT process would not at this time be sustained without the efforts of the involved ValueOptions staff. However, if we had waited for the desired degree of buy-in from the ED it is possible the CCT may not be running as it is today. Despite this challenge, the ICM and Peer have been effective at connecting with staff that are more directly involved in providing care in the ED, and the other leadership at the hospital as it relates to member follow up. Very positive working relationships have been reported. The level of involvement from the RNM was greater than had been anticipated but it was necessary in order to get the CCT up and running.

**HARTFORD HOSPITAL AND ST. FRANCIS HOSPITAL AND MEDICAL CENTER**

An initial meeting was held on June 19, 2014 at St. Francis Hospital to introduce the ED project. At that meeting St. Francis leadership agreed to consider participation, but did not commit. Subsequently they did agree to participate and a follow-up meeting was held on July 9 to discuss operationalizing the project, including access to the ED and medical records. VO provided the frequent visitor data.

Once the project officially started, the ICM and Peer were allowed access to the ED and the EHR. St. Francis has not implemented a process notifying the ICM/Peer when one of the frequent visitors presents at the ED. Rather, either the ICM or the Peer goes to the hospital on a daily basis to check the ED log to determine if any of the frequent visitors have presented there.

An initial meeting also was held on June 19, 2014 at Hartford Hospital. Hartford initially stated that the ICM and Peer must go through a process similar to the process for new employees before they were allowed access to the ED, but agreed to a work-around instead. Since then the ICM and Peer have had access to the ED, but still do not have access to the EHR. Notification when a frequent visitor presents at the ED is done telephonically.

The potential for developing a joint Community Care Team for St. Francis Hospital & Medical Center and Hartford Hospital was explored at each hospital’s Emergency Department and Medical Detox pilot kick off meetings. These meetings culminated with an agreement by the hospitals to create one CCT for the Hartford area with the understanding that ValueOptions would take the lead role in its implementation. The first joint CCT planning meeting with St. Francis and Hartford Hospital was held on August 5, 2014.

Initially both hospitals, as well as VO, expressed interest in approaching Capital Region, the state operated LMHA, with the prospect of enhancing the existing Gridlock meeting to encompass a Community Care Team for the Hartford area. To increase the likelihood of obtaining a favorable response, it was determined that Lori Johnson, Director for the Behavioral Health Assessment Center at Hartford Hospital and Robin Nicols, Manager for Crisis Services at
St. Francis Hospital, both long term participants of the Gridlock Team, would make this proposal. Capital Region declined this request, so VO and the two hospitals decided to create a new CCT.

In addition to the two hospitals, Journey Home has become a strategic partner during the implementation phase of the Community Care Team. (Journey Home is an organization working to end homelessness in the Greater Hartford Region, by focusing on housing, employment and other supportive services.) This partnership has been essential in bringing the shelter, housing and supportive service systems to the table as active CCT participants, and vital links in the CCT “connect to care” process. The existing relationships that Journey Home has cultivated with local, state and national organizations make them a valuable strategic partner in addressing the housing needs of our Medicaid members and by extension, reducing the over-utilization of emergency department services by the identified BH ED Frequent Visitor cohort.

As part of the CCT progression, VO also has developed collaborative relationships with the Connecticut Hospital Association and the Partnership for Strong Communities. Their shared initiative to reduce multiple hospital emergency room and inpatient readmissions for Medicaid recipients who are homeless or unstably housed fits cohesively with the goals of ValueOptions, St. Francis and Hartford Hospital in creating a CCT for the Hartford Region.

St. Francis and Hartford Hospital jointly hosted an Organizational Community Care Team meeting on September 11. The attendees included a broad array of providers offering both authorized and non-authorized services. This forum provided an opportunity to promote and assess interest, educate and orient attendees to the model/philosophy of a CCT and lastly, build momentum in advance of launching the first CCT meeting. In addition, Terri Di Pietro, the CCT Champion from Middlesex Hospital, provided a brief video that summarized Middlesex Hospital’s CCT progression, highlighting the added value that the care planning process has for members.

The release of information (ROI) process is by far the most arduous and time-consuming component of the CCT progression. Steven Wolf, M.D. & Chairman of ED Medicine at St. Francis Hospital & Medical Center assumed the lead role for this aspect of the project. In an effort to avoid the usual delay associated with this task, Steve was put in direct contact with the CCT Champion at Yale New Haven Hospital, who also supported the parallel ROI process that was occurring simultaneously under the leadership of David Pepper, M.D., of ED psychiatry at Hartford Hospital. This strategy culminated in producing ROIs for each hospital that were vetted and approved by their respective Legal & Compliance departments in a very timely fashion.

To prevent system overload, the referral process for the CCT initially has been limited to the two hospitals and the VO Intensive Care Managers assigned to their Emergency Departments. Members who have been identified as BH ED Frequent Visitors, have opted into the pilot program and have a signed ROI on file. Consideration to expand the referral process to the outpatient community remains part of an ongoing dialogue and evolving strategy.

**ROIs for each hospital that were vetted and approved by their respective Legal & Compliance departments in a very timely fashion.**
As noted above, the VO RNM took the lead role in coordinating activities related to the development of the CCT. Because this project involved two hospitals, Journey Home, the Partnership for Strong Communities and a large number of community providers, this was a very demanding, time-consuming role. The RNM’s activities included the following: managing and facilitating overall development and implementation of the CCT; coordinating activities of the two hospitals; scheduling all meetings; generating, sending and tracking meeting invitations; producing meeting agendas; facilitating planning meetings; ensuring the compatibility of the two ROIs; entering the CCT ROIs into Care-Connect System; managing the ROI Tracking Sheet; creating the coalition of CCT members; facilitating the kickoff CCT meeting and subsequent meetings.

The first CCT meeting was held on November 13, 2014, and future meetings have been scheduled. A total of 14 members have been reviewed at the CCT as of December 14th 2014.

During the development of the CCT there were two critical activities that helped participants understand the value of the CCT and navigate the path to implementation. First, the presentation by Terri Di Pietro at the organizational meeting and her willingness to answer questions about Middlesex’s experience helped to demystify the process. Second, the willingness of Steve Merz at Yale to consult with St. Francis and Hartford Hospital about the importance of the ROI was instrumental to getting rapid approval of the ROIs. In addition, as has been noted above, it is critically important to have someone champion the process, and we were very lucky to have two CCT champions in Dr. Wolf and Dr. Pepper.

The major concern at this point is the sustainability of the joint CCT going forward. As previously mentioned, coordination of the activity of the two hospitals has been very time-consuming and this work has been done by the VO RNM. It is unclear who will assume these tasks in the future, and how the responsibility will be shared between the hospitals. Transitioning the leadership of the CCT to either a hospital staff member or a local provider who participates in the CCT will be critical to sustaining this initiative.

**YALE-NEW HAVEN HOSPITAL**

In March, 2013, Yale-New Haven Hospital in collaboration with Yale-New Haven Psychiatric Hospital, Communicare, Connecticut Mental Health Center (CMHC), Bridges, and Cornell-Scott Hill Health Center, under the auspices of South Central Consortium (SC Consortium), successfully submitted and was awarded a competitive Integrated Healthcare grant funded by the Connecticut Health Foundation.

**Transitioning the leadership of the CCT to either a hospital staff member or a local provider who participates in the CCT will be critical to sustaining this initiative.**
The overall goal of this initiative was to identify, develop, and test strategies to integrate behavioral health and primary care services with an emphasis on decreasing disparities in health outcomes among those with severe persistent mental illness (SPMI), specifically within minority populations.

During the design and implementation phase the SC Consortium:

- Reviewed best practices in care integration,
- Developed integration tools (e.g., release of information),
- Identified cultural differences between physical health and behavioral health care settings,
- Established position descriptions for increased integration (e.g. care navigators), and
- Worked to improve the functionality of electronic health records by identifying capability among Consortium members’ electronic health record systems to share clinical data and coordinate care.

As a result of the work accomplished through this grant, the SC Consortium continued to meet monthly to advance recognized objectives focusing on: (1) Ascertaining provider organizations that offer essential services that meet the needs of the region’s residents diagnosed with SPMI and (2) creating a framework and infrastructure to facilitate coordinated care and improve health outcomes for the region’s residents diagnosed with SPMI.

In April, 2014 the Region 2 RNM began attending the monthly SC Consortium meetings. This was an essential step in establishing relationships and obtaining buy-in with senior leadership of several of the major behavioral health providers in the Greater New Haven area: CommuniCare, Inc. (a collaboration between BHcare and Bridges); Connecticut Mental Health Center (a DMHAS funded behavioral health center serving individuals with serious and persistent mental illness); Cornell Scott-Hill Health Center (a Federally Qualified Health Center); Fair Haven Community Health Center (a Federally Qualified Health Center); and Yale New Haven Hospital.

In June, 2014 Yale–New Haven Hospital (YNHH) psychiatric leadership accepted the invitation to participate in the VO Emergency Department Initiative. Two important motivating factors for Yale were being able to obtain “frequent visitor” data and receiving assistance in connecting members to care upon discharge, which has been among Yale’s top priorities. From the beginning of this initiative high-level leadership of the SC Consortium member agencies, including Yale–New Haven Hospital, have demonstrated their commitment to the process by attending the meetings and assigning additional staff to attend.

The VO ICM and Peers received badges and identification cards to access members on psychiatric units, the observation unit, and the Emergency Department. Despite this access, they have not been able to access Yale’s electronic medical record. The RNM and Clinical Director continue to explore access to Yale’s electronic health record. Yale leadership requested that VO submit a letter specifying the need for access and confirming that information will not be used for authorization purposes. Yale personnel will arrange an EPIC training for VO personnel once EPIC access is granted. Notification that a frequent visitor has presented at the ED is provided by Yale via fax and phone.
As a result of the Integrated Healthcare grant described above, the SC Consortium already had the basic infrastructure and understanding in place to support the development of a Community Care Team. Development of the CCT, therefore, proceeded quickly and smoothly, with the organizational meeting taking place on July 17, 2014.

Following that meeting, several external meetings were organized in collaboration with Yale-New Haven Hospital Psychiatric leadership, Yale-New Haven Hospital-Medical Detox, and the VO RNM, Clinical Supervisor, and Clinical Director. These meetings were focused on:

- resources needed/allocated to operationalize the initiative,
- identification and education of Yale-New Haven Hospital internal personnel associated with initiative,
- development of a set of procedures for VO and Yale staff to ensure effective implementation of the community care team regarding:
  - Structure of the community care team,
  - Frequency of meetings,
  - Roles of participants,
  - Location of the meeting,
  - Establishment of a protocol to ensure consistent communication and debriefing opportunities between Yale and the RNM and Clinical Director.

Additional meetings were held with behavioral health community providers, area shelters, and community housing providers to introduce, educate, and raise awareness of the upcoming Community Care Team initiative. The RNM made additional outreach calls to non-traditional community agencies, including drop in centers, shelters, and recovery centers.

A re-occurring, internal VO team meeting was established including the RNM, community peer, intensive care manager, and clinical supervisor to monitor execution and implementation of the CCT. In addition, the RNM worked with Yale staff to review and refine the community release of information previously established by the SC Consortium. Two versions of the ROI were reviewed and approved by both Yale and VO legal/compliance departments; one in English and one in Spanish. The ROIs received final approval by Yale on August 18, 2014.

Although the target population identified through the Integrated Healthcare Improvement grant was not recognized as “frequent visitors,” the SC Consortium provider organizations agreed that for the CCT they would begin with “frequent visitors” of the Yale Emergency Department.
The first CCT meeting at which frequent visitors were discussed was on August 21. The ICM selects the members to be discussed at the CCT and runs the meeting. The ICM’s ability to access a member’s previous treatment history and provider relationships brings added value to the CCT process. To date, the Yale CCT has reviewed/discussed 29 members referred due to their status as frequent visitors to the ED.

Behavioral health services at Yale are provided across various departments (observation unit, medical detoxification unit, emergency services, crisis intervention unit, and project assert), making meetings with leadership in each unit critical to the development of the CCT. The RNM and senior leadership at Yale are still in the process of engaging medical leadership of the ED to achieve buy-in and assure the success of the CCT going forward.

Yale does not yet have a mechanism in place to identify and track frequent visitors of Emergency Department Services. This has resulted in a substantial reliance on the VO RNM, ICM and Peer to execute, coordinate, and facilitate the CCT. Yale will need to identify additional hospital resources to sustain the CCT beyond the pilot period.

CONCLUSION
Establishing a CCT requires coordination and the establishment of buy-in across large and multifaceted hospital systems and diverse community providers and support agencies. Such a complex endeavor seldom happens quickly or without encountering barriers and obstacles.

Approval of the ROI has been difficult at times and can be a laborious and time-consuming process. There are varying opinions about the need for an ROI and the appropriate scope/language of such an agreement. It is most helpful to have access to someone who can explain the purpose and need for the ROI and in terms that the legal/compliance staff at each entity can relate to. In the effort to streamline and organize multiple community meetings into a CCT, RNMs frequently encountered resistance from the leaders of other pre-existing community groups that may also be working with complex clients. Since the CCT is a relatively new concept, seldom are there dedicated resources available to manage the initiative. In order for these initiatives to be a success, someone needs to lead, coordinate, keep records, track members, etc., and it can be difficult for hospitals or other providers to identify these resources within cash strapped budgets. Technology offers many opportunities for improved coordination and information sharing but many of the Hospital and provider EHRs are incompatible.

Keys to success include addressing the barriers identified above and getting buy-in from Behavioral Health, ED, and other leadership within the hospital. RNMs also found it to be critically important to have an influential champion who understands and embraces the CCT philosophy and can explain it to others. A clear, concise, and compelling rationale for the need for an ROI is also crucial to success. Identifying the right people to bring to the table (those who can make decisions/commitments) and securing their commitment to the team is also vital to success.

To date, the Yale CCT has reviewed/discussed 29 members referred due to their status as frequent visitors to the ED.
Finally it is very important to establish agreement on the target population for the CCT. Experience suggests that communities should start small and focused and only expand the population once the meeting has been up and running successfully for a while.

ValueOptions staff have worked diligently to “develop or enhance” CCTs at the hospitals participating in the ED PT. The strategies, challenges and timeframes have been different at each hospital, and, as described above, the CCTs are at different stages of development. At this time, the Yale and Bristol CCTs have each been in operation for several months and are functioning well. The joint St. Francis and Hartford Hospital CCT has just begun, but holds great promise and is the product of ground-breaking collaboration between two large hospital systems. Work on developing a CCT continues at Backus, but, as documented above, progress has clearly been made in enhancing the pre-existing Case Conference meeting.

At all hospitals the ValueOptions staff have been critical to the development process and continue to be significantly involved in scheduling, organizing and facilitating the meetings. Some challenges do remain, the largest of which may be transitioning the operationalization of the CCTs from VO to hospital staff or local providers. Given the collaborative nature of the relationships that have been developed as part of this process, however, ValueOptions is confident that these challenges will be successfully addressed.

VII. Utilize RNMs to support an ED focused educational campaign (brochures/posters) regarding prescription medication abuse/overdose

An ED focused educational campaign regarding prescription medication abuse/overdose was proposed given the frequency with which individuals with substance use disorders engage in drug seeking behavior at the ED and/or individuals seeking pain relief may inadvertently develop a pattern of inappropriate use of potentially addictive pain medications over multiple ED visits. The purpose of the educational campaign was two-fold: educate consumers about the risk of abuse, and educate ED staff regarding how to minimize the risk of either supporting drug seeking behavior or inadvertently contributing to the development of abuse of pain medication.

In June of 2014 the assigned RNM and the PAR Director conducted an online search for pre-existing materials that might be used in a campaign against prescription drug abuse. They found that there were many similar campaigns that had been initiated by both public and private organizations, inside and outside of the state of CT. The Connecticut Department of Consumer Protection (DCP) was one of the organizations that had educational materials available on the topic of prescription medication/overdose for both providers and patients as it related to their Prescription Monitoring Program.
In July of 2014, the PAR Director requested a meeting with leadership at the DCP to request further information regarding their materials, and to discuss the possibility of allowing VO to use these materials as part of the ED campaign. On July 18th, 2014, the PAR Director and RNM met with John Gadea, Jr., R. Ph., Director of the Drug Control Division, and Xaviel Soto, Program Manager of the Medical Marijuana Program/Prescription Monitoring Program. During this meeting, Mr. Gadea and Mr. Soto reviewed the DCP’s Prescription Monitoring Program with the PAR Director and RNM, and offered VO use of these materials for the ED campaign at no charge. The PAR Director and RNM received sample brochures from the DCP. They brought the materials back to the RNM Team and to VO Lean Management for consideration and approval.

Five different brochures from the DCP were selected by the RNM and reviewed by the RNM team and Lean Management. Three brochures (“Medication Safety: Who’s At Risk & What You Can Do,” “Oxycodone: Protect Your Teens,” and “Keeping Medications Secure”) were reviewed and approved for distribution to ED patients and their families, and two brochures (“Who’s In Charge—Patients Abusing Their Practitioners for Prescription Drugs” and “Better Data, Better Care”) were approved for distribution to ED providers. One brochure, “Keeping Medications Safe,” is printed in English on one side and Spanish on the other side. “Better Data, Better Care” opens into an 11 by 17 inch poster. The RNM requested additional copies of the brochures from DCP for distribution.

To supplement the materials that would be distributed to each of the five hospitals, the RNM drafted a letter to introduce the campaign to the hospital providers and explain each of the five brochures. After receiving additional brochures from the DCP, the RNM prepared a “campaign box” for each of the five hospitals. Hartford Hospital, Yale-New Haven Hospital, and St. Francis Hospital and Medical Center were allotted approximately 20-30 of each of the five brochures, while Bristol Hospital and The William W. Backus Hospital were given 15-20 of each brochure. Providers were encouraged to seek additional materials directly from the DCP should they wish to replenish any of the brochures at a later date.

Campaign boxes were delivered to a “point person” at the hospital by the RNM assigned to the hospital. All campaign boxes were delivered in person by the RNM as of December 12, 2014.

**MEET WITH ED STAFF TO IDENTIFY THE HIGHEST ED UTILIZERS BASED ON MEDICAID CLAIMS AS DESCRIBED ABOVE**

Beginning in July 2014, Hospital specific lists of ED Frequent Visitors were initially identified from the Medicaid members who were ED Frequent Visitors during the July 2013 through December 2013 index period. These lists were securely delivered to each of the five pilot hospitals and to two additional hospitals (Norwalk Hospital and Middlesex Hospital) that were participating in a related project directed by the Partnership for a Stronger Community and focused on homeless individual’s use of the ED. Beginning in August of 2014 VO began refreshing each of the hospital lists of Frequent Visitors in order to capture more individuals that could be identified as frequent visitors since the last report was run. These frequent visitor lists were updated each month based on the most recent 6 month period for which VO had received a claims file.

Beginning in August of 2014 VO began refreshing each of the hospital lists of Frequent Visitors.
VIII. Results

Define and Identify Super Utilizers of ED & Hospital Inpatient Care for adults and youth

Identify the top 10% of adults and youth who use ED and hospital inpatient services, based on ED and hospital inpatient service volume. There must be a behavioral health diagnosis on the ED or inpatient claim. This becomes the Inpatient/ED high user report and should be separated by adults and youth.

ADULTS: TOP 10% BH ED & IP HIGH USER REPORT

Among Adult Medicaid members, 18,392 had at least one Behavioral Health IP visit, and 32,729 had at least one Behavioral Health ED visit in calendar year 2013. After establishing the Top 10% cutoff of 3 or more BH IP visits, or 4 or more BH ED visits during the year, there were 2,662 adults with High BH IP use and 5,345 adults with High BH ED use. These totals reflect slightly more than 10% of the total group size because of the nature of the frequency distribution of visits and the desire to not arbitrarily apply the established visit cutoff to some members but not others. There was less overlap than expected between High BH IP and ED, however among the adult BH IP High Users, 53% (1412 of 2662) met the threshold for both.

<table>
<thead>
<tr>
<th>BH ED or BH IP</th>
<th>Number of Adults</th>
<th># of High Users</th>
<th># of Adults who Overlap</th>
<th>% of Adults who Overlap</th>
</tr>
</thead>
<tbody>
<tr>
<td>BH ED</td>
<td>32,729</td>
<td>5,345</td>
<td>1,412</td>
<td>26.4%</td>
</tr>
<tr>
<td>BH IP</td>
<td>18,392</td>
<td>2,662</td>
<td>1,412</td>
<td>53.0%</td>
</tr>
</tbody>
</table>

DEFINE AND IDENTIFY ED SUPER USERS FOR ADULT AND YOUTH POPULATION

Define a baseline rate of ED Super Use based on the top 2% of ED utilization during the period of July 1, 2013 through December 31st 2013. Calculate this baseline rate for the five highest volume hospitals and the aggregate of the five hospitals. Determine the cutoff for the number of visits that defines the top 2% (for example 6 visits or greater).

There was less overlap than expected between High BH IP and ED, however among the adult BH IP High Users, 53% (1412 of 2662) met the threshold for both.
For the period July 1, 2014, through December 31, 2014, define a comparison rate of ED Super Use based on the percentage of super users that meet or exceed the per visit cutoff set by the baseline.

The parties mutually agreed to utilize the six (6), six-month periods preceding the initiation of the Frequent ED Intervention as the baseline comparison. Agreement was also obtained to utilize a multiple regression analysis that measures the marginal statistical significance (p < .10) of the degree to which the measurement obtained for the intervention period deviates, in the hypothesized direction, from the trend established by the six base-line measurements (January to June 2014, July to December 2013, January to June 2013, July to December 2012, January to June 2012, July to December 2011). Due to claims lag of approximately 4 months, this analysis will not be completed, reviewed, and reported on until May of 2015 as agreed in data Warehouse and Core.

By October 15, 2014, complete a further analysis of the adult and youth ED Super Users to determine the ongoing pattern of continued use of the ED, Medicaid eligibility, geographic mobility, and other factors that would be relevant to developing/refining an evaluation approach.

Identify Hospitals with the greatest numbers/highest percentage of ED super users for both adult and child populations. Using claims data and the High user report, the contractor will develop reports to help the departments and the contractor identify the ED Super Users. The contractor will also identify the emergency departments most often utilized by ED super users.

Identify the top 2% of ED Utilizers: those with the highest number of visits during the analysis period= ED super users.

**ADULT: TOP 2% BH ED FREQUENT VISITORS**

Of the 32,729 adults who used the ED for behavioral health services at least once during the 6-month index time period (July 1- December 31, 2013), the Top 2% cut-off was established as 7 or more BH ED visits (N=721). For the purpose of this analysis, individuals with less than 120 days of eligibility during the 6-months prior to or following the index period were removed since lapses in eligibility could obscure actual ED utilization. Therefore, the eligibility restriction in the prior and following time periods resulted in different denominators across the three time periods.
In comparison to the index time period, a little over one-third of adult Frequent Visitors met the threshold for Frequent Visitors in the prior (38.6%, N=250) and following (36.4%, N=242) 6-months.

Similar to the Youth BH ED Frequent Visitors, there were some interesting symmetrical findings in the 6-months prior to and following the index time period. For example, approximately 10% of adult Frequent Visitors did not have any BH ED visits in the 6-months prior (10.5%) or following (13.5%) the index time period. Moreover, in comparison to the index time period, a little over one-third of adult Frequent Visitors met the threshold for Frequent Visitors in the prior (38.6%, N=250) and following (36.4%, N=242) 6-months. There was a smaller subset of Adults with High Frequency BH ED utilization across all three time periods (N=116).

<table>
<thead>
<tr>
<th></th>
<th># Adult Frequent Visitors</th>
<th>Denominator</th>
<th>% Adult Frequent Visitors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prior 6-months: Jan 2013 to Jun 2013</td>
<td>250</td>
<td>647</td>
<td>38.6%</td>
</tr>
<tr>
<td>Index 6-months: Jul 2013 to Dec 2013</td>
<td>721</td>
<td>721</td>
<td>100.0%</td>
</tr>
<tr>
<td>Following 6-months: Jan 2014 to Jun 2014</td>
<td>242</td>
<td>665</td>
<td>36.4%</td>
</tr>
</tbody>
</table>

The frequency distribution of adult BH ED Frequent Visitors during the index period indicates that 44% had 10 or more visits in a 6 month period while the remaining 56% visited the ED 7, 8, or 9 times in the same time period (see chart below).
Among BH ED Frequent Visitors during the index 6-month time period, 34.2% of adults visited three or more EDs.

The table on page 41 compares the demographic characteristics of youth and adults who were BH ED frequent visitors with behavioral health cohort members and the total Medicaid Membership.

BH ED Frequent Visitors during the index period were primarily HUSKY D (61.6%). Less than one-third were HUSKY C (28.7%) and even fewer were HUSKY A (9.7%). In comparison to the BH Cohort and the Total Medicaid Membership, HUSKY D members were over-represented in the BH ED Frequent Visitors cohort (61.6%) in comparison to both the BH Cohort (43.5%) and The Total Medicaid Population (38.1%). All observed differences were statistically significant as indicated by chi-square analysis.

Of the 721 adult BH ED Frequent Visitors, 448 (62.1%) were male and 273 (37.9%) were female. The rate of males in the BH ED Frequent Visitor cohort (62.1%) was disproportionately high in comparison to BH Cohort (44%) and the Total Adult Medicaid Population (42%) and both differences were statistically significant. Only the difference in the percentage of males between the BH Cohort and the total Medicaid Population was not significant.

The average age of adults in the Frequent Visitor Cohort was 41.2 years-old, and slightly younger in the BH (38.5) and total Adult Medicaid Population (37). BH ED Frequent Visitors were predominantly Caucasian (71.2%), and this rate was disproportional to their presence in the BH Cohort (56.6%) and the total Adult Medicaid Population (47.6%). All three comparisons regarding the percentage of Caucasians were significant at the p < .001 level (chi-square).

Of the 721 adult BH ED Frequent Visitors, 448 (62.1%) were male and 273 (37.9%) were female.
Individuals that identified as Hispanic in the BH ED Frequent Visitor Cohort (15.5%) were disproportionally lower in comparison to both the BH Cohort (24.6%) and the Adult Medicaid Population (28.1%). Both differences were statistically significant at the $p < .001$ level. The difference in the percentage of Hispanics between the BH Cohort and Total Medicaid population was not statistically significant ($p > .05$). The percentage of African American adults in the BH ED Frequent Visitor Cohort was disproportionally and statistically low ($p < .01$) in comparison to the total Medicaid Population but not the BH Cohort ($p > .05$). African American Adults frequently use the ED about as much as you would expect given their presence in the BH Cohort but use less than would be expected in comparison based on base rates in the total Medicaid Population.

Please note: BH ED Frequent Visitor Demographic Profile is from 7/1/2013–12/31/2013.

BH Service Utilizers & Medicaid Population Demographic Profiles are from 1/1/2013–12/31/2013.

<table>
<thead>
<tr>
<th>Demographic Comparisons of BH ED Frequent Visitors, BH Service Utilizers, &amp; Total Youth/Adult Medicaid</th>
<th>BH ED Frequent Visitor Demographic Profile: Index Period BH ED FREQUENT VISITORS</th>
<th>BH Service Utilizers Demographic Profile</th>
<th>Medicaid Population Demographic Profile</th>
</tr>
</thead>
<tbody>
<tr>
<td>Youth</td>
<td>Adult</td>
<td>Youth</td>
<td>Adult</td>
</tr>
<tr>
<td><strong>Range of BH ED Visits</strong></td>
<td>4-17</td>
<td>7-69</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>BH EDs Visited</strong></td>
<td>50% visited 1 ED</td>
<td>31.2% visited 1 ED</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Eligibility</strong></td>
<td>DCF Involved (48.6%)</td>
<td>Husky C (28.6%) Husky D (61.6%)</td>
<td>DCF Involved (10.5%)</td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td>Male (40.7%) Female (59.3%)</td>
<td>Male (62.1%) Female (37.9%)</td>
<td>Male (58.0%) Female (42.0%)</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td>27.9% Ages 3-12 72.1% Ages 13-17 Average age: 13.6 years-old</td>
<td>60.8% Ages 3-12 39.2% Ages 13-17 Average age: 10.7 years-old</td>
<td>Average age: 41.1 years-old</td>
</tr>
<tr>
<td><strong>Race/ethnicity</strong></td>
<td>Caucasian (45%) Hispanic (32.1%) African-American (21.4%)</td>
<td>Caucasian (71.2%) Hispanic (12.5%) African-American (15.5%)</td>
<td>Caucasian (46.7%) Hispanic (34.7%) African-American (16.3%)</td>
</tr>
</tbody>
</table>
The table below shows the results of the significance testing of the differences on demographic variables across the index sample of Adult ED BH Frequent Visitors, the Adult Behavioral Health Cohort, and the Total Medicaid Adult Population. Each cell indicates the level of significance for the test of differences between the variables identified by the intersecting columns and rows. For example, the first cell that intersects the Gender—FV row with the BH Column, reports the level of significance of the observed difference in the percentage of Males in the BH ED Frequent Visitor Cohort (62.1%) from the percentage of males in the Behavioral Health Cohort (44%). The *** indicates significance at the p < .001 level of significance. The legend at the bottom provides further information regarding this table.

In general, most of the observed differences (9 of 12 possible comparisons) across gender & ethnicity are statistically significant.

<table>
<thead>
<tr>
<th>CHI-SQUARE TESTING - ADULT DEMOGRAPHICS</th>
<th>BH SERVICE UTILIZERS</th>
<th>MEDICAID POPULATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>GENDER (MALE)</td>
<td>FV</td>
<td>***</td>
</tr>
<tr>
<td></td>
<td>BH</td>
<td>n.s.</td>
</tr>
<tr>
<td>CAUCASIAN</td>
<td>FV</td>
<td>***</td>
</tr>
<tr>
<td></td>
<td>BH</td>
<td>***</td>
</tr>
<tr>
<td>HISPANIC</td>
<td>FV</td>
<td>***</td>
</tr>
<tr>
<td></td>
<td>BH</td>
<td>n.s.</td>
</tr>
<tr>
<td>AFRICAN AMERICAN</td>
<td>FV</td>
<td>n.s.</td>
</tr>
<tr>
<td></td>
<td>BH</td>
<td>*</td>
</tr>
</tbody>
</table>

Legend
- Not Significant: n.s.
- p<=.001: ***
- p<=.01: **
- p<=.05: *
- FV: Frequent Visitor BH ED Cohort
- BH: Behavioral Health Service utilizers

Using the results of previous regressions to inform the analysis—develop a profile (e.g. demographics, diagnosis, comorbid conditions, etc.) of ED Super users.
The multiple regression analysis conducted during the 2013 PT identified factors that were statistically predictive of ED utilization. These factors were identified from the population that utilized the ED and had a BH diagnosis on the claim. The model was not derived from a sample of ED Frequent visitors that represent an outlier cohort of BH ED users but it still appeared reasonable to assume that the factors identified based on BH ED use may be relevant to identifying those who would be at risk of frequent ED utilization. In the table below are the variables from the 2013 regression analysis predicting Adult ED use.

<table>
<thead>
<tr>
<th>VARIABLES THAT PREDICTED READMISSION TO THE ED FROM THE 2013 PT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
</tr>
<tr>
<td>Caucasian</td>
</tr>
<tr>
<td>Homeless at some point during previous year</td>
</tr>
<tr>
<td>DHMAS-Involved</td>
</tr>
<tr>
<td>Co-Occurring MH and SA disorders</td>
</tr>
<tr>
<td>Intellectual Disabilities</td>
</tr>
<tr>
<td>ETOH Use Disorder</td>
</tr>
<tr>
<td>Anxiety Disorder</td>
</tr>
<tr>
<td>Bipolar Disorder</td>
</tr>
<tr>
<td>Nicotine Dependence</td>
</tr>
<tr>
<td>Other Drug Use Disorders</td>
</tr>
<tr>
<td>Personality Disorders</td>
</tr>
<tr>
<td>Psychosis</td>
</tr>
<tr>
<td>Delirium Disorders</td>
</tr>
<tr>
<td><strong>More</strong> days since last BH service</td>
</tr>
<tr>
<td><strong>Larger # of ED BH visits</strong> within 180 days before index visit</td>
</tr>
<tr>
<td>Younger age at index ED visit</td>
</tr>
<tr>
<td><strong>AND USE OF THE FOLLOWING BH SERVICES IN THE 180 DAYS PRIOR TO THE INDEX ED VISIT OR IP STAY THAT INCREASED THE LIKELIHOOD OF READMISSION:</strong></td>
</tr>
<tr>
<td>DMHAS Detox Days</td>
</tr>
<tr>
<td>DMHAS Residential Days</td>
</tr>
<tr>
<td>Methadone Maintenance Units used</td>
</tr>
<tr>
<td>IOP</td>
</tr>
<tr>
<td>PHP</td>
</tr>
</tbody>
</table>
Based on these measures, an ED frequent visitor referral guide was developed as a tool for ED staff and Peer/ICMs to use in attempting to identify individuals at risk for frequent visits to the ED. In developing the guide, it was determined that 22 variables was too many and would be impractical in an ED environment. It was also apparent that it would be impractical/unethical to use gender or race as screening categories and other variables would be difficult or impossible to ascertain in real time (intellectual disabilities, methadone maintenance units used, etc.). The set of 22 variables was whittled down to 10 that could be ascertained at the point of presenting to the ED. The ED Frequent Visitor Referral Guide was developed based on these considerations and is reproduced below.
The initial intent was to work these variables into a tool that could help to identify individuals at risk of becoming a frequent visitor, and use it as a component of the intervention with the five hospital EDs participating in the pilot. However, there were three reasons why the application of this tool was not feasible. The first is that the hospitals expressed resistance to incorporating the tool into their everyday business and were reluctant to engage in further data collection given current challenges around paperwork and workflow in the fast-paced ED environment. Secondly, it was determined that the caseload capacity of the PEER/ICM teams deployed to each ED was not sufficient to serve more individuals than were already being identified using the frequent visitor lists supplied to each hospital ED. Finally, it also became evident that the methodology used to evaluate the pilot was focused on reducing the ED utilization of frequent visitors and any success in preventing individuals from becoming frequent visitors would not be counted as success within this methodology.

IDENTIFY THE TOP 10 UTILIZED EDs BY CLAIMS AND UTILIZATION

Using the index period of July 1, 2013 through December 31, 2013, the total of all claims for BH ED visits were sorted by hospital. The ten hospitals with the highest volumes are identified in the table below.

<table>
<thead>
<tr>
<th>HOSPITAL NAME</th>
<th>PROV VISIT TOT</th>
<th>SUPER VISIT TOT</th>
<th>SUPER VISIT PCT</th>
<th>UNIQUE SUPER MBR</th>
<th>UNIQUE MBRS TOTAL</th>
<th>SUPER MBR PCT</th>
</tr>
</thead>
<tbody>
<tr>
<td>THE WILLIAM BACKUS HOSPITAL</td>
<td>7034</td>
<td>749</td>
<td>10.65</td>
<td>119</td>
<td>4026</td>
<td>2.96</td>
</tr>
<tr>
<td>HARTFORD HOSPITAL</td>
<td>6211</td>
<td>930</td>
<td>14.97</td>
<td>180</td>
<td>4087</td>
<td>4.40</td>
</tr>
<tr>
<td>YALE NEW HAVEN HOSPITAL</td>
<td>6114</td>
<td>1217</td>
<td>19.91</td>
<td>147</td>
<td>3539</td>
<td>4.15</td>
</tr>
<tr>
<td>ST. FRANCIS HOSPITAL MEDICAL CENTER</td>
<td>5043</td>
<td>562</td>
<td>11.14</td>
<td>165</td>
<td>3708</td>
<td>4.45</td>
</tr>
<tr>
<td>THE HOSPITAL OF CENTRAL CONNECTICUT</td>
<td>5022</td>
<td>799</td>
<td>15.91</td>
<td>124</td>
<td>3076</td>
<td>4.03</td>
</tr>
<tr>
<td>LAWRENCE AND MEMORIAL HOSPITAL</td>
<td>3790</td>
<td>310</td>
<td>8.18</td>
<td>71</td>
<td>2311</td>
<td>3.07</td>
</tr>
<tr>
<td>BRISTOL HOSPITAL</td>
<td>3600</td>
<td>503</td>
<td>13.97</td>
<td>76</td>
<td>2010</td>
<td>3.78</td>
</tr>
<tr>
<td>ST. MARYS HOSPITAL</td>
<td>3467</td>
<td>337</td>
<td>9.72</td>
<td>75</td>
<td>2456</td>
<td>3.05</td>
</tr>
<tr>
<td>THE CHARLOTTE HUNGERFORD HOSPITAL</td>
<td>2573</td>
<td>240</td>
<td>9.33</td>
<td>44</td>
<td>1556</td>
<td>2.83</td>
</tr>
<tr>
<td>WINDHAM COMM MEM HOSPITAL</td>
<td>2171</td>
<td>259</td>
<td>11.93</td>
<td>50</td>
<td>1264</td>
<td>3.96</td>
</tr>
</tbody>
</table>
IDENTIFY THE TOP 10 EDs THAT HAVE THE HIGHEST RECIDIVISM RATE (BASED ON 7 DAY AND 30 DAY READMITS)

Recidivism rates were conceptualized and computed as ED readmission rates. The ED Readmission rate was computed for each hospital, based on each BH ED visit that occurred within the 6 month measurement period and the percentage of those visits that had another BH ED visit within a specified follow-up period (7 days and 30 Days). ED visits where the member was hospitalized or admitted to a facility that precluded a BH ED visit in the near term were removed from the analysis. Each subsequent ED visit became a new index and the computation was completed for every visit that occurred throughout the 6 month measurement period. If ED visits occurred towards the end of the index period, the follow-up period was extended out (7 or 30 days) even if that went beyond the end of the index period. As the table below demonstrates, the statewide rate for both the 7 and 30 days readmission rates have been very stable over the 24 month period for which the rates were computed.

STATEWIDE 7 & 30 DAY ED READMIT RATES — 2012 & 2013

IDENTIFY THE HIGHEST UTILIZATION AND RECIDIVISM POPULATION WITH CORRESPONDING HOSPITAL EDs.

All adult Medicaid members that visited an ED and had a BH diagnosis either primary or secondary on the claim during the period of July 1 through December 31, 2013 were sorted to identify all members that met the threshold for ED Frequent Visitors (>= 7 for adults). The list was divided by youth and adult and then further sorted by hospital to determine which hospitals had the highest numbers of frequent visitors. The data indicated that many of the frequent visitors went to more than one hospital. When members went to more than one hospital, they were counted as a
frequent visitor for all the hospitals they attended (even if they did not visit that particular hospital 7 or more times). However, only the actual visits at each hospital were tallied in computing the number of visits by a frequent visitor at a particular hospital.

<table>
<thead>
<tr>
<th>HOSPITAL NAME</th>
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<th>SUPER VISIT PCT</th>
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<td>930</td>
<td>14.97</td>
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<td>1556</td>
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</tbody>
</table>
The percentage of ED visits accounted for by Adult BH ED Frequent Visitors for each hospital is presented in the bar graph below. This measure gives an indication of the variation in the degree to which BH ED Frequent Visitors account for BH ED visits at each hospital. The range is from a high of 55.3% at Norwalk Hospital to a low of 22.8% by Backus Hospital. Backus was among the top hospitals with a large number of BH ED Frequent Visitors but due to having the highest volume of BH ED visits in total, the percentage accounted for by BH ED Frequent Visitors was lower than other hospitals.

<table>
<thead>
<tr>
<th>Hospital Name</th>
<th>% of Total Adult BH ED Visits by Frequent Visitors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Norwalk Hospital</td>
<td>55.3%</td>
</tr>
<tr>
<td>Danbury Hospital</td>
<td>42.8%</td>
</tr>
<tr>
<td>The Hospital of Central Connecticut</td>
<td>39.7%</td>
</tr>
<tr>
<td>Yale New Haven Hospital</td>
<td>25.6%</td>
</tr>
<tr>
<td>St. Vincent’s Medical Center</td>
<td>20.1%</td>
</tr>
<tr>
<td>Bristol Hospital</td>
<td>19.8%</td>
</tr>
<tr>
<td>Greenwich Hospital</td>
<td>10.3%</td>
</tr>
<tr>
<td>Windham Comm Mem Hospital</td>
<td>9.2%</td>
</tr>
<tr>
<td>John Dempsey Hospital</td>
<td>6.0%</td>
</tr>
<tr>
<td>Hartford Hospital</td>
<td>4.5%</td>
</tr>
<tr>
<td>Rockville General Hospital</td>
<td>2.2%</td>
</tr>
<tr>
<td>Manchester Memorial Hospital</td>
<td>1.6%</td>
</tr>
<tr>
<td>Stamford Hospital</td>
<td>1.6%</td>
</tr>
<tr>
<td>Statewide</td>
<td>1.6%</td>
</tr>
<tr>
<td>Bridgeport Hospital Inc</td>
<td>0.8%</td>
</tr>
<tr>
<td>Waterbury Hospital</td>
<td>0.6%</td>
</tr>
<tr>
<td>Midstate Medical Center</td>
<td>0.6%</td>
</tr>
<tr>
<td>Griffin Hospital</td>
<td>0.4%</td>
</tr>
<tr>
<td>Milford Hospital Inc</td>
<td>0.4%</td>
</tr>
<tr>
<td>St. Marys Hospital</td>
<td>0.4%</td>
</tr>
<tr>
<td>New Milford Hospital Inc</td>
<td>0.4%</td>
</tr>
<tr>
<td>Middlesex Hospital</td>
<td>0.4%</td>
</tr>
<tr>
<td>The Charlotte Hungerford Hospital</td>
<td>0.4%</td>
</tr>
<tr>
<td>Lawrence and Memorial Hospital</td>
<td>0.4%</td>
</tr>
<tr>
<td>Johnson Memorial Hospital</td>
<td>0.4%</td>
</tr>
<tr>
<td>Sharon Hospital</td>
<td>0.4%</td>
</tr>
<tr>
<td>St. Francis Hospital Medical Center</td>
<td>0.4%</td>
</tr>
<tr>
<td>Day Kimball Hospital</td>
<td>0.4%</td>
</tr>
<tr>
<td>The William Backus Hospital</td>
<td>0.4%</td>
</tr>
</tbody>
</table>
Of the top six (6) hospitals with the most BH ED Frequent Visitors, four (4) were among the top eight (eight) hospitals with the highest 7-Day readmission rate.

The ED 7-Day readmission rates for adults by hospital are presented in the bar chart below. The top ten hospitals with the highest readmission rates are highlighted in orange. The range of ED 7-Day hospital admission rates are from a low of 14% at Backus Hospital to a high of 41% at Norwalk Hospital. The statewide average is 21%. Sharon hospital once again had the lowest number of BH ED visits at 52 during the 6 month time period. While there was clearly some relationship between the number of frequent visitors at a hospital and the 7-Day BH ED Readmission rate, there were also hospitals low on one measure, and high on the other. Of the top six (6) hospitals with the most BH ED Frequent Visitors, four (4) were among the top eight (eight) hospitals with the highest 7-Day readmission rates (Bristol, Yale New Haven, Hospital of Central CT., & Hartford Hospital). Also, two of the top six (six) hospitals with the most BH ED Frequent Visitors were among the bottom three (3) in rates of 7-Day readmissions (St. Francis and Backus). Finally, two hospitals that did not even make the top ten in terms of the number of frequent visitors were the two highest in rates of 7-Day Readmissions (Norwalk and Danbury). One hypothesis is that overall volume of BH ED visits is a factor in the rate of BH ED readmissions. However, the correlation coefficient for the relationship between BH ED volume of visits and 7-Day readmissions was near 0 ($r = -0.04$, $t = -0.204$, df 26, n.s.) suggesting that these variables are relatively independent. It may be that hospitals with low rates of BH ED Frequent visitors and high rates of ED BH Readmissions commonly see visitors multiple times but have relatively few that meet the threshold for ED Frequent Visitors with 7 or more visits. Why they have so many repeat visitors but relatively few that come back 7 or more times is unclear at this point.
The ED 30-Day readmission rates for adults by hospital are presented in the bar chart below. The top ten hospitals with the highest readmission rates are highlighted in orange. The range of ED 30-Day hospital admission rates are from a low of 25% at Sharon Hospital to a high of 58% at Norwalk Hospital. The statewide average is 36%. Sharon Hospital once again had the lowest number of BH ED visits of 52 during the 6 month time period. While there was clearly some relationship between the number of frequent visitors at a hospital and the 7-Day BH ED Readmission rate, there were also hospitals low on one measure, and high on the other. Of the top six (6) hospitals with the most BH ED Frequent Visitors, four (4) were among the top 7 (seven) hospitals with the highest 30-Day readmission rates (Yale New Haven, Bristol, Hospital of Central CT., & Hartford Hospital). Also, one of the top 6 (six) hospitals with the most BH ED Frequent Visitors was among the bottom two (2) in rates of 30-Day readmissions (St. Francis and Backus). Finally, two hospitals that did not even make the top ten in terms of the number of frequent visitors were the two highest in rates of 30-Day Readmissions (Norwalk and Danbury).
BH ED Readmission rates were also computed for Frequent Visitors and are presented in two bar charts, starting below. The ten hospitals with the highest BH ED Frequent Visitor rates are highlighted in orange. The ED readmission rates for frequent visitors are higher than for the general adult ED visitors. The range of BH ED Frequent Visitor 7-Day hospital admission rates are from a low of 32.7%% at Stamford Hospital to a high of 68% at Norwalk Hospital. The statewide average is 46.5%. Sharon Hospital once again had the lowest number of BH ED visits by Frequent Visitors at 11 during the 6 month time period.
The range of BH ED Frequent Visitor 30-Day hospital readmission rates begins at a low of 38.5% at Sharon hospital but this is based on a very small N of 11 visits. Stamford Hospital had a higher number of visits (199) and a rate of 55.8% as the next lowest 30-Day Readmission rate for frequent visitors. The highest rate was at Norwalk Hospital with a 30-Day readmission rate of 87%. The statewide average is 71.2%. Yale New Haven Hospital, with a 30-Day rate of 77.5% was the only one of the pilot hospitals in the top ten hospitals.
CTC RATES

In addition to computing ED Readmit Rates by Hospital, Connect to Care Rates (CTC) for Youth and Adults for each hospital were also computed as described in the methodology section above. Both (7) and (30) Day Connect to Care Rates were computed. Also, CTC rates were computed for All BH ED visits and for only those visits accounted for by BH ED Frequent Visitors. This later CTC rate will be one of the primary measures of the effectiveness of the ED Frequent Visitor interventions.

The bar graph below shows hospital rates of 7-Day CTC for All BH ED Visitors from July to December of 2013. The Top Ten hospitals are shaded in orange. The statewide average for BH ED 7-Day CTC was 20.8%. The range of CTC rates was from a high of 37% at Midstate Medical Center to a low of 11.7% at Norwalk Hospital. Interestingly, all five of the ED BH Frequent Visitor Pilot Hospitals were below average in their 7-Day CTC rates.
Whatever can be done to improve CTC within the first 7 days is likely to have a similar impact on the 30-Day CTC.

The bar graph below shows hospital rates of 30-Day CTC for All BH ED Visitors for July to December of 2013. The statewide average for ED 30-Day CTC was 36.8%. The range of CTC rates was from a high of 51.7% at Midstate Medical Center to a low of 24.4% at Norwalk Hospital. Four (4) of the five (5) of the ED BH Frequent Visitor Pilot Hospitals were below average in their 30-Day CTC rates. Backus Hospital was the one exception that was below average on the 7-Day CTC but above average on the 30-Day CTC. Across hospitals, the relationship between the rate of CTC at 7-Days and at 30-Days was quite strong with an r of .89 (r=.89, df = 26, t=9.953, p<.0000001) indicating a highly significant and very strong correlation between CTC at these two different time periods. This finding suggests that whatever can be done to improve CTC within the first 7 days is likely to have a similar impact on the 30-Day CTC.
The bar graph below shows hospital rates of 7-Day BH ED Frequent Visitor CTC for July to December of 2013. The statewide average for this 7-Day CTC was 21.8%. The range of CTC rates was from a high of 41.6% at Middlesex Hospital to a low of 5.3% at Norwalk Hospital. Four (4) of the five (5) of the ED BH Frequent Visitor Pilot Hospitals were below average in their 7-Day CTC rates. Backus Hospital was the one exception that was above average on the 7-Day CTC. In comparing the 7-Day CTC for All BH ED Visitors to the 7-Day CTC for BH ED Frequent Visitors, the frequent visitor rate was slightly higher (21.8% vs. 20.8%, chi square p<.05). This suggests that Frequent Visitor status is unlikely to be due solely or primarily to poorer 7-Day connections to care.
The bar graph below shows hospital rates of 30-Day BH ED Frequent Visitor CTC for July to December of 2013. The statewide average for this 30-Day CTC was 39.3%. The range of CTC rates was from a high of 64.6% at Middlesex Hospital to a low of 16.9% at Norwalk Hospital. Four (4) of the five (5) of the ED BH Frequent Visitor Pilot Hospitals were below average in their 30-Day CTC rates. Backus Hospital was the one exception that was above average on the 30-Day CTC. Notably, Middlesex Hospital, the one hospital with the longest running CCT and that was the model for the current intervention, had the highest CTC rate for BH ED Frequent Visitors. However, in comparing the 30-Day CTC for All BH ED Visitors to the 30-Day CTC for BH ED Frequent Visitors, the frequent visitor rate of CTC was significantly higher (39.3% vs. 36.8%, chi square p <.05). This suggests that frequent visitor status is unlikely to be solely or primarily due to poorer 30-Day connections to care.
Finally, in order to explore the relationship between Connection to Care and Readmission rates, the Pearson r statistic or correlation coefficient, was computed for the 7 & 30 day BH ED connection to care and 7 & 30 day BH ED readmission rates. Moderate correlations were obtained. For the 7 day BH ED Readmission and 7 day ED CTC rate, the r was -.46 ($t = -2.36$, df = 26, $p<.013$) and indicates that as the CTC rate gets higher, the readmission rate gets lower. Similarly the 30 day comparison yielded a -.42 ($t=2.642$, df = 26, $p<0.00689$) with a similar interpretation as the 7 day rate. Although correlations do not indicate causality, a moderate correlation between readmission and connect to care suggests that improving connection to care is likely to lower the rate of readmission.

PRODUCE A GEO-MAP OF HIGHEST ED UTILIZERS AS A STEP IN THE DIRECTION TOWARDS “HOT-SPOT” INTERVENTION.

The street addresses of all adult members that were frequent visitors identified during the index period were mapped onto the state of CT map. The resulting “Geo-Map” is displayed below. The clusters of members coincide with the location of Hospitals with emergency departments. For example, in southwestern CT, clusters correspond to Stamford, Norwalk, Bridgeport, New Haven, and Danbury Hospitals. Consistent with prior research, the vast majority of ED frequent visitors live within the city/town where the hospital ED is located suggesting that convenience and easy geographic access may be significant factors in high utilization.
DEVELOP AND IMPLEMENT METHODS OF INTERVENTION FOR ADULT ICMS TO UTILIZE WITH THE ED SUPER USERS.

Assign staff and deploy when necessary to select hospital EDs. (Value = .5%)

Assign an adult ICM and/or Peer Specialist to each of the five (5) selected hospitals (from the top 10 noted above) and select the ED intervention target at each hospital.

The intervention target will be defined and prioritized according to the following criteria:

the ED super users identified in the period July 1, 2013 to December 31, 2013

As noted previously hospital specific lists of the ED frequent visitors were developed initially based on the index period of July to December 2013 and then subsequently refreshed with current data each month beginning in August 2014. Given the evaluation methodology focused on reducing the percentage of visits accounted for by frequent visitors and the caseload capacity of the assigned ICM/PEER team, it became necessary to limit the participation in the frequent visitor pilot to individuals on these lists that met the frequent visitor definition.

members presenting at the ED that match the profile of high utilizers

As noted above, given the focus of the intervention on the frequent visitors and the resistance of the hospitals to engage in any kind of screening process at the time of presentation at the ED, the pilot did not attempt to enroll or engage members meeting a profile of high utilizers that were not already identified by having 7 or more visits to the ED.

members identified by the ED as recent/current high utilizers

Again, given that the evaluation methodology is focused on the target population of those who visit 7 times or more, members identified by the hospital that did not meet the 7 visit threshold were not enrolled or engaged in the pilot project. In practice, the visitors identified by the ED staff were typically those who were already on the list of frequent visitors.

Perform the following interventions to assist in reducing the rate of members in the ED super use group:

Determine baseline rates of connect to care and hospital readmissions for the comparison group by July 1, 2014.

VO and the State partners agreed to a change in the evaluation methodology that no longer employs a “comparison group” methodology. Instead the evaluation of the intervention will utilize a repeated measures design. A 3 year baseline comparison period for each hospital on each measure, commencing July 1, 2011 and ending June 30th 2014 will be substituted for the comparison group. This analysis will be completed in the spring of 2015 (due to claims lag).
BEGIN INTERVENTIONS WITH EDs AND SUPER USERS BY JULY 1, 2014.

Interventions with EDs were initiated by July 1, 2014 as described above. Initial efforts were focused on identifying key staff in the ED and BH department’s in each hospital, developing procedures for referral and making contact with members, gaining access to the hospital medical record, obtaining necessary credentials, conducting organization meetings, etc. Although some of these activities were begun in June, many carried over into July.

Despite the challenges associated with launching such a complex endeavor in a short time frame, four (4) of the five (5) selected hospitals (Bristol Hospital, Backus Hospital, St. Francis Hospital and Yale New Haven Hospital) began referring members in July 2014 and all had at least one client opt in to the program. Hartford Hospital was initially seeking a high level of credentialing for VO staff that delayed initial implementation, but the issue was successfully negotiated and Hartford Hospital began making referrals and clients began opting-in, in August of 2014.

The report below shows the referrals, opt-ins, and opt-outs for the project from July 1, 2014 through December 15th, 2014 (the last report able to be accessed at the time of writing this narrative).

A total of 325 referrals had been made across all five hospitals with 157 of those referrals choosing to Opt-In to the program and 13 Opting-out. Of all individuals contacted, 92% choose to participate in the program. The remaining 158 individuals could not be contacted either during their ED visit or following discharge from the ED. St. Francis had the largest number of Opt-Ins with 38, followed by Hartford with 37, Yale with 31, Bristol with 24, and Backus with 22.
BH ED Frequent Visitors that opted-in to the pilot project at the five hospitals were compared to all those referred as well as to all BH ED Frequent Visitors in the original sample and the total Adult Medicaid Population. The variables included Gender, Age, Race/Ethnicity, Substance Use Problem, Transportation Issues, Housing Issues, and The Physical Composite Score and the Mental Composite Score of the SF-12, a general health status survey. Not all measures were available for all groups. Gender, Age, and Race/ethnicity were available for all groups. Substance Abuse, Transportation Issues, and Housing Issues variables were available for some of the individuals referred but that did not opt-in and for most of those that opted-in. The SF-12 Physical Composite Measure (PCS) and Mental Composite Measure (MCS) were only available on those that opted in to the pilot. The Table below presents the characteristics of referred and opt-in pilot participants in comparison to all BH ED Frequent Visitors identified during the index period and the total adult Medicaid population.

<table>
<thead>
<tr>
<th>CHARACTERISTICS OF BH ED FREQUENT VISITOR PILOT SUBJECTS - REFERRED VS. OPT-IN VS. ALL FREQUENT VISITORS VS. ALL MEDICAID (July to Dec, 2014)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>REferred</strong></td>
</tr>
<tr>
<td>Gender Total</td>
</tr>
<tr>
<td>Female</td>
</tr>
<tr>
<td>Male</td>
</tr>
<tr>
<td>Average Age</td>
</tr>
<tr>
<td>Race/Ethnicity Total</td>
</tr>
<tr>
<td>African American</td>
</tr>
<tr>
<td>Caucasian</td>
</tr>
<tr>
<td>Hispanic</td>
</tr>
<tr>
<td>Multi-Race</td>
</tr>
<tr>
<td>Substance Abuse Total</td>
</tr>
<tr>
<td>Not Scored</td>
</tr>
<tr>
<td>Yes</td>
</tr>
<tr>
<td>Transportation Total</td>
</tr>
<tr>
<td>Not Scored</td>
</tr>
<tr>
<td>0-No Barrier</td>
</tr>
<tr>
<td>1-Moderate Barrier</td>
</tr>
<tr>
<td>2-Significant Barrier</td>
</tr>
<tr>
<td>Housing Issues Total</td>
</tr>
<tr>
<td>Not Scored</td>
</tr>
<tr>
<td>0-No Barrier</td>
</tr>
<tr>
<td>1-Minimal Barrier</td>
</tr>
<tr>
<td>2-Moderate Barrier</td>
</tr>
<tr>
<td>3-Homeless or at Risk</td>
</tr>
<tr>
<td>SF-12 PCS - Total N</td>
</tr>
<tr>
<td>SF-12 PCS - Average Physical Health</td>
</tr>
<tr>
<td>SF-12 MCS - Total N</td>
</tr>
<tr>
<td>SF-12 MCS - Average Mental Health</td>
</tr>
</tbody>
</table>

1 The run date on this analysis was 12/15/14. For the following tables and graphs, the issues with the unassigned individuals were resolved and they were either eliminated as duplicates or assigned to the appropriate hospital.
The table below shows the results of the significance testing of the differences on demographic variables across the index sample of Opt-Ins, the Adult ED BH Frequent Visitors, and the Total Medicaid Adult Population. Each cell indicates the level of significance for the test of differences between the variables identified by the intersecting columns and rows. The *** indicates significance at the p < .001 level of significance. The legend at the bottom provides further information regarding this table.

In general, most of the observed differences (9 of 12 possible comparisons) across gender & ethnicity are statistically significant.

<table>
<thead>
<tr>
<th>DEMOGRAPHICS</th>
<th>OPT IN</th>
<th>BH ED FREQUENT VISITORS</th>
<th>MEDICAID POPULATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>GENDER (MALE)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>OPT IN</td>
<td>n.s.</td>
<td>***</td>
</tr>
<tr>
<td></td>
<td>FV</td>
<td></td>
<td>***</td>
</tr>
<tr>
<td>CAUCASIAN</td>
<td>OPT IN</td>
<td>***</td>
<td>***</td>
</tr>
<tr>
<td></td>
<td>FV</td>
<td></td>
<td>***</td>
</tr>
<tr>
<td>HISPANIC</td>
<td>OPT IN</td>
<td>n.s.</td>
<td>***</td>
</tr>
<tr>
<td></td>
<td>FV</td>
<td></td>
<td>***</td>
</tr>
<tr>
<td>AFRICAN AMERICAN</td>
<td>OPT IN</td>
<td>***</td>
<td>n.s.</td>
</tr>
<tr>
<td></td>
<td>FV</td>
<td></td>
<td>**</td>
</tr>
</tbody>
</table>

**Legend**

- Not Significant: n.s.
- p<=.001: ***
- p<=.01: **
- p<=.05: *

OPT IN: Frequent Visitors who Opted In
FV: Frequent Visitor BH ED Cohort
With regards to Gender, there was only a 1% difference between those referred (59% male) and those that opted in to the pilot (60% male) suggesting that gender was not a differential factor in who opted-in to the program. Within the group that opted in, 60% were male and 40% were female. The percentage of males that opted-in was slightly less than what was observed in the index sample of BH ED Frequent Visitors (60% vs. 62%) but significantly more than the percentage of males in the Adult Medicaid Population (42%). Once again, the percentage of males in high BH ED use groups is disproportionate to their presence in the Medicaid Population.

Those that chose to opt-in to the pilot program were slightly older (42) than the average of those referred (40), the BH ED Frequent Visitor Cohort (41), and the Total Adult Medicaid Population (37). Being older may be related to having more, or more serious health problems.

There was little to no difference between the Referred and Opt-In groups on race and ethnicity except for a slightly higher representation of African Americans in the Opt-in group (24% vs. 22%). There were significantly more African Americans opted-in to the pilot than there were in the BH ED Frequent Visitor Cohort (16%). There were significantly fewer Caucasians opted-in to the pilot (63%) than there were in the BH ED Frequent Visitor Cohort (71%), but significantly more than in the Total Medicaid Adult Population (48%). There were significantly fewer Hispanics opted-in to the pilot (13%) or in the BH ED Frequent Visitor Cohort (13%) than there were in the Total Medicaid Adult Population (28%). The finding regarding a disproportionate number of Caucasians among frequent visitors is consistent with previous findings and the literature. The finding of higher percentages of African Americans among the Opt-in group is counter to previous findings of disproportionally lower rates of African Americans as BH Frequent Visitors in the ED. Hispanics are disproportionally under-represented in the Pilot for both those referred and those that opt-in, as well as in the BH ED Frequent Visitor Cohort. Language and/or cultural barriers may be a factor here.

With regards to the presence of substance use disorders, over half (57%) of members that Opted-In to the pilot had a substance use disorder and nearly the same percentage of the referred group (58%) were substance abusers.

Transportation was a barrier to access to care for 62% and 64% of those referred and those that opted-in, respectively. Transportation was equally likely to be rated as significant barrier for those that opted-in (19%) vs. those that were referred (18%).

Housing issues were equally common among those referred and those that opted in with only 20% of both groups indicating no housing barriers to health and wellness. A startling 46% of those referred and 44% of those that opted-in were either homeless or at imminent risk of homelessness.

**Hispanics are disproportionally under-represented in the Pilot for both those referred and those that opt-in, as well as in the BH ED Frequent Visitor Cohort. Language and/or cultural barriers may be a factor here.**
Finally, the SF-12 Physical Health and Mental Health Composites were computed at intake for the majority (79%) of those that opted-in to the program. As expected both scores were below the average score of 50 (PCS=43, MCS=30) with the mental composite score at two standard deviations below the mean for this subscale. This confirms the high level of mental health challenge that these individuals are struggling with.

These demographic, situational, and health status measures were also broken out by hospital as a first step in exploring regional and/or hospital based differences. Separate tables and summary graphs across hospitals on each measure follows. The sample of those referred and Opted-in is relatively small and several of the measures used were not tested for inter-rater reliability (Substance Use, Transportation Barriers, Housing Barriers) so caution should be taken in generalizing from these results.

Backus Hospital had 22 members opt-in to the program as of 12/15/14. Backus Hospital is the only one of the five pilot hospitals to have more females Opt-in to the pilot than males (64% female vs. 36% male) which is also contrary to the pattern observed in the larger cohort of BH ED Frequent visitors. This could be due to the relatively small N (22) but it warrants further discussion with the Hospital and the VO team to determine what other factors may be behind this apparent anomaly. The average age of those that opted-in (38) is younger than the average for BH ED Frequent Visitors (41), and similar to the Adult Medicaid Population (37). Both in terms of those referred and those that Opt-In, there are fewer minorities and more Caucasians being served at Backus which may be a reflection of the racial and ethnic population served by that region. With regards to substance use, Backus is showing similar numbers on the percentage opted-in (41%) vs, those referred (42%), which was lower than the overall opted-in (57%) and referred (58%) rates. Backus had a smaller number of members with a significant transportation barrier (9%) among those that opted-in. Backus had the second lowest percentage of members with any kind of housing barrier (59%) and the lowest percentage of those that were rated as homeless or at risk of homelessness (23%).
## CHARACTERISTICS OF BH ED FREQUENT VISITOR PILOT SUBJECTS - REFERRED VS. OPT-IN VS. ALL FREQUENT VISITORS VS. ALL MEDICAID (July to Dec, 2014) BACKUS HOSPITAL

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Backus Hospital Referred</th>
<th>Backus Hospital Opt-In</th>
<th>All Adult BH ED Frequent Visitors</th>
<th>All Adult Medicaid</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender Total</strong></td>
<td>55 100%</td>
<td>22 100%</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>Female</td>
<td>29 53%</td>
<td>14 64%</td>
<td>64%</td>
<td>58%</td>
</tr>
<tr>
<td>Male</td>
<td>26 47%</td>
<td>8 36%</td>
<td>36%</td>
<td>42%</td>
</tr>
<tr>
<td><strong>Average Age</strong></td>
<td>39 N/A</td>
<td>38 N/A</td>
<td>41</td>
<td>37</td>
</tr>
<tr>
<td><strong>Race Ethnicity Total</strong></td>
<td>55 100%</td>
<td>22 100%</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>African American</td>
<td>4 7%</td>
<td>1 5%</td>
<td>16%</td>
<td>21%</td>
</tr>
<tr>
<td>Caucasian</td>
<td>45 82%</td>
<td>18 82%</td>
<td>71%</td>
<td>48%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>5 9%</td>
<td>2 9%</td>
<td>13%</td>
<td>28%</td>
</tr>
<tr>
<td>Multi-Race</td>
<td>1 2%</td>
<td>1 5%</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Substance Abuse Total</strong></td>
<td>55 100%</td>
<td>22 100%</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Not Scored</td>
<td>29 53%</td>
<td>0 0%</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Yes</td>
<td>11 42%</td>
<td>9 41%</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Transportation Total</strong></td>
<td>55 100%</td>
<td>22 100%</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Not Scored</td>
<td>29 53%</td>
<td>0 0%</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>0-No Barrier</td>
<td>11 42%</td>
<td>10 45%</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>1-Moderate Barrier</td>
<td>13 50%</td>
<td>10 45%</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>2-Significant Barrier</td>
<td>2 8%</td>
<td>2 9%</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Housing Issues Total</strong></td>
<td>55 100%</td>
<td>22 100%</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Not Scored</td>
<td>29 53%</td>
<td>0 0%</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>0-No Barrier</td>
<td>9 35%</td>
<td>9 41%</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>1-Minimal Barrier</td>
<td>5 19%</td>
<td>4 18%</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>2-Moderate Barrier</td>
<td>6 23%</td>
<td>4 18%</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>3-Homeless or at Risk</td>
<td>6 23%</td>
<td>5 23%</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>SF-12 PCS - Total N</strong></td>
<td>N/A</td>
<td>N/A</td>
<td>22 100%</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>SF-12 PCS - Average</strong></td>
<td>N/A</td>
<td>N/A</td>
<td>40 N/A</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>SF-12 MCS - Total N</strong></td>
<td>N/A</td>
<td>N/A</td>
<td>22 100%</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>SF-12 MCS - Average</strong></td>
<td>N/A</td>
<td>N/A</td>
<td>34 N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>
Bristol Hospital had a similar profile to Backus on several of the variables reviewed. Bristol showed the more typical pattern regarding gender with more males in the Opt-In category (63%) than females (37%). The average age of those that opted-in (41) is the same as the average for BH ED Frequent Visitors (41) and slightly older than the Adult Medicaid Population (37). Similar to Backus, very few minorities were either referred or opted-in, with the racial/ethnic background of the region being the most likely reason for this finding. Substance use disorders were present in 59% of those referred and 67% of those that opted-in. Bristol did not identify anyone with a significant transportation barrier and had the highest percentage of individuals with no transportation barrier (47%). 40% of the Bristol Opt-in population was rated as homeless or at risk of homelessness. The average score on the Physical Composite Measure of the Bristol Opt-in sample (42) was near the average of all five hospitals (43) but the Mental Composite Measure was the lowest at 25, and well below 2 standard deviations of the normative mean for the instrument.

| CHARACTERISTICS OF BH ED FREQUENT VISITOR PILOT SUBJECTS - REFERRED VS. OPT-IN VS. ALL FREQUENT VISITORS VS. ALL MEDICAID (July to Dec, 2014) | BRISTOL HOSPITAL |
|---|---|---|---|---|
| | BRISTOL HOSPITAL REFERRED | BRISTOL HOSPITAL OPT-IN | ALL ADULT BH ED FREQUENT VISITORS | TOTAL ADULT MEDICAID |
| Gender Total | 69 | 100% | 24 | 100% | 100% | 100% |
| Female | 37 | 54% | 9 | 38% | 38% | 58% |
| Male | 32 | 46% | 15 | 63% | 62% | 42% |
| Average Age | 39 | N/A | 41 | N/A | 41 | 37 |
| Race Ethnicity Total | 69 | 100% | 24 | 100% | 100% | 100% |
| African American | 2 | 3% | 1 | 4% | 16% | 21% |
| Caucasian | 64 | 93% | 21 | 88% | 71% | 48% |
| Hispanic | 3 | 4% | 2 | 8% | 13% | 28% |
| Multi-Race | 0 | 0% | 0 | 0% | N/A | N/A |
| Substance Abuse Total | 69 | 100% | 24 | 100% | N/A | N/A |
| Not Scored | 52 | 75% | 9 | 38% | N/A | N/A |
| Yes | 7 | 41% | 5 | 33% | N/A | N/A |
| Transportation Total | 69 | 100% | 24 | 100% | N/A | N/A |
| Not Scored | 52 | 75% | 9 | 38% | N/A | N/A |
| 0-No Barrier | 8 | 47% | 7 | 47% | N/A | N/A |
| 1-Moderate Barrier | 9 | 53% | 8 | 53% | N/A | N/A |
| 2-Significant Barrier | 0 | 0% | 0 | 0% | N/A | N/A |
| Housing Issues Total | 69 | 100% | 24 | 100% | N/A | N/A |
| Not Scored | 52 | 75% | 9 | 38% | N/A | N/A |
| 0-No Barrier | 5 | 29% | 4 | 27% | N/A | N/A |
| 1-Minimal Barrier | 3 | 18% | 3 | 20% | N/A | N/A |
| 2-Moderate Barrier | 2 | 12% | 2 | 13% | N/A | N/A |
| 3-Homeless or at Risk | 7 | 41% | 6 | 40% | N/A | N/A |
| SF-12 PCS - Total N Physical Health | N/A | N/A | 15 | 63% | N/A | N/A |
| SF-12 PCS - Average Physical Health | N/A | N/A | 42 | N/A | N/A | N/A |
| SF-12 MCS - Total N Mental Health | N/A | N/A | 15 | 63% | N/A | N/A |
| SF-12 MCS - Average Mental Health | N/A | N/A | 25 | N/A | N/A | N/A |
At Hartford Hospital 62% of those that Opted-In were male, similar to what has been observed at most other participating hospitals. The average age of those referred (40) and those that Opted-In (41) were similar to the BH ED Frequent Visitor Cohort (41) and slightly older than the Adult Medicaid Population (37). Hartford had the highest percentage of Hispanics Opt-in (22%) in comparison to all other participating Hospitals, which is higher than the BH ED Frequent Visitor (13%), but still at a rate below what would have been predicted by the Adult Medicaid Cohort (28%) or among those referred (36%). Somewhat surprisingly, Hartford Hospital had a relatively low rate of substance abusers among their Opt-In cohort (33%), the lowest rate among the five (5) participating hospitals. A somewhat lower rate of transportation barriers was also noted with a higher rate of Opt-Ins at Hartford experiencing no barrier (41% compared to Opt-in average of 36%). With regards to housing issues, Hartford had the highest rate among all five hospitals with 65% of individuals rated as homeless or at risk for homelessness. On measures of health status, Hartford had the highest average score on the Physical Health Composite of those that Opted-In (46) and a Mental Health Composite near the average for the five hospitals (29 vs. 30).

Hartford had the highest rate among all five hospitals with 65% of individuals rated as homeless or at risk for homelessness.
St. Francis also had the highest percentage of Opt-ins with a substance use disorder at 76%, perhaps related to the frequency with which they provide detox services. During 2013, claims reports indicate that St. Francis Hospital conducted 1,979 Hospital Detoxes in comparison to 888 conducted by their neighbor Hartford Hospital. With regards to transportation barriers, St. Francis once again had the highest percentage with a barrier at 81%. They also had the smallest percentage of Opt-Ins with no housing barrier (5%) and the second highest percentage (49%) rated as homeless or at risk.

St. Francis Opt-Ins had an average score of 45 on the SF-12 Physical Health Composite and a 32, on the Mental Health Composite.
Yale had the highest percentage of Males (71%) and the highest average age (45) for Opt-Ins at any Hospital in the pilot. 65% of Yale New Haven Hospital Opt-ins were Caucasian but they also had the second highest percentage of African Americans (32%). Yale had 64% of their Opt-in population identified with a substance use disorder, the second highest percentage among the intervention hospitals behind St. Francis. A higher than average percentage of those who Opted-in to Yale (46%) had no transportation barrier and a lower than average percentage were rated as homeless (36%). The Opt-in Physical and Mental Composite Scores were 41 and 26 respectively.

The data for each hospital’s opt-in sample is displayed in a series of bar charts that follow. Below each cluster of bars the N for those scored is listed in parentheses. In those case where some members were not scored the N is listed as (15 of 24) indicating that there were a total of 24 members that opted in, with 15 that were scored. Percentages for each score were based on the number scored rather than the total N.
Substance Abuse Comparisons of Frequent Visitor Opt-In Populations
Excluding Records that are Not Scored

Transportation Barrier Comparisons of Frequent Visitor Opt-In Populations
Excluding Records that are Not Scored
Housing Comparisons of Frequent Visitor Opt-in Populations
Excluding Records that are Not Scored

- Bristol (15 of 24)
- Backus (22 of 22)
- Hartford (34 of 37)
- St. Francis (37 of 38)
- Yale (28 of 31)
- All Opt in (140 of 157)
- All Referrals (156 of 323)

Legend:
- 3=Homeless or at Risk
- 2=Moderate Barrier
- 1=Minimal Barrier
- 0=No Barrier
Several general observations can be made regarding the demographic and other client factors and how the results are distributed across the hospitals in the pilot. These observations should be regarded as preliminary considering the small N and other methodological factors but it may be wise to explore these further in comparison to hospital based data on the demographics of clients served. While it would seem useful and perhaps likely that differences across hospitals might be based on a classification as urban (Hartford, St. Francis & Yale) vs. suburban (Backus and Bristol), this categorization does not always hold up. Four of the five hospitals are aligned with regards to gender with between 71% and 58% male. Backus is the one outlier with 64% female. The urban centers appear to be high in the percentage of individuals with substance abuse (Yale and St. Francis vs. Backus) but Hartford Hospital has the lowest percentage of individuals with SA diagnoses and Bristol has the 2nd highest. With regards to transportation barriers, The two less urban centers (Backus and Bristol) report fewer transportation issues than two of the urban centers (Hartford and St. Francis) and yet Yale New Haven Hospital emerges as the one facility in the group that has the highest percentage with no transportation issues. Two of the urban centers (Hartford and St. Francis) have the highest percentage of Homeless and Backus has the lowest. However, unexpectedly, Bristol has a higher percentage of Homeless in the Opt-In group than Yale. Across all hospitals the Physical Composite health status measure is higher than the Mental Composite Measure, as one would expect given the population. Notably, the Mental Composite average scores per hospital range from 1.5 to 2 standard deviations below the mean (50) for this standardized measure, indicating a highly significant degree of mental health impairment in this population.

**Intervention group will connect to care at a mutually agreed upon rate higher than the comparison group at 7 and 30 days when comparing October 1, 2014 through December 31, 2014. The rate will be mutually agreed upon by August 1, 2014.**

As noted previously, the methodology has changed to a repeated measurements design and rather than identify an arbitrary threshold of difference or change expected, the agreement was to use a P<.10 statistical significance test. As agreed, to accommodate the impact of claims lag, this analysis will be completed in the Spring of 2015.

**Intervention group will re-admit to any hospital for any reason at a mutually agreed upon rate lower than the comparison group at 7 and 30 days when comparing October 1, 2014 through December 31, 2014. The rate will be mutually agreed upon by August 1, 2014.**

Here again, the comparison will be the rate during the index period vs. the rate in the preceding three years with expected change being P<.10 statistical significance.
VO will refresh the baseline data regarding connect to care and readmission rates by August 31, 2014. State partners and VO will review updated baseline information by 9/15/2014 to confirm that the mutually agreed upon target rates are acceptable. If the new analysis shows results that are significantly different from the initial results, the target rates will be renegotiated.

Given the change in methodology and use of the p\textless{}=.10 threshold, there was no need for a refresh of the baseline readmission rates or revision of the target rates.

**IX. Develop a methodology to evaluate rates of ambulatory primary care and behavioral health visits of ED super users for adults and youth.**

As noted above, VO developed and implemented a measure of connection to BH care following an ED visit (ED CTC). The decision was made to base the measure on HEDIS Ambulatory Follow-up but modifications were made with regards to the index event (e.g. BH ED Visit vs. BH Inpatient Admission) and the services that would qualify as appropriate follow-up (e.g. incorporating non-Medicaid DMHAS services). Those ED CTC rates are broken out by hospital and reported above. The initial plan to evaluate ambulatory primary care visits of BH ED Frequent Visitors was to first identify all primary care providers through a DSS supplied provider file with a primary care identifier(s).

In the spring of 2014, VO learned that DSS would be unable to supply VO with the necessary information. Without access to this information, this portion of the analysis could not be completed and was suspended by the State Partners. However, since it is known that ED BH Frequent Visitors often have a high rate of co-occurring medical disorders (such as Asthma and COPD) and they are often frequent visitors to the ED for medical, as well as for BH reasons, the state partners remained interested in examining primary care follow-up following a BH ED visit.

VO staff researched other methods of determining primary care connection and found several methodologies that use an “attribution” methodology to link PCPs with members using a claims-based search of CPT and revenue codes commonly associated with primary care practice. Widely used as a method of tracking provider accountability through Accountable Care Organizations, the attribution method can also be adapted to track primary care medical follow-up after an ED visit. We also discovered that our colleagues at Community Health Network (CHN) utilize an attribution methodology to report on the percentages of members attributed to a PCP or PCMH vs. Unattributed. Our plan is to adopt/modify their methodology which offers the advantage of using comparable methods across ASOs and the possibility of making direct comparisons between CHN and VO projects.

**Widely used as a method of tracking provider accountability through Accountable Care Organizations, the attribution method can also be adapted to track primary care medical follow-up after an ED visit.**
The CHN method is to “Attribute” members to primary care physicians (PCPs) or primary care medical homes (PCMHs) by tracking specific CPT and revenue codes typically associated with primary care activities/procedures. These codes are used to link the member with the provider that has utilized these codes. All the required CPT and Revenue Codes are contained in the claims file that VO receives from DSS. The codes include the following:

- Preventive CPT code ranges: 99381-99387 and 99391-99397
- Evaluation and Management CPT code ranges: 99201-99215 and 99401-99409
- Revenue Codes: 510, 514, 515, 517, 519

Essentially, the method attributes the member to the provider that has billed the most codes in the prior 15 month period from those codes listed above. Various decision rules are incorporated when there is a “tie” between multiple providers or when a PCP/Group attribution is no longer valid. Further details regarding the handling of duals, gaps in eligibility, etc. can be decided by mutual agreement during the 2015 PT.

Several options are available regarding how to adopt this methodology for the purpose of assessing ambulatory primary care follow-up to a BH ED visit. One approach would be to simply use the CPT and revenue codes as the indicator of whether appropriate follow-up has occurred without also attributing the member to a specific provider. This assumes that any follow-up primary care activity is sufficient. The other method is to actually attribute the member to a specific provider and then determine if follow-up by that provider has occurred post ED discharge. This gets a bit more at issues of continuity of care vs. simply having received a follow-up visit. The limitations are that the attribution to a particular provider is arbitrary based on the past history of claims and may not be the “true” primary care provider.

**X. Develop an Evaluation Methodology for an intervention to improve the connection and engagement in ambulatory primary and behavioral health care for high utilizers of the ED.**

The current PT includes an evaluation methodology for an intervention to improve connection to care for ED BH Frequent Visitors. As described above, VO recommends a repeated measures design comparing a hospital’s prior performance to an index period in which an intervention is delivered. We do not believe a comparison group methodology is advisable given the unfeasibility of true random assignment and the challenges of developing a matched control as an alternative. Without either randomization or matching, it is unlikely that there will be enough control of random factors to produce reliable results. It is also advised that such a complex, real world study would take more than a single contract year to carry out and should be developed as a multi-year project.
Intervening to improve ambulatory primary care follow-up would be best accomplished as a collaborative effort with the Medical ASO and/or in conjunction with the Behavioral Health Home Initiative.

Intervening to improve ambulatory primary care follow-up would be best accomplished as a collaborative effort with the Medical ASO and/or in conjunction with the Behavioral Health Home Initiative. Four alternative but complementary approaches are considered. One is to focus on a systemic intervention, such as the CCT process, but to expand the scope of participating providers to include FQHCs, other large primary care providers, and/or Behavioral Health Homes. A second option would be to utilize specially trained peers/care managers that would function as supports and navigators. It is recommended that these care navigators be attached to and embedded within the local service system. A third option would be to focus on a technology oriented approach creating a health information exchange that would share timely healthcare utilization data such as ED visits, prescription refills, outpatient appointments, etc., with a community based team serving a subset of ED BH Frequent Visitors with chronic medical illness. The technology solution could include text message reminders for appointments, medications, etc. The fourth approach would be to promote the development of urgent medical and behavioral health clinics located in the vicinity of EDs. This would be considered a “hot-spotter” type intervention that could capitalize on the fact that many frequent visitors live in the vicinity of the ED.

XI. Discussion

Broadly speaking, the goals of this performance target were to learn more about frequent visitors to the ED; including who they are, why they return to the ED so often, and how hospitals across the state are performing with regards to reducing readmissions and improving connections to care. Additionally VO was charged with developing an intervention with frequent visitors to reduce their rate of readmission and improve their follow-up in the community. A secondary goal has been to better understand those that are high users of both inpatient care and emergency department visits.

Increasing use of the Emergency Department (ED) is a national and international concern yet few hospitals have methods of identifying those who use the ED the most. Although people use the ED for many reasons, frequent visitors are more likely to have mental health and substance abuse problems as well as comorbid medical conditions and social and economic challenges such as poverty, homelessness, and lack of employment. We are also beginning to understand that most frequent visitors to the ED live in the town or city where the ED is located and that the vast majority will return to a significantly reduced frequency of ED visits within a year.
The episodic nature of frequent visiting suggests that to be most effective, tools allowing early, real time, accurate prediction of who will become a frequent visitor should be developed.

VO and the CTBHP developed an Intensive Care Manager/Peer Support Intervention (ICM/PEER) to intervene with the top 2% of BH ED Frequent visitors, defined as those with 7 or more ED visits in a 6 month period where there was a BH diagnosis as primary or secondary on the ED claim. Five hospitals were selected for participation in this pilot based on their numbers of ED frequent visitors. The five hospitals are Backus Hospital, Bristol Hospital, Hartford Hospital, St. Francis Hospital and Medical Center, and Yale New Haven Hospital. The goals of the intervention are to reduce the percentage of BH ED visits accounted for by Frequent Visitors, reduce ED BH Readmission Rates, and improve connections to care following an ED visit. The ICM/PEER model was developed based on two evidence-based care strategies; Motivational Interviewing (MI) and Wraparound or WRAP. In simplest terms, MI strategies are used to enhance engagement in care and recovery and improve motivation while WRAP is focused on coordinating care to achieve better coordination across systems and services and more timely access to resources. ICM/PEER Teams were assigned to each of the five hospitals participating in the pilot project and the clinical leadership at VO utilized standardized training, supervision, care management protocols, and QI processes to support effective implementation and fidelity to the care model.

The development/enhancement of Community Care Teams (CCT) was a second strategy employed in conjunction with the ICM/PEER Intervention to better serve frequent visitors to the ED. CCTs bring hospital EDs together with key community resources to engage in client specific planning and coordination. VO adapted the CCT model developed at Middlesex Hospital and has been promoting its development and use at Bristol Hospital, Backus Hospital, Yale, and a joint CCT between Hartford Hospital and St. Francis Medical Center. The CCT improves the timeliness of access, removal of barriers, and coordination of care on behalf of the member. To be successful a CCT must have high level buy-in, commitment and participation from multiple hospital departments (including the ED) and key community agencies and support networks. VO Regional Network Managers (RNM)s have found that the keys to success have included successful negotiation of legal issues related to implementing a broad release of information for all CCT participants, resources and key players to lead the CCT and provide organizational support, and access to technology for timely information sharing related to care planning and coordination.

Given growing concerns about prescription drug abuse and the fact that many individuals visit the ED for pain management and/or to seek drugs, a prescription drug abuse prevention campaign was included as a third intervention strategy. VO RNM staff distributed educational materials supplied by the Department of Consumer Protection that are designed to educate medical staff and consumers about the dangers of prescription drug abuse.
A sub goal of the PT was to identify the High Users of both inpatient care and the ED based on the top 10% of highest utilizers. There was significantly less overlap between these populations than originally anticipated with a minority of those that visit the ED (26%) being high users of the hospital and just over half of those that are hospitalized (53%) being high users of the ED. For now, it is suggested that separate strategies for dealing with Inpatient or ED High Users is the best approach.

The current study confirmed previous research indicating that most frequent visitors do not persist in their frequent use of the ED. Of the BH ED Frequent Visitors identified during the index period, 61% did not meet the 7 visit threshold in the prior six (6) months and 64% did not meet the threshold in the following six (6) months, earning the label of episodic frequent visitor. Further detailed study of both persistent and episodic frequent visitors is indicated.

A major goal of the PT was to explore patterns of BH ED Frequent visitor utilization, ED readmission rates, and ED connect to care rates across hospitals in Connecticut. VO developed new measures of connection to care and readmission based on HEDIS specifications but modified to address the idiosyncrasies of ED care and utilization (HEDIS does not currently have ED Measures). Evaluation of 7 and 30 day ED readmission rates across 2012 and 2013 found the rates to be quite stable when examined as a statewide rate. Individual hospital rates showed a significant degree of variation suggesting opportunities for improvement among those with higher rates. Individual hospital rates of the percentage of BH ED visits accounted for by ED frequent visitors also varied significantly across hospitals ranging from 21% to 56%. Although volume of ED visits was suspected to play some role in these rates, no statistical relationship was found between volume and percentage of ED visits accounted for by BH ED Frequent Visitors.

A high degree of variation in hospital rates of connect to care was also observed indicating still further opportunities for improvement. The high level of statistical relationship between 7 & 30 day Connect to Care (r = .89) suggests that work at discharge to successfully improve 7 day connections to care is likely to have a similar impact on 30 day rates. Similarly, modest negative relationships between connect to care at 7 & 30 days and readmissions in the same time period suggest that improved connections to care may reduce readmission rates. One puzzling finding is that BH ED Frequent Visitors have better connection to care rates, particularly at 30 days, than do less frequent users of the ED for BH reasons. While connection to care may be important, other factors may drive readmission rates for the highest utilizers. One encouraging sign is that the one hospital that was the model for the CTC intervention, had the highest rate of connection to care for frequent visitors in the state.

The high level of statistical relationship between 7 & 30 day Connect to Care (r = .89) suggests that work at discharge to successfully improve 7 day connections to care is likely to have a similar impact on 30 day rates.
A geo-map of CT BH ED Frequent Visitors to the ED confirmed what the literature found regarding most frequent visitors living in the general vicinity of the ED. Convenience may be a significant factor suggesting that local interventions such as urgent care centers should be explored.

The clients that have Opted-In to the ED Frequent Visitor pilot generally follow the demographics of the larger sample of ED frequent visitors and there is little evidence of any type of recruitment selection bias. Most (roughly 60%) of those that have opted in are males, in their early forties, half with a substance use disorder, 60% with transportation issues and nearly half (44%) homeless or at high risk. With regards to race and ethnicity, more African Americans and Caucasians and fewer Hispanics have opted in than would have been predicted by the base rate of the BH ED Frequent Visitor sample. Across the five hospitals there is some evidence of an urban/suburban pattern among the demographics but there are notable exceptions and the relatively small numbers and methodological limitations require caution in interpreting the results. The highest rates of housing issues were reported in Hartford where different utilization patterns across the two hospitals were suggested by the data. For example, St. Francis had a higher percentage of members with substance use disorders and more African Americans while Hartford Hospital had more Hispanics Opt-in. The SF-12 results confirmed a high rate of mental health challenges (1.5 to over 2 standard deviations below the mean) and below average physical health status.

A further goal of the PT was the development of a method of tracking ambulatory follow-up with primary care following a BH ED visit. VO has researched and proposes using an “attribution” methodology that “attributes” members to primary care physicians (PCPs) or primary care medical homes (PCMHs) by tracking specific CPT and revenue codes typically associated with primary care procedures. These codes are used to link the member with the provider that has utilized them in billing. This method is similar to one used by the Medical ASO.

Finally, an intervention to address primary care follow-up from BH ED visits may have merit in reducing ED readmissions, improving health, and promoting integrated care. VO believes that an intervention to improve primary care follow-up should engage CHN and/or Behavioral Health Homes in collaboration, expand the CCT team to include primary care providers, embed care navigators in the local provider community, establish a health information exchange to promote collaboration and integration, and consider the development of urgent care behavioral health centers in the vicinity of hospital EDs.

Consider the development of urgent care behavioral health centers in the vicinity of hospital EDs.
XII. Recommendations

1) Begin computing ED utilization as a penetration rate of visits per thousand in the population. Also consider a similar rate per the Medicaid Population.

2) Test and Refine a predictive model for Adult BH ED Frequent visitors. Apply to all Medicaid adult members and produce risk scores that can be accessed in real time when a member presents at the ED.

3) Develop a funding mechanism for an ICM/Peer intervention for all hospitals. Smaller hospitals may be able to share teams.

4) Further develop/refine the ICM/PEER Intervention by producing a manual and implementation materials.

5) Transition existing CCTs to local leadership and facilitation for sustainability. Consider funding options through Medicaid or private foundations.

6) Develop a learning-collaborative and implementation materials for CCT development/application.

7) Continue to develop separate interventions for high users of Inpatient vs. Frequent ED visitors.

8) Further study the characteristics, similarities, and differences among persistent and episodic BH ED Frequent Visitors.

9) Further explore the relationship between 7-Day and 30-Day connections to care. Do EDs with low 7-Day rates increase their 30-Day rates the same amount as ED’s with higher 7-Day rates? What is the relationship between connection to care and measures of community access to mental health services? Do hospitals that operate a broader continuum of step-down services (IOP, EDT, etc.) have higher connection to care rates?

10) Incorporate new hospital measures re: % of visits accounted for by ED BH Frequent Visitors, BH ED Readmission Rates, and BH ED CTC rates into the hospital PAR program. Use the PAR to refine these measures and consider adding risk stratification in defining benchmarks.

11) Further explore differences between hospitals in ED client characteristics to inform interventions individualized for each hospital.

12) Consider developing a measure of engagement in follow-up care vs. simple 1 time connection.

Incorporate new hospital measures re: % of visits accounted for by ED BH Frequent Visitors, BH ED Readmission Rates, and BH ED CTC rates into the hospital PAR program.
13) Further explore reasons for readmissions to the ED for Frequent ED visitors that are already connected to care.

14) Continue to refine and extend geo-mapping strategies in the design of interventions for BH ED Frequent Visitors.

15) Complete the evaluation of the PT Interventions and consider exploring the financial return on investment of such approaches.

16) Continue administration of the SF-12 in tracking progress of pilot subjects and explore relationships between this outcome measure and other demographic, clinical, and utilization measures.

17) Implement the proposed “attribution” methodology to track primary care follow-up to BH ED visits. Work with State Partners to explore various options in developing this approach.

18) Consider the following strategies to enhance primary care follow-up to BH ED visits:

   i. Engage CHN and/or the BHHs in collaborating to measure and promote improved primary care follow-up.

   ii. Expand the scope of the CCT model to incorporate major primary care providers.

   iii. Embed care navigators in the local provider community and explore methods of funding.

   iv. Establish a Health Information Exchange to promote more efficient sharing of information across CCT and other providers.

   v. Develop urgent care behavioral health centers in the vicinity of existing EDs.

Expand the scope of the CCT model to incorporate major primary care providers.
XIII. Bibliography


APPENDIX 1

ALTERNATIVE METHODOLOGY—APPROVED 9/15/14

METHODOLOGY FOR PT #1 FREQUENT VISITORS TO THE ED—MEASURE OF INTERVENTION EFFECTIVENESS

- Two primary and one secondary intervention:
  - Primary Interventions.
    - Member Specific—I CM and PEER Intervention with frequent visitors.
    - Systemic—Establishment of a Community Care Team (CCT) or improvement of an existing CCT.
  - Secondary.
    - Utilize RNMs to support an ED focused educational campaign regarding prescription medication abuse/overdose.

- One Set of Primary and two sets of secondary measures:
  - Primary Measures.
    - Reductions in the predicted percentage of ED Visits accounted for by frequent visitors.
    - How Computed—This measure will be computed by comparing measures across a series of six month time periods.
      - The six-month period of July 1, 2014 through December 31, 2014 in comparison to the predicted six-month value based on the preceding 7 six-month periods (January 2011 through June 2014).
      - The value computed for each time period will be the total number of BH ED visits by frequent visitors to that hospital (those who visit any ED for BH reasons 7 times or more and have visited the particular ED at least once in the period) divided by the total number of BH ED visits at that hospital during the period.
      - These values will be computed for each hospital participating in the intervention and the aggregate of all 5 hospitals.
    - Statistical Test—In order to test if the post-intervention rate of visits by frequent visitors has decreased by a statistically significant degree, one approach is to compare the trend line for post-intervention quarters with pre-intervention quarters. If the value obtained during the intervention period deviates from the prior trend in the hypothesized direction (e.g. lower in this case) then one can make a strong argument that the intervention reduced the utilization by high utilizers. A continuous piecewise linear regression is a type of splined regression that performs the trend comparison in a single regression formula with a “knot” or “hinge point" at the final period prior to intervention. The pre- and post-intervention regression lines are constrained to share the hinge point.
• Threshold for determining an effect—Since this is a pilot intervention, implemented and evaluated within a “short” window, and designed to assist in the development of a more robust evaluation of a refined intervention, we propose using the threshold of a marginal statistically significant result of p<.10 or less. Marginal results are regularly reported in reputable scientific journals, particularly in exploratory research.

• Primary Measures.
  • Reductions in the predicted percentage of ED Visits accounted for by frequent visitors.

• Secondary Measures.

• Re-admit Rates for 7 and 30 days.
  • These would be computed for the same time periods noted above.
  • For every index BH visit by a frequent visitor that occurred at the particular hospital, those followed by another BH ED visit within the time period (7 or 30 days) at any other hospital, would be considered a readmission.
  • Using every visit by a frequent visitor at the designated hospital as an index visit, compute the readmission rate by frequent visitors at that hospital.
  • These values will be computed for each hospital participating in the intervention and the aggregate of all 5 hospitals.
  • Statistical Test — In order to test if the post-intervention readmission rate of visits by frequent visitors has decreased by a statistically significant degree, one approach is to compare the trend line for post-intervention quarters with pre-intervention quarters. If the value obtained during the intervention period deviates from the prior trend in the hypothesized direction (e.g. lower in this case) then one can make a strong argument that the intervention reduced the readmission rate by high utilizers. A continuous piecewise linear regression is a type of splined regression that performs the trend comparison in a single regression formula with a “knot” or “hinge point” at the final period prior to intervention. The pre- and post-intervention regression lines are constrained to share the hinge point.

• Threshold for determining an effect—Since this is a pilot intervention, implemented and evaluated within a “short” window, and designed to assist in the development of a more robust evaluation of a refined intervention, we propose using the threshold of a marginal statistically significant result of p<.10 or less. Marginal results are regularly reported in reputable scientific journals, particularly in exploratory research.

• Frequent Visitor Connect to Care Rate.
  • Connect to Care Rates for 7 and 30 days.
  • These would be computed for the same time periods noted above.
  • For every index BH visit by a frequent visitor that occurred at the particular hospital, those followed by an acceptable follow-up service (see connect to care methodology for list of acceptable services that have been expanded beyond HEDIS) within the time period (7 or 30 days) would be considered a connection to care.
• Using every visit by a frequent visitor at the designated hospital as an index visit, compute the connection to care rate by frequent visitors at that hospital by dividing the number of connected visits by the total number of visits by frequent visitors.

• These values will be computed for each hospital participating in the intervention and the aggregate of all 5 hospitals.

• Statistical Test—In order to test if the post-intervention connection to care rate of visits by frequent visitors has increased by a statistically significant degree, one approach is to compare the trend line for post-intervention quarters with pre-intervention quarters. If the value obtained during the intervention period deviates from the prior trend in the hypothesized direction (e.g. higher in this case) then one can make a strong argument that the intervention improved the connection to care rate by high utilizers. A continuous piecewise linear regression is a type of splined regression that performs the trend comparison in a single regression formula with a “knot” or “hinge point” at the final period prior to intervention. The pre- and post-intervention regression lines are constrained to share the hinge point.

• Threshold for determining an effect—Since this is a pilot intervention, implemented and evaluated within a “short” window, and designed to assist in the development of a more robust evaluation of a refined intervention, we propose using the threshold of a marginal statistically significant result of p<.10 or less. Marginal results are regularly reported in reputable scientific journals, particularly in exploratory research.

• Please note, for all calculations above, we will follow the established decision rules for indicators across the Performance Targets (i.e., definition of BH ED Visits included in analyses, exclusion rules based on gaps in eligibility).

• Addendum: On 9/8/14, an e-mail was received from the State Partners that approved the use of the methodology described above for the analysis of both the 2014 Inpatient and ED PTs. More specifically, they agreed to VO using the p<0.10 as the threshold for determining an effect but also requested that VO provide the outcomes for “p.05”. The partners also agreed to the proposed time periods described above.
Welcome
Honoring one another
Outline
Warm-up

Motivational Interviewing

Techniques
- Open-ended Questions
- Reflective Listening
- Affirm
- Summarize
- Elicit Change Talk

Core Components
- Express Empathy
- Avoid Argumentation
- Roll with Resistance
- Develop Discrepancy
- Support Self-efficacy

Spirit
- Collaboration
- Evocation
- Autonomy

Miller and Rollnick, 2002
TRAINING OUTLINE DAY ONE

- Clarifying our goals
- Teaching and Supervising MI
- Address questions on promoting team effectiveness
- Developing and integrating MI Language

TRAINING OUTLINE DAY TWO

- Dealing with challenges in implementing MI
- Recommendations & Feedback for Team Members
- Case Study With Actor

WARM-UP EXERCISE: NOTECARDS

In integrating MI into your program, what would success look like for you?
WARM-UP EXERCISE: NOTECARDS (CONT’D)

Find a partner and switch cards with them

Discussion Question:

What actions are you taking to achieve those objectives?

“Spirit of MI”

What is a teacher? It isn’t someone who teaches something, but someone who inspires the student to give of her best in order to discover what she already knows.

-Santo Coelho

8 TASKS FOR LEARNING MI

1. Exploring the spirit of MI.
2. Using client-centered skills (OARS).
3. Recognizing change talk.
4. Eliciting and reinforcing change talk.
5. Rolling with resistance.
6. Developing a change plan.
7. Consolidating client commitment.
8. Integrating MI with other intervention methods.

TEACHING MI

- Spirit, Theory, Techniques
- Video
- Exercises
- Experiential
- “Walk the Talk!” – Practice what you preach
- MI is deceptively complicated

DOCUMENTATION

- Stage of Change
- OARS
- Motivator: “Hook”

"Out beyond ideas of wrongdoing and rightdoing, there is a field. I’ll meet you there." - Rumi (translated by Clarks)
SUPERVISING MI - METHODS

1. Reviewing MI manuals, textbook chapters, or MI training tapes
2. Discussing the clinician’s past MI interviews
3. Using structured role-plays targeting skills areas necessitating development or clinical circumstances in which clinicians have difficulty using MI
4. Forming a group or peer supervision to promote wider interest and dissemination of MI within the agency

Modified from MIA-STEP Manual
http://www.motivationalinterview.org/Documents/MIA-STEP.pdf

WHERE MI CLINICIANS CAN GET STUCK

1. Letting go of the “expert” role
2. Using complex reflections
3. Missing opportunities for MI
4. Giving insufficient direction
5. Opposing resistance
6. (Not) attending to commitment language
7. (Not) letting go of MI

Great minds discuss ideas; Average minds discuss events; Small minds discuss people.

~Eleanor Roosevelt
EXERCISE: NOTECARDS

On an ANONYMOUS Notecard, write down:

- Three challenges that you see in implementing MI at Value Options
- One reason why MI is a worthwhile strategy

SELF-EXPECTATIONS

Expect success, and your performance with members will rise to meet your expectations.
LEADERSHIP OPPORTUNITIES

- Different Roles of the ICM and the Peer Counselors
- Integrating the two roles
- Increasing acceptance and utilization of MI
- Incorporating MI into the teams and their activities
- What else?

ICM VS. PEER ROLES

POSITIVE OUTLOOK

- You can control actions...and reactions. But not outcomes.
- Don’t fixate on “what went wrong”, but on what you did right—and how to improve on it next time.
- Frame criticism as a suggestion for the future.
ROLES & LEADERSHIP

• Help people to understand and accept your role—and strive towards the collective goal

• Fostering the idea that ICMs and Peer Counselors are equally necessary

• Taking pride in the success of the entire Value Options team—even if it's not directly yours.

THE TEAMWORK TRIAD

“"I like my role”

“I accept my role”

“I am effective in my role”

NEW MI LANGUAGE – THE LIFESAVER

• In order to help someone, they have to “grab the life saver”

• Mantra: "Engagement is the goal, rather than adherence."

• Shift the focus away from “losing” or “giving up” on the member to “They haven’t picked up on it yet”
### WHAT ARE YOUR GOALS?

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Process</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduce number of ED Visits for individuals who overuse emergency services. Increase adherence to primary care clinics and clinicians</td>
<td>• Develop more engagement with each patient interaction to understand why they use emergency services&lt;br&gt;• Use MI techniques to work more closely with Peer/ICM teammates in order to help the patient with issues</td>
</tr>
</tbody>
</table>

### THE BOTTOM LINE

You have **no control** over the outcome…

But **TOTAL CONTROL** over the PROCESS

### DECIDING WHEN TO “LET A MEMBER GO”

- Even if members agree to this program, that doesn't mean they're ready.
- Remind them that “Not pushing” is not the same as “giving up.”
- **ASK YOURSELF:** Am I doing more work than this member? Have I done all I can to get them the lifesaver? Are they still not picking up?
We are all concerned with the results... results get you moved up a level or eventually to the big leagues. However we know that paying attention to process goals is more productive. Discuss how we can't control the result or outcome just the action and reaction. We can only control our approach and our thinking about what happened. The result is also dependent on what other people do. Discuss how the MC player resists the temptation to focus on the Result or outcome but focuses more on the Action or the reaction (ie the process).

BRYAN CRANSTON ON PROCESS GOALS

Discuss the components of effective routines
— Play the video in Dropbox
WHAT ARE YOUR PROCESS GOALS?

Take a notecard and write down one or two process goals that you have developed as a result of our meetings.

WORKING WITH THE STANDARDIZED ICM/PEER

- Observe Colleague with ICM/Peer
- Discuss dynamics
- Brainstorm strategies

WORKING WITH PEER COUNSELOR

Case One: Jared

Jared, age 29, has been a peer counselor at Value Options for 3 years. He works with an ICM, Thomas, with whom there has lately been tension over a member with severe alcoholism who has failed to show up to his last three rehab appointments. Jared, who has had trouble with alcohol himself many years back, feels that the ICM often takes the lead in working with the members. "Tom picks and chooses when I should speak with this member. He's always saying that this case is more complicated and needs a clinical lead. So, what's my role? Do I have to wait every time we work with someone for Tom to decide what I should be doing?" he says. "So, I'm the guy with the experience, but it's too much for me to handle. It makes me wonder what Tom thinks about me!" With regards to MI, Jared believes its too "soft". "So I am just supposed to sit there and let them mess up?" he asks during a recent meeting?
**WORKING WITH AN ICM**

**Case Two: Thomas**

Thomas, 32 years old, has worked as an ICM at Value Options for six months and has been working with Jared, a peer counselor, to assist a client with severe alcoholism. Thomas disagrees with Jared over how best to approach difficult patients. He says, “The role of the peer counselor is very important, fine, but in drastic cases the support aspect is really kind of secondary.” He says that his first priority is to make sure the patient is on board, make sure that he will see the doctors. “Obviously I can’t connect with members the way Jared can. But Jared should know when to step aside and let someone with clinical training take over.” He says he, “loves MI” but is frequently confrontational with members who have significant problems with adherence.

**QUESTIONS?**
APPENDIX 3

PT TRAINING—ICM MODULE

Wed July 23, 2014 2:00–3:00 pm
Hartford Room

I. Welcome/Housekeeping

- PT Initiative
  - Reduction of Utilization/Recidivism at Hospital EDs (5 locations)
  - Enhanced ICM/Peer Intervention in Medical Detox (2 locations)

- Training Objective
  - Create inquiries for Performance Target Members
  - Access and input data and text in ICM Module

- Today’s Process
  - SMES walk through tracking Case Management for PT Initiative by highlighting relevant tabs/fields in the ICM Module (using Process Workflow and the System)
  - Use a Parking Lot to compile a list of questions/follow up actions/open items

II. Creating Performance Target Inquiries

III. ICM Module Process Flow

- Flags and Assignments
- ICM Referral
- Acuity Assessment
- Clinical Assessments
  - PF-12 (both ED and IPT), Audit (for IPT)
- Medications
- ICM Contact Activity/Updates
  - Contacts
  - Resources
  - Referrals
  - Monitor Follow up appointment
  - Treatment Adherence

IV. Summary
Hello,

Compliments of Suzanne Rosenberg, below is a link to an interactive program on hand hygiene:

http://www.cdc.gov/handhygiene/training/interactiveEducation/
APPENDIX 5

PARKING LOT FROM 7/23/14 ICM MODULE TRAINING FOR PT INITIATIVE

- Dates for OPT IN (EFF date/EXP: 99999999) and OPT OUT (EFF date/SAME date for EXP Date).
- Member Educational Folder to be called WELLCOME MATERIALS.
- Laminate SF-12 for Member to put into the PT Initiative Welcome Material Folder.
- MHSA Assessment tool identified to be used as needed by ICMs.
- Verify exactly where PCP INFO IS RECORDED in the Acuity Assessment Tab of ICM Module.
- Add a section 5.b. to workflow for Peers to log Community resources/referrals.
- ICM TO COMPLETE THE Transitional Care Plan in ICM Module.
- PEERS to review use of CARE PLAN TAB in ICM Module.
- Emphasize that you MUST SAVE CONTACT ACTIVITY EVERY TIME before proceeding in Module.
- Complete another Acuity Assessment when member goes into IPD from ED.
APPENDIX 6

PEER SUPPORT SPECIALIST—TRAINING PROFILE DESCRIPTIONS

<table>
<thead>
<tr>
<th>TRAINING PROGRAM</th>
<th>RESOURCE</th>
<th>DESCRIPTION</th>
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</table>
| Recovery Support Specialist | Advocacy Unlimited (AU) | Recovery University is an advanced training and certification program funded in part by the CT Department of Mental Health and Addiction Services for persons in recovery from mental health or co-occurring disorders. It is the only state authorized program to certify individuals as meeting the requirements of Certification for Recovery Support Specialist. Upon successful completion of the course and the certification exam, graduates will be state certified as Recovery Support Specialists, Peer Delivered Services. Course topics include the following Certification Exam Competency Areas:  
  • New Peer Modules for work in Emergency Depts. and Inpatient Psych Units  
  • Effective, Empathetic Communication Skills  
  • Legal and Ethical Practice, Boundaries, Client Rights  
  • Introduction to Mental Health, Substance Abuse, and Co-Occurring Disorders  
  • Principles of Psychiatric Rehabilitation  
  • Medicaid Mental Health Waiver / Money Follows the Person  
  • Using Your Recovery Story, Role of Peer Supports on Teams, Recovery Culture  
  • Role Challenges, Conflict Resolution, Self Care  
  • Recovery Planning and Documentation  
  • Entitlements and Benefits Management  
  • Cultural Awareness |
<p>| Recovery Coach Academy | CT Community for Addiction Recovery (CCAR) | Recovery coaches do not provide clinical services. They do however sometimes work with people experiencing difficult emotional and physical states. As a result, the training provides participants with a basic understanding of substance use and mental disorders, crisis intervention and how to respond in crisis situations. In addition, skills and tools on effective communication, motivational enhancement strategies, recovery action planning, cultural competency and recovery ethics will be offered. |</p>
<table>
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<tr>
<th>TRAINING PROGRAM</th>
<th>RESOURCE</th>
<th>DESCRIPTION</th>
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<tbody>
<tr>
<td>• Wellness Recovery Action Planning (WRAP): Mary Ellen Copeland, PhD</td>
<td>Connecticut Clearinghouse</td>
<td>An evidence based system that is used world-wide by people who are dealing with mental health challenges as well as other medical conditions such as diabetes, weight gain and pain management, and life issues like addictions, smoking, and trauma. It can also be used as a framework to guide interpersonal relationships in peer support, recovery groups, agencies, and organizations. WRAP is being used in many different places including schools, prisons, hospitals, veterans’ facilities, and with children, transition age youth, seniors, and anyone who wants to attain the highest possible level of wellness. It was developed by a group of people who have a lived experience of mental health difficulties; people who were searching for ways to resolve issues that had been troubling them for a long time. WRAP involves listing your personal resources, your Wellness Tools, and then using those resources to develop Action Plans to use in specific situations which are determined by you. WRAP is adaptable to any situation. WRAP also includes a Crisis Plan or Advance Directive.</td>
</tr>
<tr>
<td>• Wraparound Services (Mary Jo Meyers)</td>
<td>Focus on Recovery United (FOR-U)</td>
<td>Wraparound is an ecologically based process building on the collective action of a team to mobilize resources and talents from a variety of sources to support families in their communities. In the wraparound process a team of people are brought together around all the components of a family’s life incorporating their history, culture, relationships and other relevant information to address their challenges and formulate possible solutions. Wraparound also includes a series of practice steps bringing a group of people together to craft and match services, supports and interventions to meet unique family needs. Often referred to as a process rather than a service or particular type of intervention, Wraparound integrates and builds on a variety of concepts from a range of sources.</td>
</tr>
<tr>
<td>• Forensic Peer Training</td>
<td>Focus on Recovery United (FOR-U)</td>
<td>Forensic Peer Specialists assist people through a variety of services and roles. Given the history of stigma and discrimination accruing to both mental illness and incarceration, perhaps the most important function of Forensic Peer Specialists is to instill hope and serve as valuable and credible models of the possibility of recovery. Other roles include helping individuals to engage in treatment and support services and to anticipate and address the psychological, social, and financial challenges of reentry. They also assist with maintaining adherence to conditions of supervision.</td>
</tr>
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<td>TRAINING PROGRAM</td>
<td>RESOURCE</td>
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| • Motivational Interviewing  
  • Individualized program tailored to company mission, vision and annual Performance Targets | Jonathan Fader, Ph.D | Motivational Interviewing is a collaborative, person-centered form of guiding to elicit and strengthen motivation for change. It is an empathic, supportive counseling style that supports the conditions for change. Practitioners are careful to avoid arguments and confrontation, which tend to increase a person’s defensiveness and resistance. Motivational interviewing is a proven and effective way to:  
  • Engage individuals with co-occurring disorders  
  • Develop therapeutic relationships  
  • Determine individualized goals  
Motivational interviewing is used for the treatment of many conditions. Specific strategies have been successfully applied to working with individuals with co-occurring disorders include:  
  • Assessing the person’s perception of the problem  
  • Exploring the person’s understanding of his or her condition  
  • Examining the person’s desire for continued treatment  
  • Ensuring a person’s attendance at initial sessions  
  • Expanding the person’s perceptions for the possibilities of successful change  
Research shows that motivational interviewing techniques, including counseling, assessment, multiple sessions, and brief interventions, are associated with greater participation in treatment and positive treatment outcomes.  
Motivational Interviewing with Dr. Fader includes Coaching and Feedback sessions for Teams working in Emergency Dept. and Inpatient Units |
<p>| • Health Promoter Training | ValueOptions, Inc. | Health Promoter training is the centerpiece of ValueOptions’ Peer curriculum and philosophy. Led by a certified coach and peer, Health Promoter showcases the “Coach Approach” to peer work, supporting consumers to explore and identify their own resources and solutions to behavioral health, substance abuse and physical health conditions. Consistent with ValueOptions’ strength-based person-centered values, Health Promoter empowers consumers to pursue and maintain their own recovery as they define it. |</p>
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| • Intentional Peer Support | Focus on Recovery United (FOR-U)               | Founded by Shery Mead, Intentional Peer Support is a way of thinking about purposeful relationships. It is a process where both people (or a group of people) use the relationship to look at things from new angles, develop greater awareness of personal and relational patterns, and to support and challenge each other as we try new things. IPS has been used in crisis respite (alternatives to psychiatric hospitalization), by peers, mental health professionals, families, friends and community-based organizations. IPS is different from traditional service relationships because:  
• It doesn’t start with the assumption of “a problem.” Instead people are taught to listen for how and why each of us has learned to make sense of our experiences, and then use the relationship to create new ways of seeing, thinking, and doing.  
• IPS promotes a ‘trauma-informed’ way of relating- instead of asking ‘what’s wrong’ we think about ‘what happened’?  
• IPS looks beyond the notion of individuals needing to change and examines our lives in the context of our relationships and communities.  
• Peer Support relationships are viewed as partnerships that enable both parties to learn and grow- rather than as one person needing to ‘help’ another.  
• Instead of a focus on what we need to stop or avoid doing, we are encouraged to move towards what and where we want to be. |
Slide 1

Universal Precautions

ValueOptions
Heidi B Pugliese RN, BSN
December 12, 2014

Slide 2

Objectives
After the presentation the learner will be able to:

1. State the definition of Universal Precautions
2. List the 3 major blood-borne pathogens
3. Indicate 3 types of other infectious agents
4. Describe the route of transmission of infectious agents
5. State control methods to prevent exposure
6. Discuss how to address accidents and injuries
7. List steps prior to seeing a member in the ED or IPD

Slide 3

What are Universal Precautions?

- OSHA’s (Occupational Safety and Health Administration) required method of control to protect employees from exposure to all human blood and other potentially infectious materials.

- Observing “Universal Precautions” means you consider all human blood and human fluids infectious for all blood borne pathogens.
Slide 4

*Protect Yourself…*

- **Universally**, treat every patient or members body fluid as if it were infected.
- **Precaution** – Use foresight and plan ahead to avoid exposure.

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Slide 5

**Universal Precautions Criteria**

Every day steps all staff need to take in order to reduce their risk of infection from:

- Blood Borne Pathogens (Hepatitis B, Hepatitis C, HIV)
- Any Infectious Organisms that cause illness

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Slide 6

**What are Pathogens?**

Blood-borne pathogens (BBP) are specific microorganisms transmitted in human blood or bodily fluids, which can cause disease in people.

- There are three major BBPs:
  - **Hepatitis B** (HBV)
    - Causes inflammation of the liver
    - Preventable by a vaccine
  - **Hepatitis C** (HCV)
    - Also causes inflammation of the liver
    - No vaccine to prevent infection
  - **Human Immunodeficiency Virus** (HIV)
    - HIV is a human retrovirus that causes AIDS (Acquired Immune Deficiency Syndrome)
    - There is no vaccine to prevent HIV infection.
What are Infectious Organisms?

Besides blood-borne pathogens, there are other potentially infectious materials found in the hospital settings. Most common are:

- **Bacteria**: Streptococcus, E-coli, Salmonella, Cholera, MRSA (methicillin resistant staphylococcus aureus)
- **Fungi**: Candidiasis, Pneumocystis Pneumonia, fungal eye infections
- **Viruses**: Influenza, Herpes-all types, HPV, Astrovirus (causes gastroenteritis)

How does infection occur?

Exposure occurs through contact with infected body fluids

These Body Fluids Include:

- Blood
- Vomit
- Saliva
- Stool (feces)
- Urine
- Drainage from nose or sinuses
- Drainage from cuts, scrapes, wounds or sores
- Secretions from mucous membranes
- Sputum (mucus from lungs)
- Vaginal secretions
- Semen
Universal Precautions Steps

- How can I protect myself from occupational exposure to infection?
- Assume all blood and body fluids to be infectious
- Always use safe work practices, required PPE (Personal Protective Equipment), and safety devices
- Do not eat, drink or apply cosmetics in the work area

Universal Precaution Steps

- Gloves (Personal Protective Equipment)
- Decontamination
- Hand Washing
- Waste Disposal

How Do I Protect Myself?

- Types of Personal Protective Equipment (PPE):
  - Gloves
  - Protective clothing such as, but not limited to, gowns, aprons, lab coats, clinic jackets
  - Eye protection devices, such as masks, goggles or glasses with solid side shields, or chin-length face shields
Slide 13

**Step 1: Gloves...**

*Always* wear gloves when ...

- Direct contact with body fluids is anticipated (nosebleeds, bleeding abrasions, sweat, urine etc.)
- Handling clothes soiled by urine, feces, vomit or blood

Slide 14

**Step 1 ...Gloves...**

- One time use.
- If gloves not immediately available, use barrier such as paper towels.
- When removing, peel off hands and roll glove outside in.
- Discard gloves in lined trash container.
- Wash hands after removing gloves.

Slide 15

**Wash your hands!**

*Most common mode of transmission of pathogens is via hands!*

Often infections acquired in healthcare and research settings are due to not washing your hands. Employees must wash their hands with soap and water:

- Immediately, or as soon as feasible, after removal of gloves or other PPE.
- Whenever they leave the work area, go on break, or before eating.
- Following contact with blood or other potentially infectious materials.
Step 2: Handwashing

- The **MOST IMPORTANT STEP** in Preventing the spread of disease!
- Use liquid soap and warm water.
- Wash vigorously for 10 – 15 seconds.
- Rinse under warm running water.
- Turn off faucet with paper towel.

Step 3: Decontamination

- Area must be cleaned with approved quaternary disinfectant –
  Clorox wipes and Lysol type products will kill many infectious organisms but **will not** kill blood borne pathogens.
- Contact unit or custodian for clean-up of blood or body fluid “spills”.

Step 4: Waste Disposal

- Bag and tie
- Place in second bag and tie again (double bag technique)
- Place all sharps (used needles) in sharps container.
- Wash hands after removing gloves.
Accidental Exposure

- If you are exposed to blood or other potentially infectious or hazardous materials, follow these steps:
  - If you experience exposure, immediately wash area with soap and water.
  - Splashes to the nose, mouth, or skin should be flushed with water.
  - Irrigate eyes using eyewash, for 10 to 15 minutes.
  - Report the incident to your supervisor.
  - Immediately seek medical treatment.

Summary

- Treat all human blood, bodily fluids and other potentially infectious materials as if they are infectious.
- There are 3 major Blood-borne pathogens: Hepatitis B, Hepatitis C and HIV.
- The most common mode of transmission of pathogens is the hands.
- Wear proper gloves, gowns, eye protection as indicated if any contact is necessary.

When going to an ED or Hospital

- Always check with the nurse prior to visiting a member.
- Call ahead if possible to inquire if member is able to be seen.
- Inquire if there are any concerns, changes in status or precautions.
- Be aware of your surroundings and environment.
When going to the ED or Hospital

- Leave personal belongings in car, outside room etc.
- Maintain a personal comfortable distance from the client.
- Refrain from touching bedrail, tables, personal belongings without wearing gloves.
- Refrain from touching eyes, nose, mouth if necessary precautions have been implemented.

References

- Retrieved from: www.cdc.gov
- Retrieved from: www.cdc.gov/diseaseconditions/
- Retrieved from: www.who.int/topics/infectious_diseases

Universal Precautions ~ Safety first

Thank you!

Questions??
APPENDIX 8

COPY OF PERFORMANCE TARGET #1

IDENTIFICATION OF EMERGENCY DEPARTMENT SUPER USERS AND REDUCTION OF ADULT EMERGENCY DEPARTMENT (ED) UTILIZATION AND RECIDIVISM AT SELECT HOSPITALS

This Performance Target has two sections:

I. Definition, identification and analysis of ED “Super Users”.

II. Intervention strategy at selected hospitals to reduce unnecessary ED utilization.

Total Value of Performance Target: 2%.

I. REPORTING AND ANALYSIS (1%):

The purpose of this section is to develop a thorough understanding of ED utilization, both by analyzing the Medicaid members who have the highest levels of use of ED services and by comparing and contrasting the ED utilization at individual hospitals. The analyses will allow us to understand factors that contribute to the members’ ED use, and also to determine if there are best practices and/or outliers among the hospitals. This information will assist the BHP in establishing outcomes based reporting, outlier management, utilization management techniques and specific provider interventions. This data in aggregate will provide the BHP a comprehensive summary of ED utilization by provider.

The state agency partners expect VO to analyze the reports on providers and populations and provide executive level analysis and recommendations. Claims from CY2013 will be used for this analysis. Items to be mutually agreed upon will be discussed in Data Warehouse and finalized in Core.

Elements of the PT will include:

1. Define and Identify Super Utilizers of ED & Hospital Inpatient Care for adults and youth.

2. Define and Identify ED Super Users for adult and youth population.

3. Identify Hospitals with the greatest numbers/highest percentage of ED super users for both adult and child populations.

4. Develop and Implement methods of intervention for Adult ICMs to utilize with the ED Super Users.

5. Reduce the rate of high end utilization of the Hospital ED for adults.

6. Develop a methodology to evaluate rates of ambulatory primary care and behavioral health visits of ED super users for adults and youth.
A. Population and Member Profiling for Adults and Youth

1. Identify the top 10% of adults and youth who use ED and hospital inpatient services, based on ED and hospital inpatient service volume. There must be a behavioral health diagnosis on the ED or inpatient claim. This becomes the Inpatient/ED high user report and should be separated by adults and youth.

2. By October 15, 2014, complete a further analysis of the adult and youth ED Super Users to determine the ongoing pattern of continued use of the ED, Medicaid eligibility, geographic mobility, and other factors that would be relevant to developing/refining an evaluation approach.

3. Review and evaluate best practices for evaluating adult and youth super users. By December 31, 2014, develop an evaluation methodology for an intervention to improve the connection and engagement in ambulatory primary and behavioral health care for high utilizers of the ED.

4. Identification of Adult Hospital ED Intervention Target (due June 1, 2014).
   a. Define a baseline rate of ED Super Use based on the top 2% of ED utilization during the period of July 1, 2013 through December 31st 2013. Calculate this baseline rate for the five highest volume hospitals and the aggregate of the five hospitals. Determine the cutoff for the number of visits that defines the top 2% (for example 6 visits or greater). For example if hospital A had 2000 visits from 1500 members, the top 2% that had the highest number of visits would be equal to .02 x 1500 = 30. The number of visits that demarcates the 2% rate is 6.
   b. For the period July 1, 2014, through December 31, 2014, define a comparison rate of ED Super Use based on the percentage of super users that meet or exceed the per visit cutoff set by the baseline. Again, for Hospital A, if they had 2100 visits by 1650 members during the comparison period, and 25 of those members met or exceeded the 6 visit threshold, the comparison rate would be 1.5%.
   c. Using claims data and the High user report, the contractor will develop reports to help the departments and the contractor identify the ED Super Users. The contractor will also identify the emergency departments most often utilized by ED super users.
      i. Identify the top 2% of ED Utilizers - those with the highest number of visits during the analysis period = ED super users.
      ii. Using the results of previous regressions to inform the analysis—develop a profile (e.g. demographics, diagnosis, comorbid conditions, etc.) of ED Super users.
      iii. Identify the top 10 utilized EDs by claims and utilization.
      iv. Identify the top 10 EDs that have the highest recidivism rate (based on 7 day and 30 day readmits).
      v. Identify the highest ED utilization and recidivism population with corresponding hospital EDs.
      vi. Produce a geo-map of highest ED utilizers as a step in the direction towards “hot-spot” intervention.
      vii. The Contractor and state agencies will mutually agree on the ED intervention cohort by June 10, 2014.
II. INTERVENTION STRATEGIES FOR ADULT SUPER USERS AND HOSPITALS (1%)

1. Assign staff and deploy when necessary to select hospital EDs. (Value = .5%).
   
a. Assign an adult ICM and/or Peer Specialist to each of the five (5) selected hospitals (from the top 10 noted above) and select the ED intervention target at each hospital.
   
b. The intervention target will be defined and prioritized according to the following criteria:
      
i. the ED super users identified in the period July 1, 2013 to December 31, 2013.
      
ii. members presenting at the ED that match the profile of high utilizers.
      
iii. members identified by the ED as recent/current high utilizers.
   
c. Perform the following interventions/analyses to assist in reducing the rate of members in the ED super use group:
      
i. Determine baseline rates of connect to care and hospital readmissions for the comparison group by July 1, 2014.
      
ii. Begin interventions with ED’s and Super Users by July 1, 2014.
      
iii. Intervention group will connect to care at a mutually agreed upon rate higher than the comparison group at 7 and 30 days when comparing October 1, 2014 through December 31, 2014. The rate will be mutually agreed upon by August 1, 2014.
      
iv. Intervention group will re-admit to any hospital for any reason at a mutually agreed upon rate lower than the comparison group at 7 and 30 days when comparing October 1, 2014 through December 31, 2014. The rate will be mutually agreed upon by August 1, 2014.
      
v. VO will refresh the baseline data regarding connect to care and readmission rates by August 31, 2014. State partners and VO will review updated baseline information by 9/15/2014 to confirm that the mutually agreed upon target rates are acceptable. If the new analysis shows results that are significantly different from the initial results, the target rates will be renegotiated.
      
d. Utilize RNM’s to support an ED focused educational campaign (brochures/posters) regarding prescription medication abuse/overdose;

2. Develop or enhance Community Care Teams or their equivalent at Select Hospitals (Value = .5% of PT).
   
a. Implement or enhance community provider meetings that address the needs of the highest utilizers/recidivists within the five selected hospitals.
      
i. Meet with ED staff to identify the highest ED utilizers based on Medicaid claims as described above.
      
ii. Explore the feasibility of replicating the ROI processes utilized by other community hospitals that have implemented successful pilot projects in this area of practice.
      
iii. Work with Hospital Staff and local providers to facilitate the development of Wraparound Plans for the ED intervention cohort.

Collaborate with care managers from CHN and/or ABH when appropriate.
APPENDIX 9
SF-12® Patient Questionnaire
Page 1 of 3

Patient Initials _____ _____ ______ Date of Birth: ____/____/____ Patkey: ______

Surgeon Name: ______________________________________________________ Date: ______________

Examination Period: ______ Preop (1) _____ 3 Year (4)
_____ Immediate Postop (2) _____ 5 Year (5)
_____ 1 Year (3) _____ Other (specify) (6): ______________

SF-12®:
This information will help your doctors keep track of how you feel and how well you are able to do your usual activities. Answer every question by placing a check mark on the line in front of the appropriate answer. It is not specific for arthritis. If you are unsure about how to answer a question, please give the best answer you can and make a written comment beside your answer.

1. In general, would you say your health is:
   _____ Excellent (1)
   _____ Very Good (2)
   _____ Good (3)
   _____ Fair (4)
   _____ Poor (5)

The following two questions are about activities you might do during a typical day. Does YOUR HEALTH NOW LIMIT YOU in these activities? If so, how much?

2. MODERATE ACTIVITIES, such as moving a table, pushing a vacuum cleaner, bowling, or playing golf:
   _____ Yes, Limited A Lot (1)
   _____ Yes, Limited A Little (2)
   _____ No, Not Limited At All (3)

3. Climbing SEVERAL flights of stairs:
   _____ Yes, Limited A Lot (1)
   _____ Yes, Limited A Little (2)
   _____ No, Not Limited At All (3)

During the PAST 4 WEEKS have you had any of the following problems with your work or other regular activities AS A RESULT OF YOUR PHYSICAL HEALTH?

4. ACCOMPLISHED LESS than you would like:
   _____ Yes (1) ______ No (2)

5. Were limited in the KIND of work or other activities:
   _____ Yes (1) ______ No (2)

Surgeon Initials __________ Date: ______________
Patient Initials _____ _____ ______ Date of Birth: ____/____/____ Patkey: ______

Surgeon Name: ______________________________________________________ Date: ______________

Examination Period: _____ Preop (1) _____ 3 Year (4)
______ Immediate Postop (2) _____ 5 Year (5)
______ 1 Year (3) _____ Other (specify) (6): ____________

SF-12® Cont’d:

During the PAST 4 WEEKS, were you limited in the kind of work you do or other regular activities AS A RESULT OF ANY EMOTIONAL PROBLEMS (such as feeling depressed or anxious)?

6. ACCOMPLISHED LESS than you would like:
   _____ Yes (1) ______ No (2)

7. Didn’t do work or other activities as CAREFULLY as usual:
   _____ Yes (1) ______ No (2)

8. During the PAST 4 WEEKS, how much did PAIN interfere with your normal work (including both work outside the home and housework)?
   _____ Not At All (1)
   _____ A Little Bit (2)
   _____ Moderately (3)
   _____ Quite A Bit (4)
   _____ Extremely (5)

The next three questions are about how you feel and how things have been DURING THE PAST 4 WEEKS. For each question, please give the one answer that comes closest to the way you have been feeling. How much of the time during the PAST 4 WEEKS —

9. Have you felt calm and peaceful?
   _____ All of the Time (1)
   _____ Most of the Time (2)
   _____ A Good Bit of the Time (3)
   _____ Some of the Time (4)
   _____ A Little of the Time (5)
   _____ None of the Time (6)

Surgeon Initials __________ Date: ______________
Patient Initials _____ _____ ______ Date of Birth: ____/____/____ Patkey: ______

Surgeon Name: ______________________________________________________ Date: ______________

Examination Period: _____ Preop (1) _____ 3 Year (4)
______ Immediate Postop (2) _____ 5 Year (5)
______ 1 Year (3) _____ Other (specify) (6): ____________

SF-12® Cont’d:

10. Did you have a lot of energy?
   _____ All of the Time (1)
   _____ Most of the Time (2)
   _____ A Good Bit of the Time (3)
   _____ Some of the Time (4)
   _____ A Little of the Time (5)
   _____ None of the Time (6)

11. Have you felt downhearted and blue?
   _____ All of the Time (1)
   _____ Most of the Time (2)
   _____ A Good Bit of the Time (3)
   _____ Some of the Time (4)
   _____ A Little of the Time (5)
   _____ None of the Time (6)

12. During the PAST 4 WEEKS, how much of the time has your PHYSICAL HEALTH OR EMOTIONAL
    PROBLEMS interfered with your social activities (like visiting with friends, relatives, etc.)?
   _____ All of the Time (1)
   _____ Most of the Time (2)
   _____ A Good Bit of the Time (3)
   _____ Some of the Time (4)
   _____ A Little of the Time (5)
   _____ None of the Time (6)

Surgeon Name: ______________________________________________________ Date: ______________

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APPENDIX 10
PT 1_ED_CORE Status Update – 10-21-14