Pediatric Inpatient Utilization Analysis
Connecticut Behavioral Health Partnership
Medicaid Claims and Service Data from 2011-2012

Connecticut Behavioral Health Partnership
DRAFT
Adult Medicaid Emergency Department Utilization

Medicaid Claims and Service Data from 2011-2012
Connecticut BHP
Nationally, 1 of every 20 ED visits is due to a psychiatric emergency.

90% of frequent ED visitors have at least 1 psychiatric diagnosis.

Frequent visitors tend to be younger, unemployed, and have transient living accommodations.

- Studies cited: Boudreaux, et al., 2011; Vandyk, et al., 2013
Diagnostic Predictors of Frequent ED Visitors
- Psychosis
- Affective Disorders
- Multiple Medical/BH Co-morbidities

Homelessness
- Homeless individuals are 3 times more likely to be frequent ED visitors
  - Studies cited: Chambers, et al., 2013; Vandyk et al., 2013.
CT ADULT ED DATA

Who uses the ED and what are their patterns of use?

This presentation of CT Adult ED data will include an overview of the following:

- Parameters, Limitations and Cohort Definitions of the data
- ED Use
  - Within the Adult Medicaid Population
  - Within the Behavioral Health Adult Cohort
  - Within the DMHAS Behavioral Health Cohort
- ED Use and Housing Status
- Next Steps
Data Parameters, Limitations and Definitions
Parameters and Limitations of the Data

This data represents a first look at the Adult ED-BH cohort and helps to inform the next steps to address ED utilization (i.e., the Frequent Visitor Pilot).

The data in this presentation excludes dually eligible clients.

- **66%** Percent of Medicaid Husky C population is dually eligible, thus excluded from this data.
- **10%** Percent of clients receiving treatment services in the DMHAS service system are dually eligible.

No statistical tests of significance were performed where simple comparisons are shown.
Data for this study is derived from Medicaid claims for Adults over the age of 18 during the 24-month period of CY2011 and CY2012.

Claims data for those who did or did not use the ED during the time period was reviewed within the following cohorts:

- DMHAS BH Cohort
- Behavioral Health (BH) Cohort
- All Medicaid Members
Definitions

**BH Cohort**

Members who utilized a Medicaid BH service from any Medicaid provider at any time over the 2-year period.

**DMHAS BH Cohort**

Members who utilized a Medicaid BH service and used any DMHAS funded programs/services at any time during the 2-year period regardless of frequency or level of engagement.
Medicaid Population
This difference is consistent with the manifestation and diagnosis of many BH symptoms during late adolescence or early adulthood.

Data from CY 2011 and CY 2012
There was a 21.2% increase in BH adult ED visits while the penetration rate increased by 11% between CY 2011 and 2012.
Medicaid Population ED Utilization

414,739 Adult Medicaid Members

177,548 BH Cohort

73,147 BH Cohort went to ED for any reason

42.8% Adult Medicaid members had a BH service claim

17.6% Adult Medicaid Members had a BH service and went to ED

Data from CY 2011 and CY 2012
Gender - ED visits and Primary/Secondary Dxs

Men are more likely to visit the ED for BH reasons

Women are more likely to visit for Medical reasons

* Members who visited the ED more than once may be represented in different categories depending on the nature of their visits.

Data from CY 2011 and CY 2012
Medicaid
Race and Ethnicity

Adult Medicaid Population

- Asian: 46.99%
- Caucasian: 28.02%
- Hispanic: 21.64%
- African Descent: 0.33%
- All Other: 3.02%

Data from CY 2011 and CY 2012
Caucasian individuals were more likely to return to the ED with greater frequency than their African-American and Hispanic counterparts.

Data from CY 2011 and CY 2012
Behavioral Health Adult Cohort
Behavioral Health Adult Cohort

The BH cohort is made up of adult Medicaid members who utilized any BH service at any time during CY2011 and CY 2012.

177,548 members make up the BH adult cohort.

73,147 adults from the BH cohort visited the ED at least once for any reason during the 2 years.

104,401 adults from the cohort utilized BH services at some point but did not utilize the ED during the 2 years.

Treatment episodes and ED visits do not have to overlap to be counted.

Data from CY 2011 and CY 2012
Gender - Who Used the ED more?

Males represent 40% of the total Medicaid Population but 45% and 48% of the BH and BH ED cohorts respectively.

Data from CY 2011 and CY 2012
Behavioral Health Adult Cohort
Gender - Frequency of ED over the 2 year period

Of the total cohort:
- 54.4% visited once
- 18.96% visited twice
- 26.64% visited 3+ times

The % of males increases as the number of visits to the ED increases.

Data from CY 2011 and CY 2012
Of those who utilized behavioral health services, adults who used the ED were more likely to be diagnosed with substance use disorders than those who used BH services, but not the ED.

**Diagnosis Rates within the BH Cohort**

- **ED**
  - Mental Health: 74.0%
  - Substance Use: 56.5%
  - Medical & BH: 37.3%

- **non-ED**
  - Mental Health: 70.9%
  - Substance Use: 30.4%
  - Medical & BH: 28.4%

Data from CY 2011 and CY 2012
Of all members who utilized a BH service, those who went to the ED were more likely to have a substance use related diagnosis.

<table>
<thead>
<tr>
<th>Substance Abuse Diagnosis Indicator</th>
<th>ED Utilizers</th>
<th>Non-ED Utilizers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alcohol Disorders</td>
<td>31.16%</td>
<td>9.93%</td>
</tr>
<tr>
<td>Cannabis Disorders</td>
<td>13.35%</td>
<td>7.61%</td>
</tr>
<tr>
<td>Cocaine Disorders</td>
<td>13.13%</td>
<td>4.67%</td>
</tr>
<tr>
<td>Opioid Disorders</td>
<td>23.24%</td>
<td>13.46%</td>
</tr>
<tr>
<td>Other Substance Abuse Disorders</td>
<td>32.83%</td>
<td>12.90%</td>
</tr>
<tr>
<td>Tobacco Disorders</td>
<td>57.09%</td>
<td>17.49%</td>
</tr>
</tbody>
</table>

Data from CY 2011 and CY 2012
Behavioral Health Adult Cohort
Mental Health Diagnoses

Diagnoses by ED or non-ED visitors

- Other
- V-codes
- Personality D/O
- Psychotic D/O
- Anxiety
- Mood D/O

ED visitors  non-ED visitors

Data from CY 2011 and CY 2012
Persons in the BH cohort who visited the ED had higher rates of being diagnosed with asthma and Chronic Obstructive Pulmonary Disease (COPD) vs. those with no ED visit.

- Asthma: 22.76% versus 14.89%
- COPD: 14.82% versus 8.28%

Data from CY 2011 and CY 2012
DMHAS Behavioral Health Cohort
DMHAS BH Cohort Member Level Data

DMHAS Cohort Definition

Any member contact with a DMHAS funded service or program:
- Before, during or after a DMHAS episode of care
- Regardless of the level of engagement in the service or program

DMHAS funded service includes but is not limited to:
- Mental health services
- Substance abuse services
- Forensic services
Of individuals in active treatment with a DMHAS funded service are Medicaid members.

DMHAS Population Insurance Status

- Medicaid: 51%
- Medicare: 7%
- Cross-over: 10%
- Private Insurance: 8%
- No Insurance: 15%
- Unknown: 9%

Data from CY 2011 and CY 2012
DMHAS Cohort
ED Visits

299,140 Total ED Visits

ED Visit(s) w Medical Only Dx 60%

BH ED Visits, Total 40%

BH ED Visits with Primary BH Dx 21%
BH ED Visits with Secondary BH Dx 19%

21% of the DMHAS BH Cohort ED visits were coded Primary BH

Data from CY 2011 and CY 2012
The ED is the entry point for accessing:
- Acute inpatient services
- Inpatient hospital detox services

ED Visits for DMHAS BH Cohort used to Access Inpatient or Detox care

16% of ED visits were used to access Inpatient or Detox within or outside of a DMHAS open episode

Data from CY 2011 and CY 2012
Housing Status
3.6% Of the Adult Medicaid population were identified as homeless *

75.6% Of the identified homeless adults were Husky D

Husky D Consistently have more days homeless than any other eligibility group

Data from CY 2011 and CY 2012

*Homelessness was determined based on addresses in the member’s eligibility file
### Medicaid Homelessness

#### Homeless Members by Eligibility Group

<table>
<thead>
<tr>
<th>Eligibility Group</th>
<th>Number of Members</th>
</tr>
</thead>
<tbody>
<tr>
<td>Husky A</td>
<td>2,288</td>
</tr>
<tr>
<td>Husky C</td>
<td>1,358</td>
</tr>
<tr>
<td>Husky D</td>
<td>11,319</td>
</tr>
</tbody>
</table>

Data from CY 2011 and CY 2012
Considering homeless adults make up slightly more than 3.6% of the Adult population, they account for a much larger portion of all ED visit categories, but most significantly so for those who have 3 or more ED visits over the 2 year period.

Data from CY 2011 and CY 2012
Homeless individuals visit the ED with a medical dx at about the same rate as their presence in the Total Medicaid Population.

Data from CY 2011 and CY 2012.

Homeless are over-represented in the ED when there is a BH dx.
Next Steps
DMHAS Initiatives Which Have Impacted ED Use

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

- **Alternative to Hospitalization (ATH)**
  - Case management staff work collaboratively with the individual and hospital emergency room staff to facilitate access to more appropriate treatment options

- **Behavioral Health Recovery Program (BHRP)**
  - Basic Needs Supports, Supported Recovery Housing Services, Shelter Housing and Independent Housing
Using data from this study period, DMHAS, DSS, DCF and VO designed an ED Frequent Visitor Pilot to reduce ED use and recidivism.

✓ Step 1: Analyze ED use at individual hospitals to identify hospitals with the greatest numbers/highest percentage of ED frequent visitors – (Completed June 2014)

✓ Step 2: Provide/coordinate intervention(s) to assess needs and connect clients to care thus reducing adult ED use and recidivism – (July-Dec 2014)

✓ Step 3: Assist in the development of Community Care Teams

Results expected in Spring 2015
Persons in the BH Cohort have higher co-morbid medical conditions

**Opportunity for Improvement:**
Implement Behavioral Health Homes to address co-morbid behavioral health and medical conditions for those members diagnosed with severe and persistent mental illness.
Homelessness appears to be a significant factor in frequent visits to the ED.

**Opportunity for Improvement:**
Use the ED Frequent Visitor Pilot and linkage to other initiatives (Partnership for Strong Communities) to improve collaboration/coordination between EDs, housing resources and other community resources.
CT data mirrors national data

**Opportunity for Improvement:** Consider further development and refinement of a predictive model based on these factors and made applicable in real-time to reduce unnecessary ED utilization.