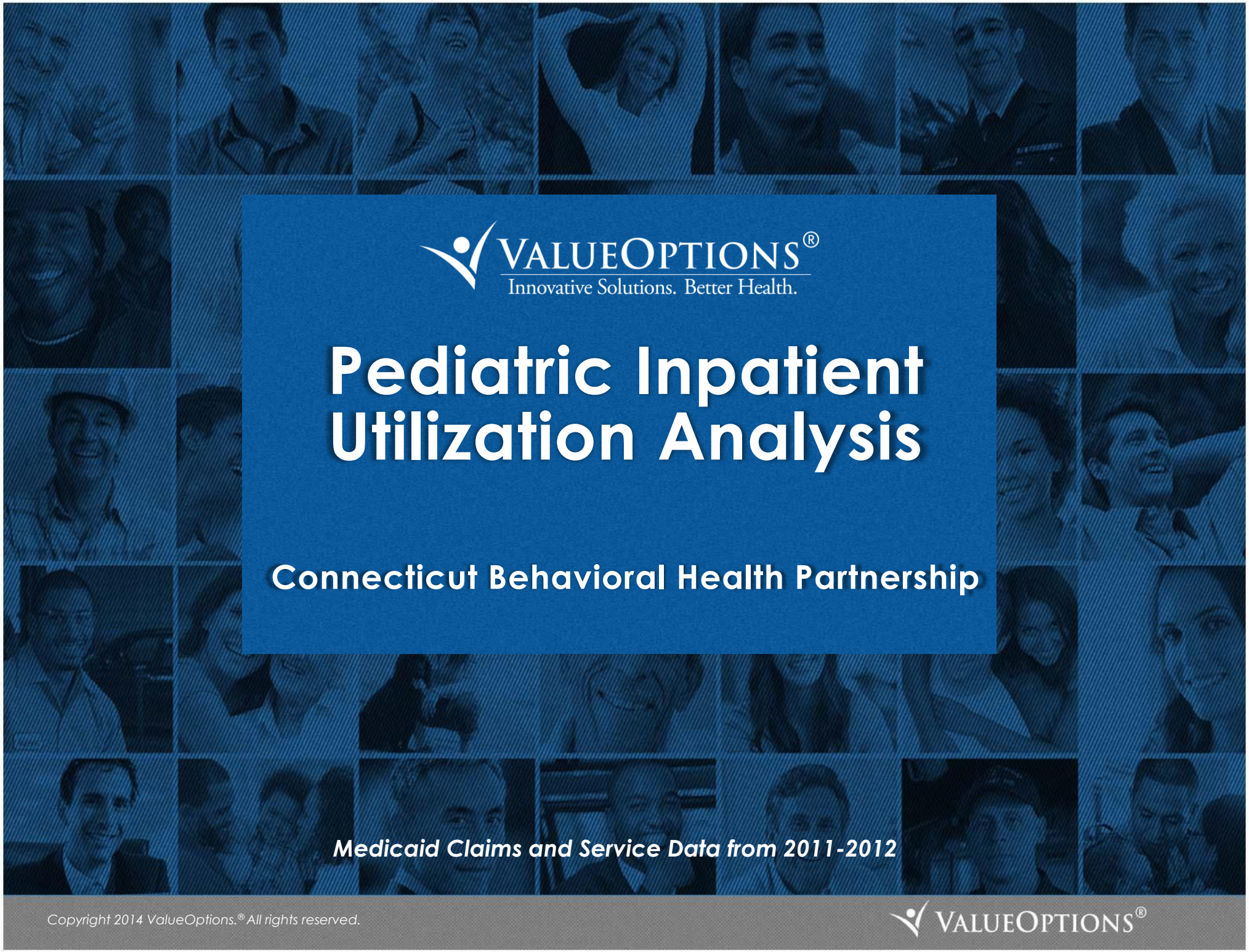


VALUEOPTIONS®

Acknowledgements

This data presentation was possible due to the collaboration of the CT Behavioral Health Partnership.

DSS

VO-CTBHP

DCF

DMHAS

Basic Methodology

Study Period:
CY 2011 & CY 2012

Data Used:

- DSS eligibility files
- Medicaid claims
- ValueOptions authorization data
- DCF data

Analyses:

- Descriptive statistics
- Bivariate analyses
- Multiple regression analyses

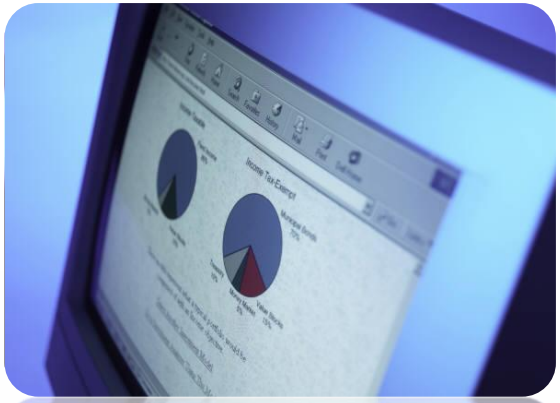
Note: Some data analyses use episode counts and so individuals may be counted more than once, and other analyses use unique member counts because a member can only be in one category.

Group Comparison Methodology

Youth Population Analyses = All eligible Medicaid youth ages 3-17.

Exclusions:

- Dually eligible at any point
- Had D05 or Title XIX at any point
- Youth ages <3



Non-Inpatient BH:

- Youth who used behavioral health services during the study period but were not hospitalized.

BH Inpatient Cohort Definition:

- Primary BH diagnosis on Inpatient claim
- Primary medical with secondary BH diagnosis on Inpatient claim.

Two Basic Questions

1: Who uses inpatient care and what are the patterns of use?

2: What factors increase risk or provide protection regarding the frequency of inpatient utilization?

National Data

According to a 2009 report by the Healthcare Cost and Utilization Project (H-CUP) of the Agency for Healthcare Research and Quality (AHRQ) Statistical Brief #118;

1: Children and Youth (17 and younger) account for 17% of all hospital inpatient stays.

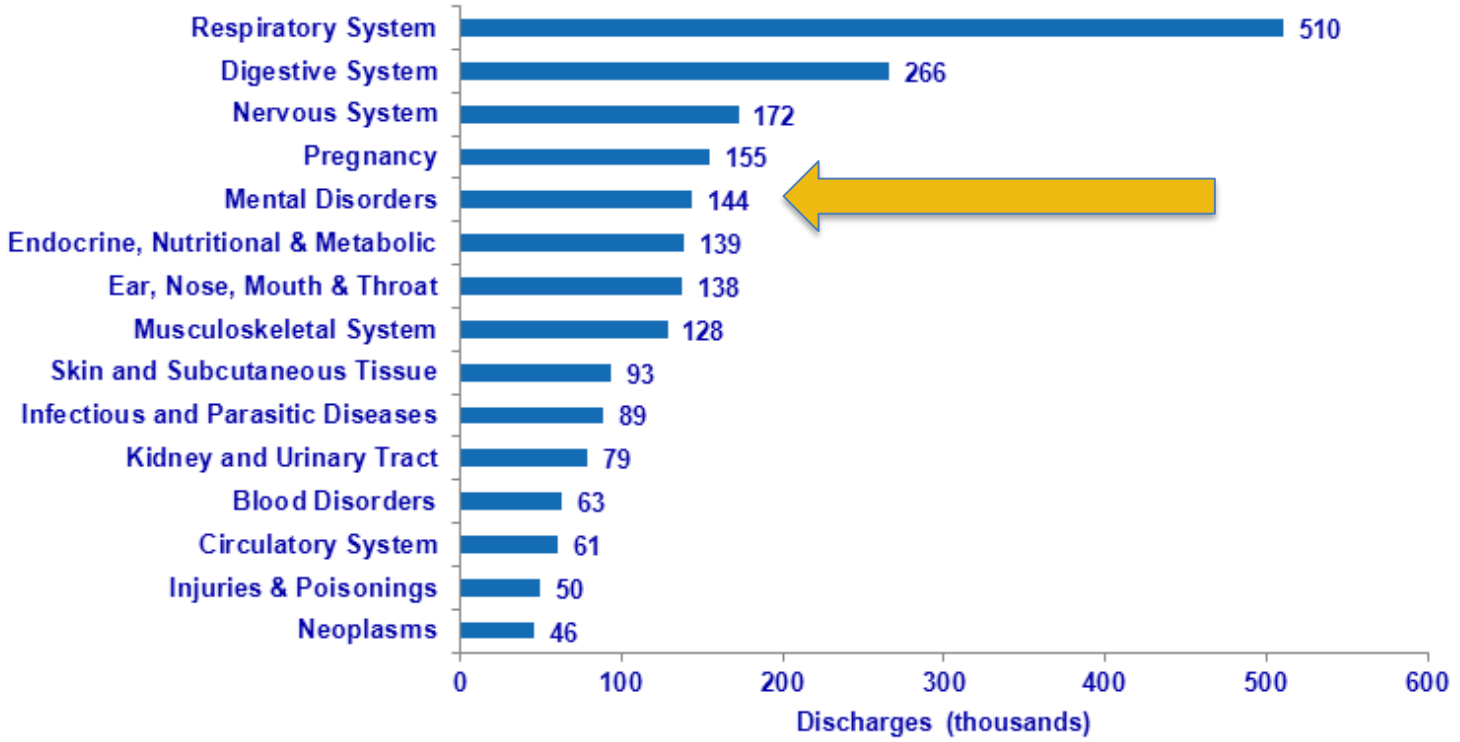
2: Stays for youth tend to be shorter and less expensive compared to adults.

3: Medicaid's share of hospital costs for children increased from 40% in 2000 to 49% in 2009.

4: The 4th most common reason for admission to a hospital was a mood disorder.

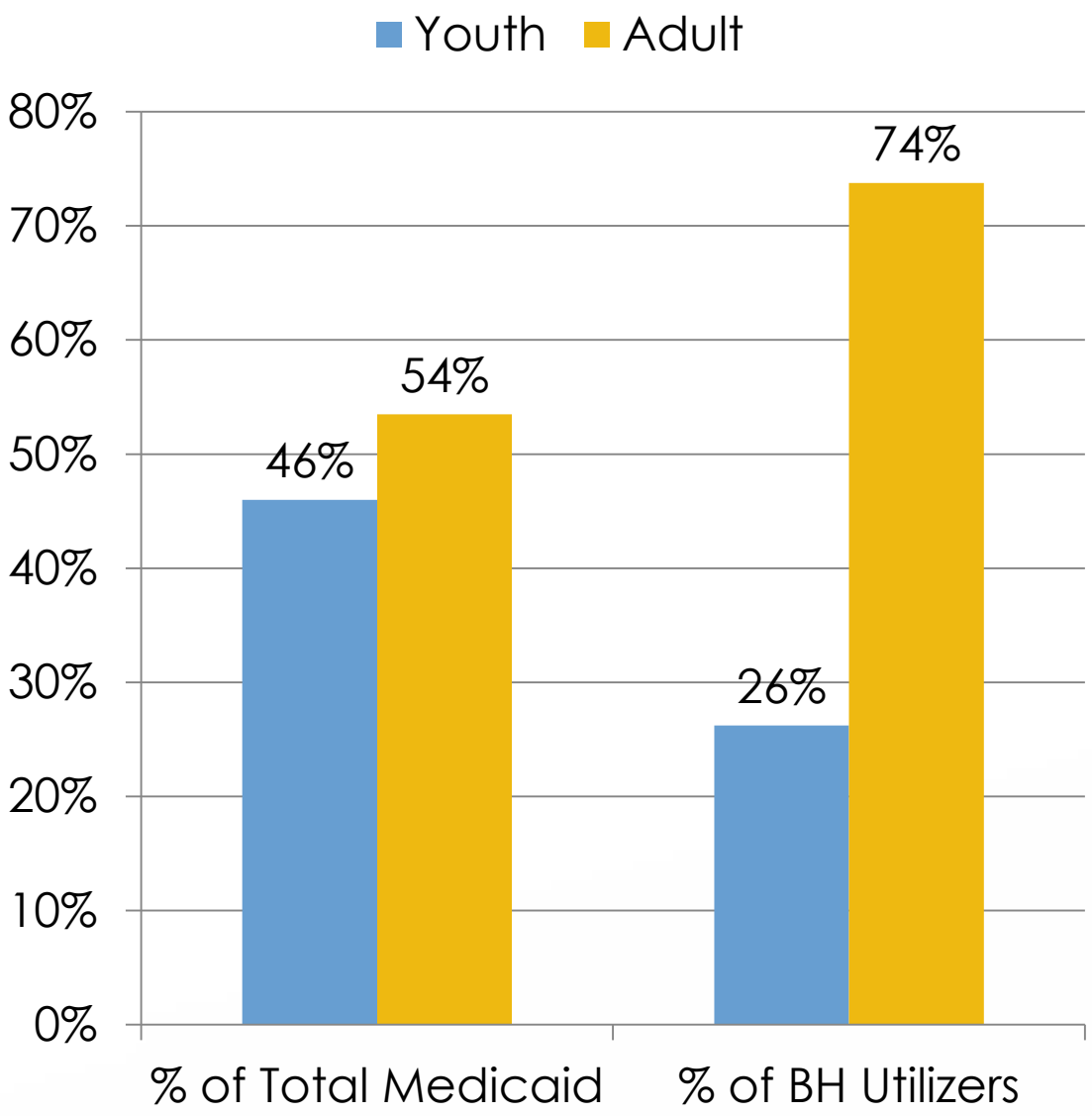
National -Top 15 Diagnostic Categories for Pediatric Inpatient

Figure 4. Top 15 major diagnostic categories for hospital stays in children, in thousands, 2009



Source: AHRQ, Center for Delivery, Organization, and Markets, Healthcare Cost and Utilization Project, Kids' Inpatient Database (KID), 2009

Child/Adult CT Medicaid Population Data



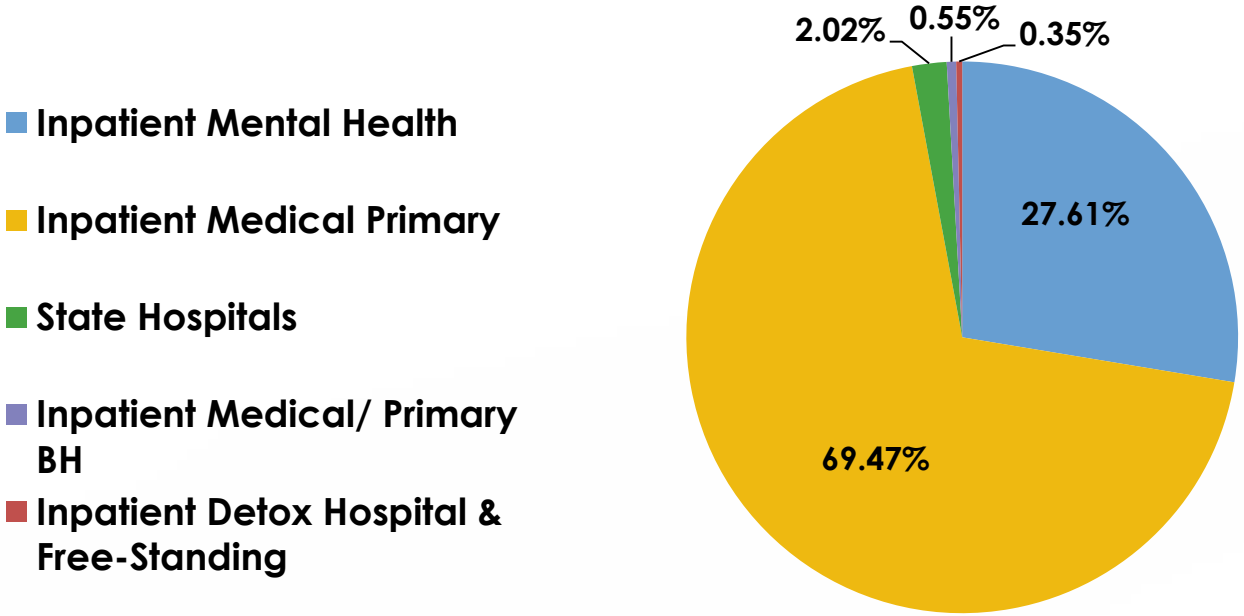
Youth represent 46% of the total Medicaid population. However, youth only account for 26% of the total individuals that use BH services.

Youth Inpatient Utilization – All Types

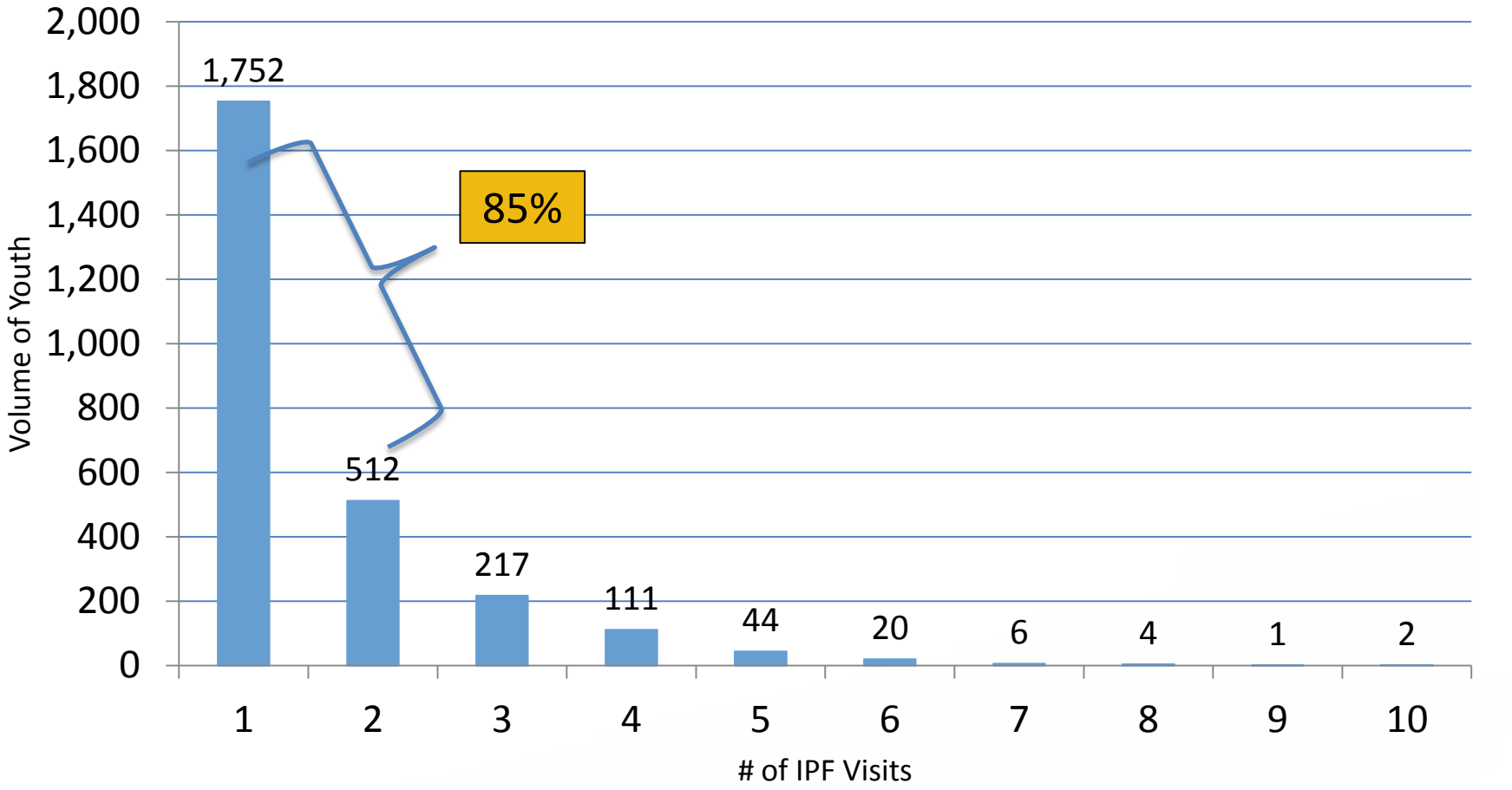
1: Medical services accounted for the majority of all IPF episodes.

2: Mental Health IPF episodes accounted for approximately 28% of the total.

3: Less than 1% of adolescents that are hospitalized receive detoxification services (inpatient and freestanding).

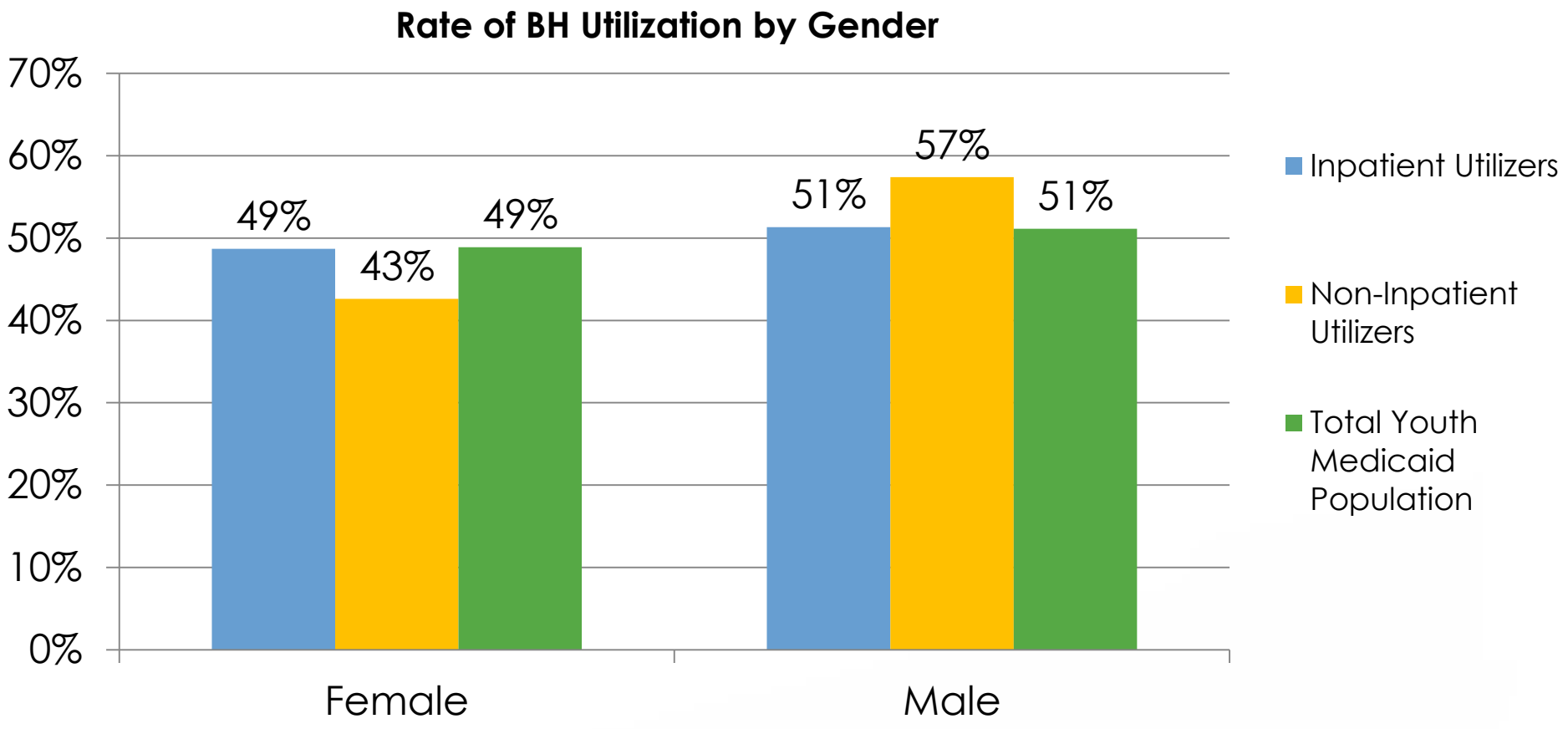


MH Inpatient Use by #s of Visits



Overall, the vast majority (85%) of youth who had a mental health IPF stay only had 1 or 2 IPF stays within the study period.

Gender



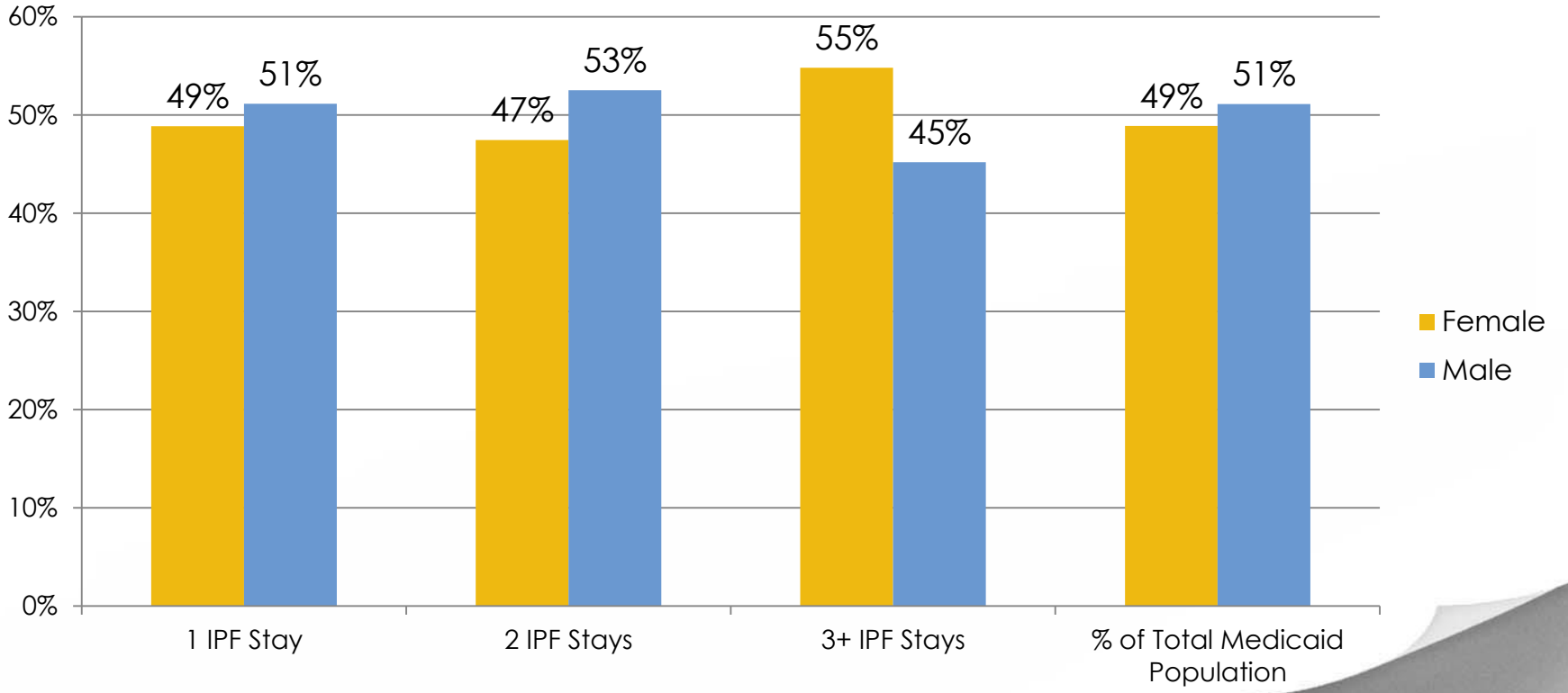
- Male and female Medicaid youth utilized inpatient behavioral health services at rates that were very consistent with their population statistics.
- Males were over-represented and females under-represented in their use of non-inpatient behavioral health services.

Note: In order to be considered an Inpatient utilizer the member must have had at least 1 of the following episodes in the 2 year study period: IPF, IPF-State, IPDF, IPDH or an IPM. A member can be represented in more than one diagnosis category.

Member-Level Analysis – MH IPF Frequency by Gender

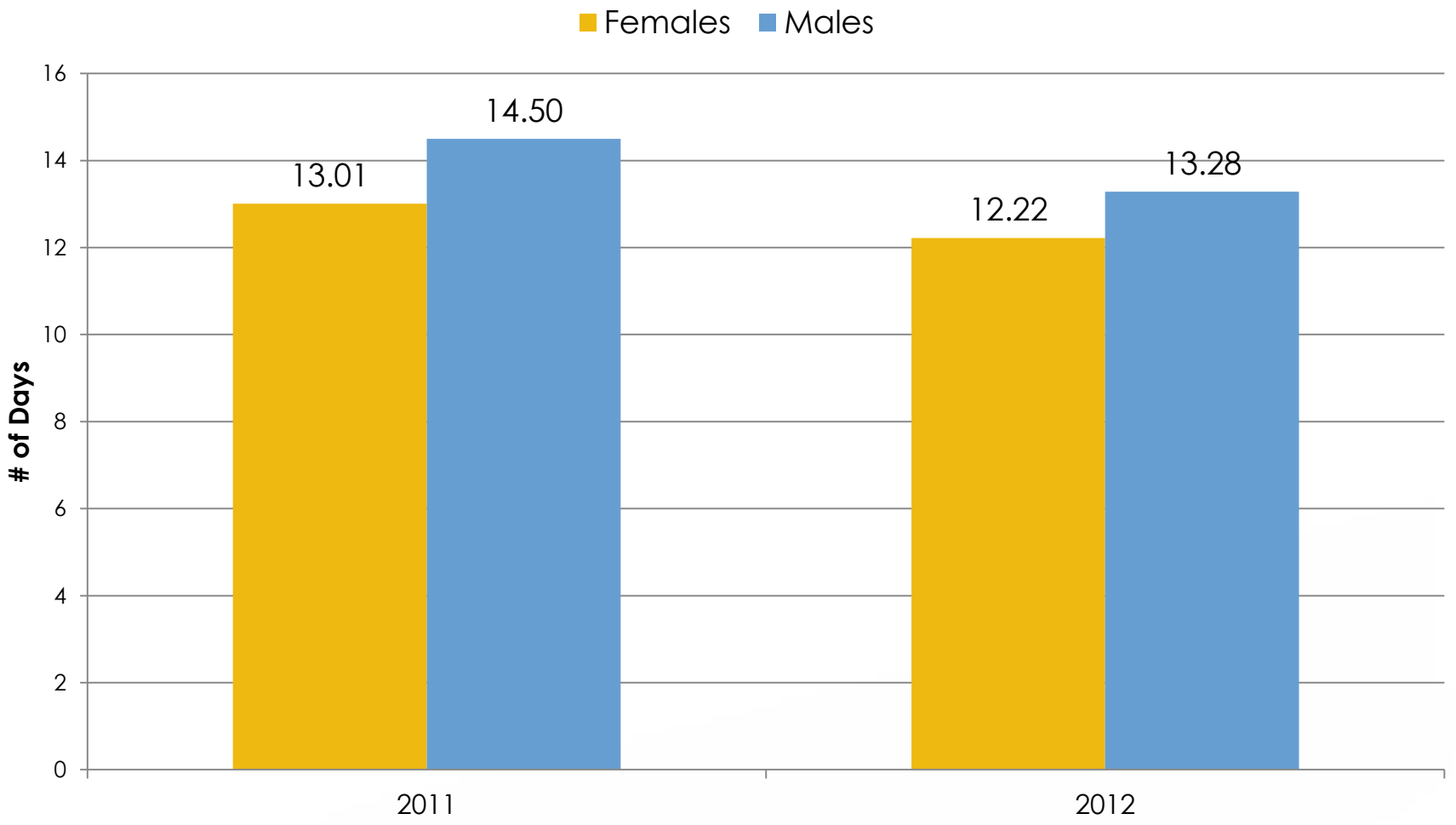
1: Males and females remain relatively consistent with their % of the Medicaid population in the 1 and 2 IPF Stay categories.

2: However, females are over-represented in the 3+ IPF Stay category indicating they are more likely to have multiple IPF episodes.



Mental Health IPF ALOS – Gender

All In-State Psych Hospitals, Excluding State (Solnit)



Males had a longer ALOS, by about 1 day, than females in both 2011 and 2012.

Gender Summary - Implications

1: Females are more likely to have multiple MH IPF Stays.

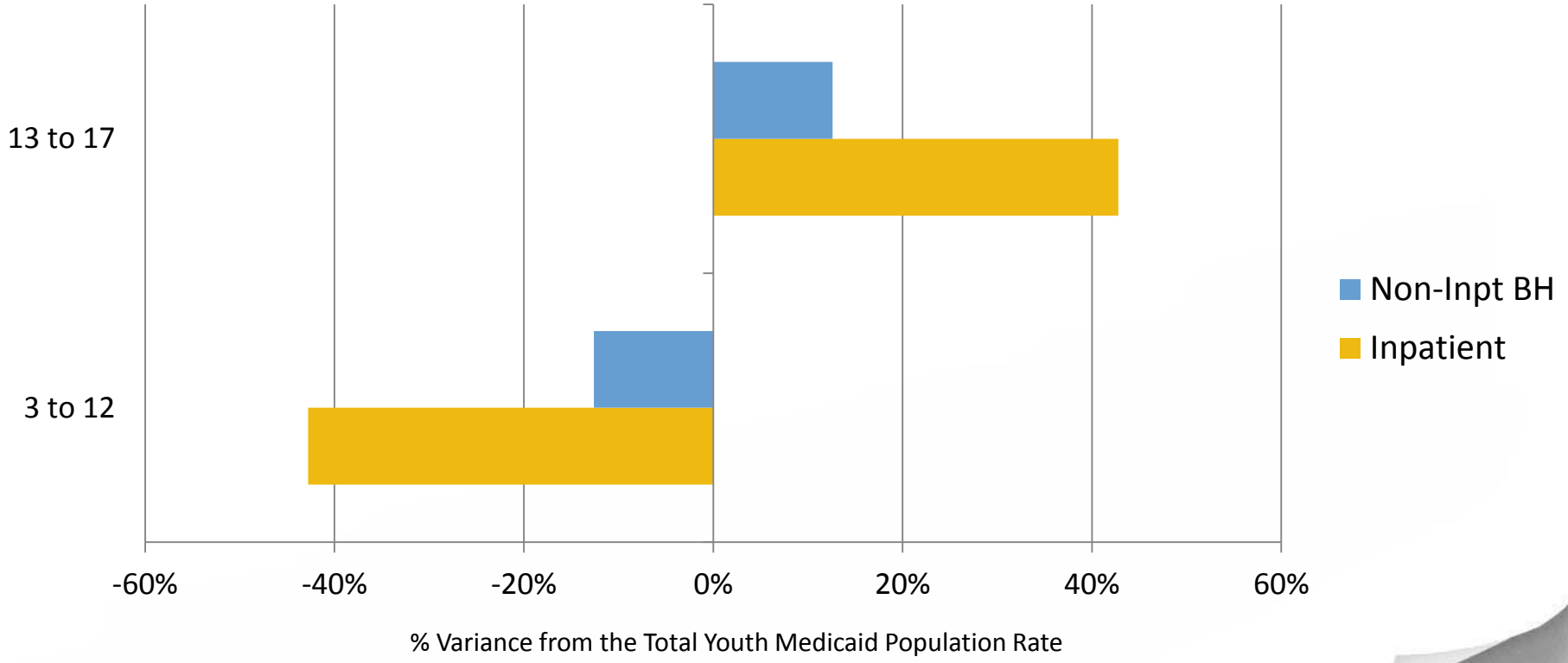
2: Males are more likely to have a longer MH IPF LOS than females.

3: Males and female utilize MH IPF at rates consistent with their population rate.

Age – BH & Inpatient Utilization

Adolescents were over-represented in both service categories, more so among inpatient utilizers and less so among non-inpatient utilizers.

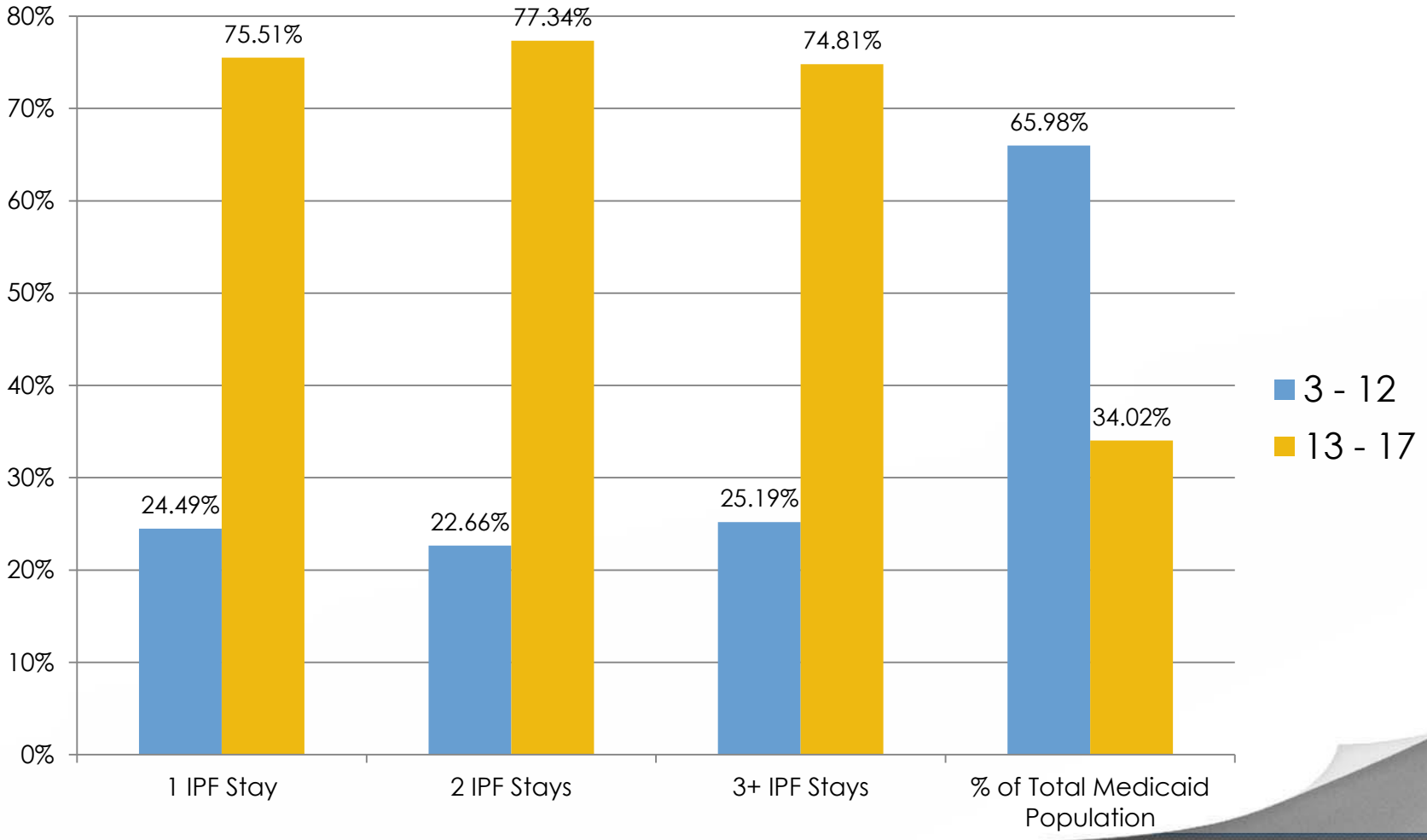
Members aged 3-12 were significantly under-represented among utilizers of inpatient behavioral health services.



Note: In order to be considered an Inpatient utilizer the member must have had at least 1 of the following episodes in the 2 year study period: IPF, IPF-State, IPDF, IPDH or an IPM. A member can be represented in more than one diagnosis category.

MH IPF Frequency by Age

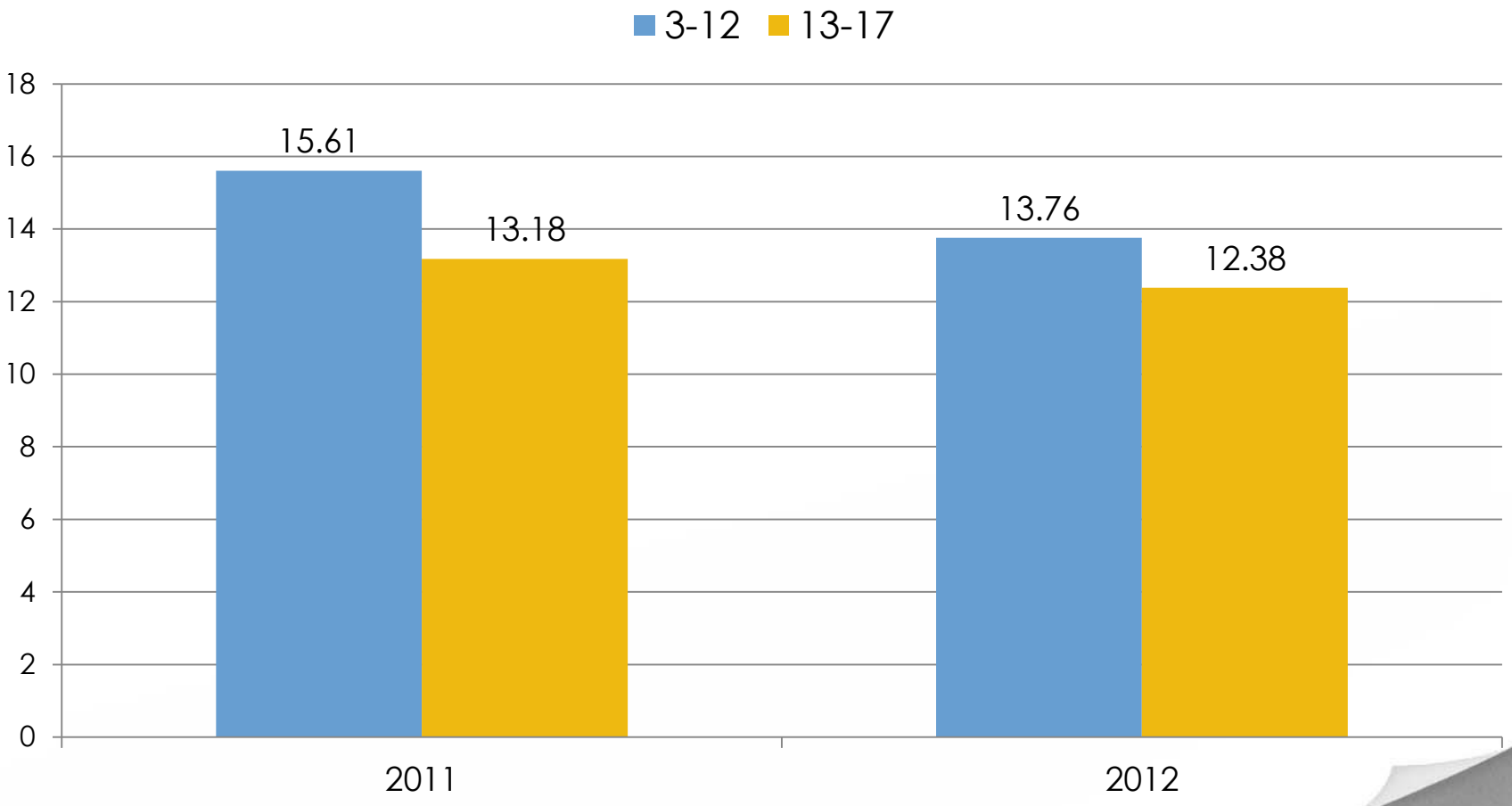
Adolescents were significantly over-represented in all frequencies of IPF stays compared to their % of the Medicaid youth population



Mental Health IPF ALOS – Age

All In-State Psych Hospitals, Excluding State (Solnit)

Young children ages 3-12 had a longer ALOS than the adolescents in both 2011 & 2012, by approximately 1-2 days.



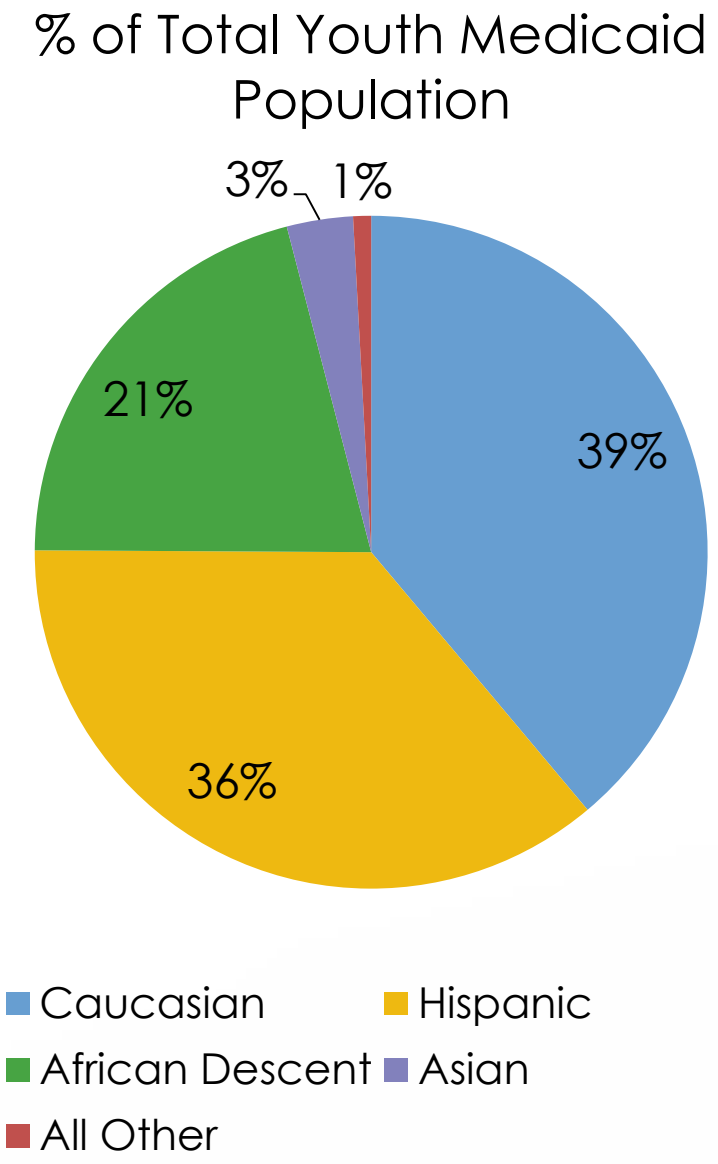
Age Summary

1: Adolescents are significantly more likely to use MH IPF services than the younger youth.

2: Adolescents outnumber younger children in all frequency categories of IPF utilization.

3: Younger children, ages 3-12, are more likely to have a longer MH IPF LOS than adolescents.

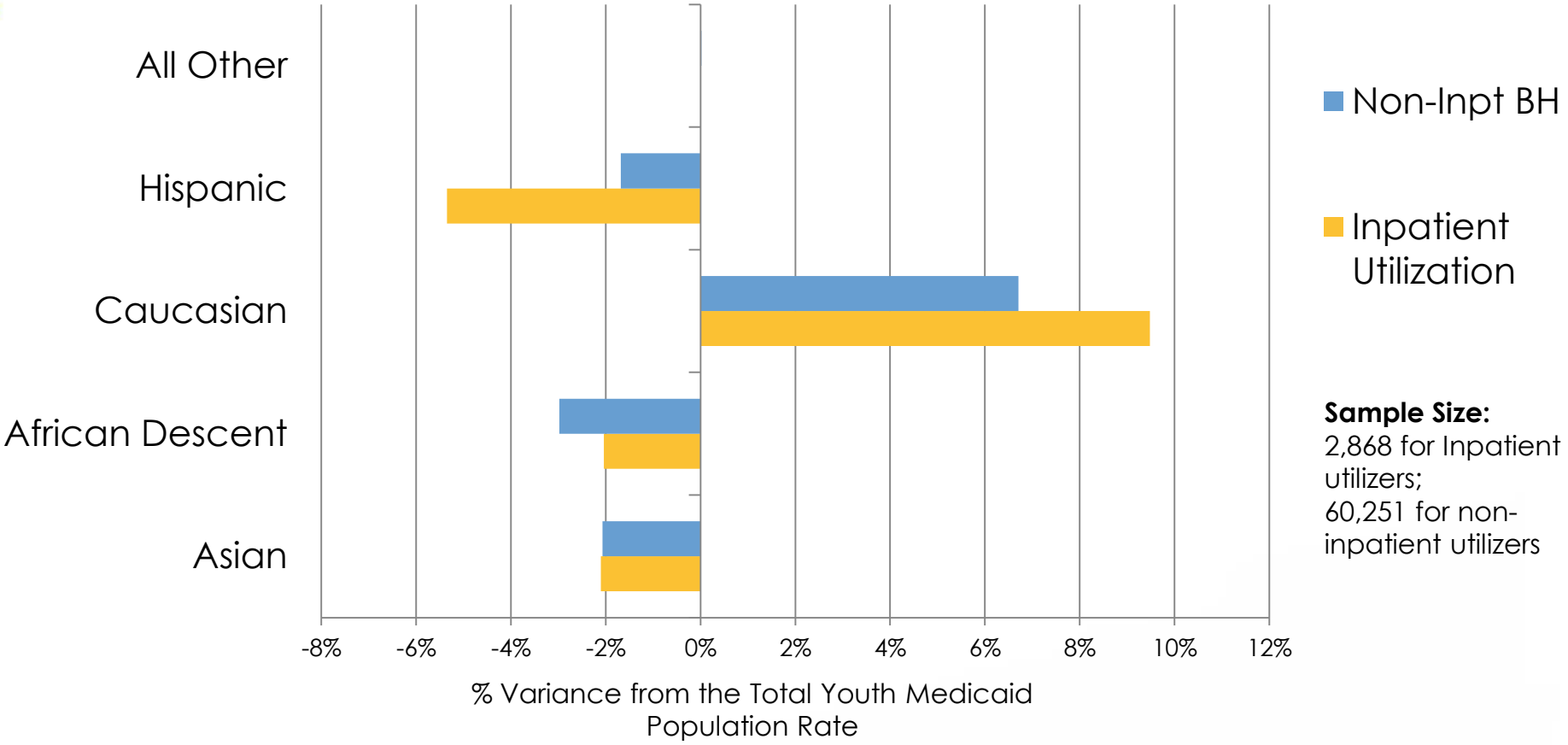
Race/Ethnicity – Medicaid vs. CT



Caucasians make up the largest racial group in the youth Medicaid population.

Asians, Hispanics and African American youth are over-represented in the Medicaid population compared to the CT youth population in general.

Race/Ethnicity



Sample Size:
2,868 for Inpatient utilizers;
60,251 for non-inpatient utilizers

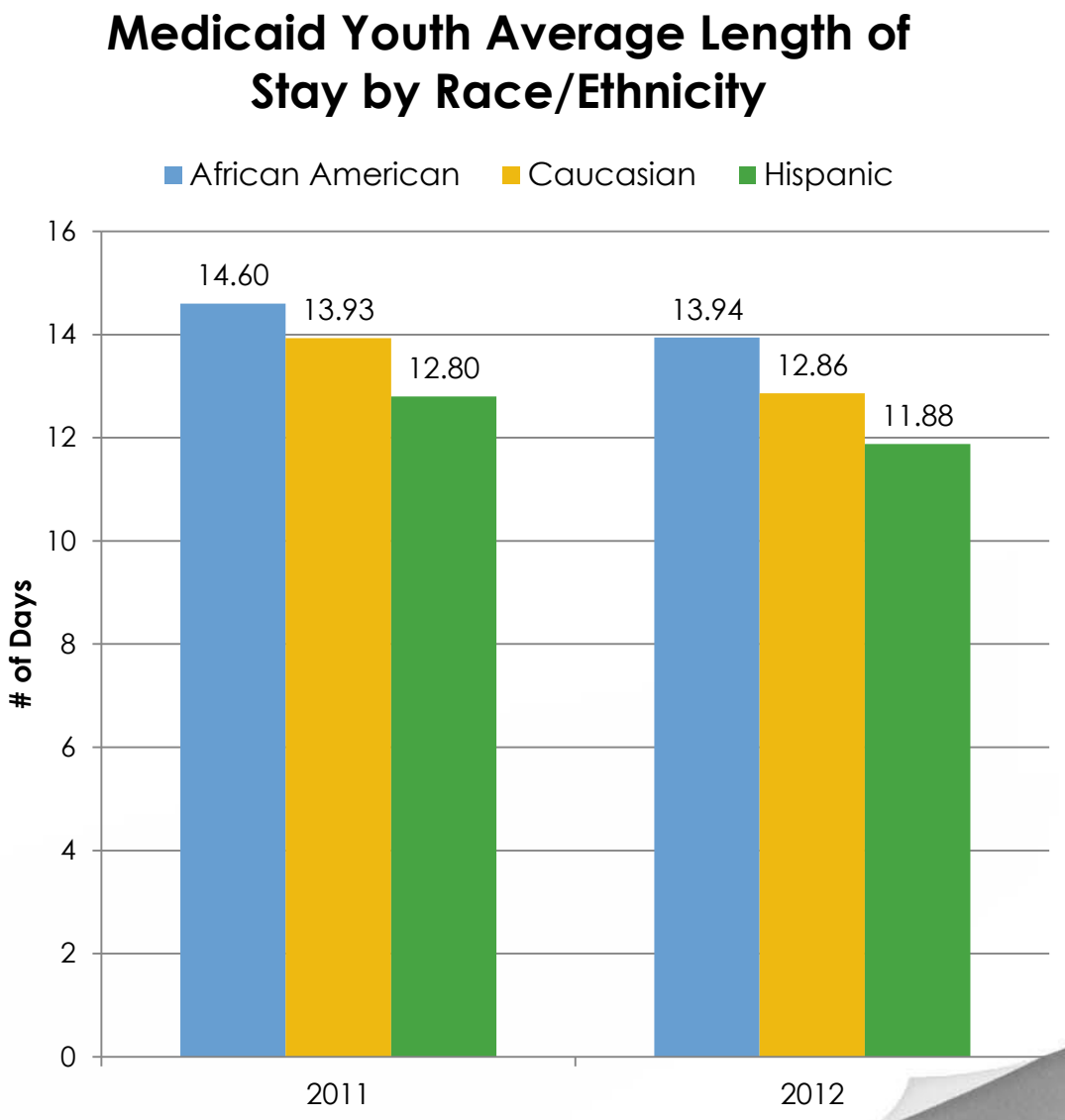
- Asian, African American, and Hispanic youth are under-represented in their use of both inpatient and non-inpatient behavioral health services.
- Caucasian youth are over-represented.

Note: In order to be considered an Inpatient utilizer the member must have had at least 1 of the following episodes in the 2 year study period: IPF, IPF-State, IPDF, IPDH or an IPM. A member can be represented in more than one diagnosis category.

Mental Health Youth ALOS – Race/Ethnicity
All In-State Psych Hospitals, Excluding State (Solnit)

Caucasians, African Americans and Hispanics accounted for 98% of the youth mental health IPF episodes over the study period.

In both years, Hispanic youth had the shortest ALOS, followed by Caucasians, and African Americans with the longest ALOS.



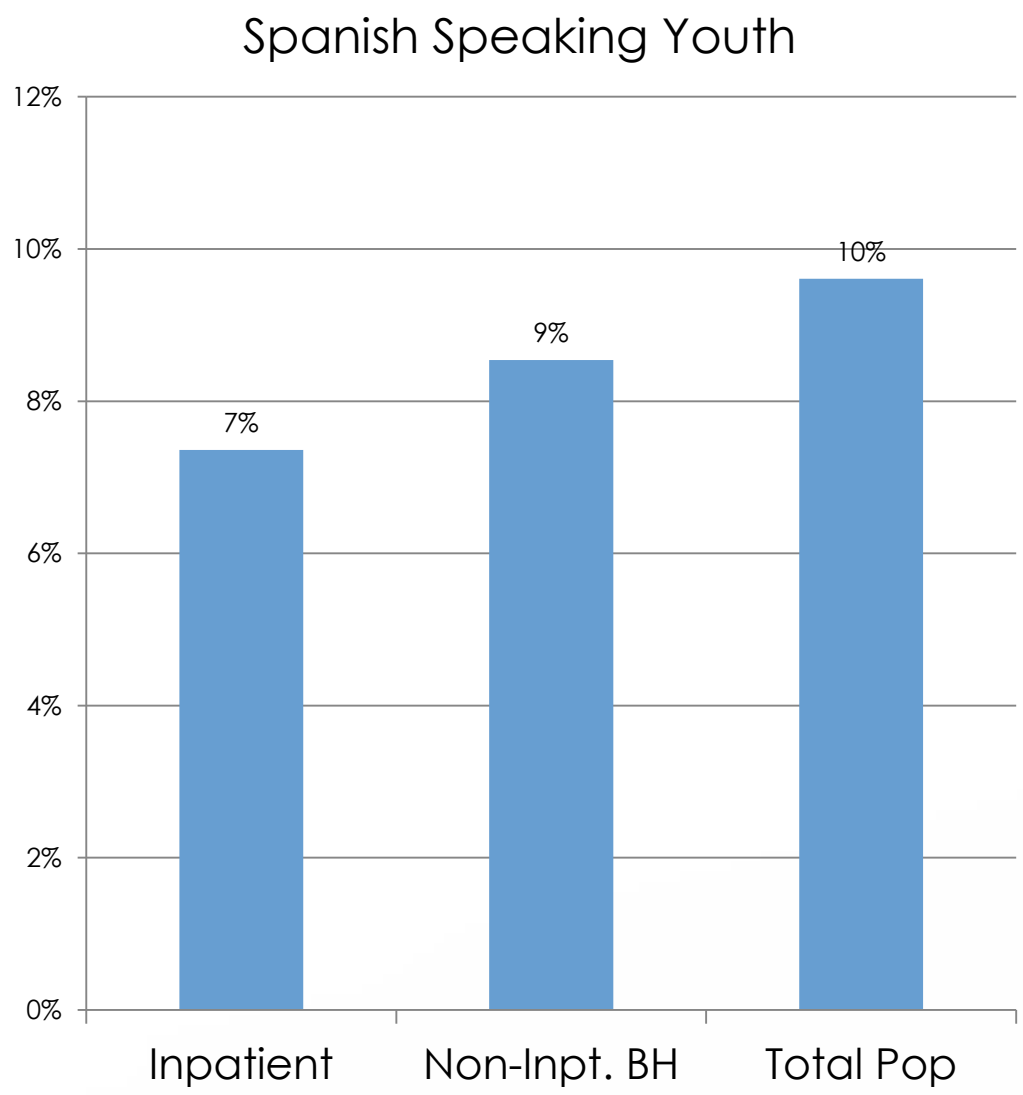
Race/Ethnicity Summary – Implications

1: Caucasians use MH IPF services at rates higher than their portion of the Medicaid youth population.

2: African Americans, Asians, and Hispanics are under-represented.

3: African Americans are more likely to have a longer MH IPF LOS than Caucasians and Hispanics.

Primary Language



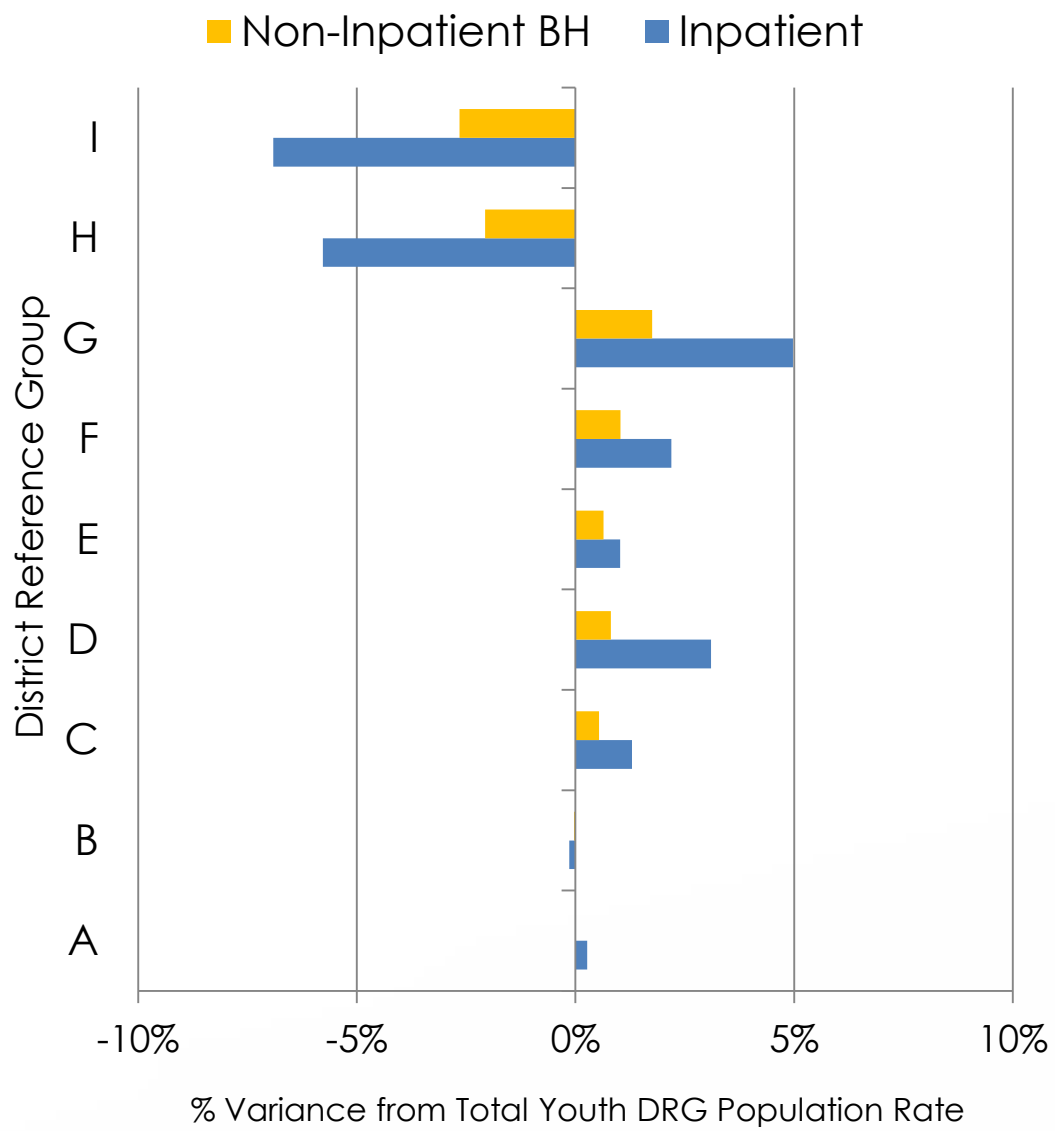
Individuals whose primary language is Spanish are under-represented in non-inpatient and inpatient behavioral health utilization.

Note: In order to be considered an Inpatient utilizer the member must have had at least 1 of the following episodes in the 2 year study period: IPF, IPF-State, IPDF, IPDH or an IPM. A member can be represented in more than one diagnosis category.

Economic Need Measures

- District Reference Groups (DRG) were used as a proxy for economic level
- CT State Department of Education uses 7 factors to classify all towns in CT on a letter scale A-I
  - A – lowest need
  - I – highest need
- For this analysis, Economic Need was determined based on the town where the member resides
- This measure is imperfect for two reasons;
  - There is some variation in income within towns
  - The Medicaid population – is a restricted range of income due to income eligibility requirements

Economic Need (DRG as Proxy)

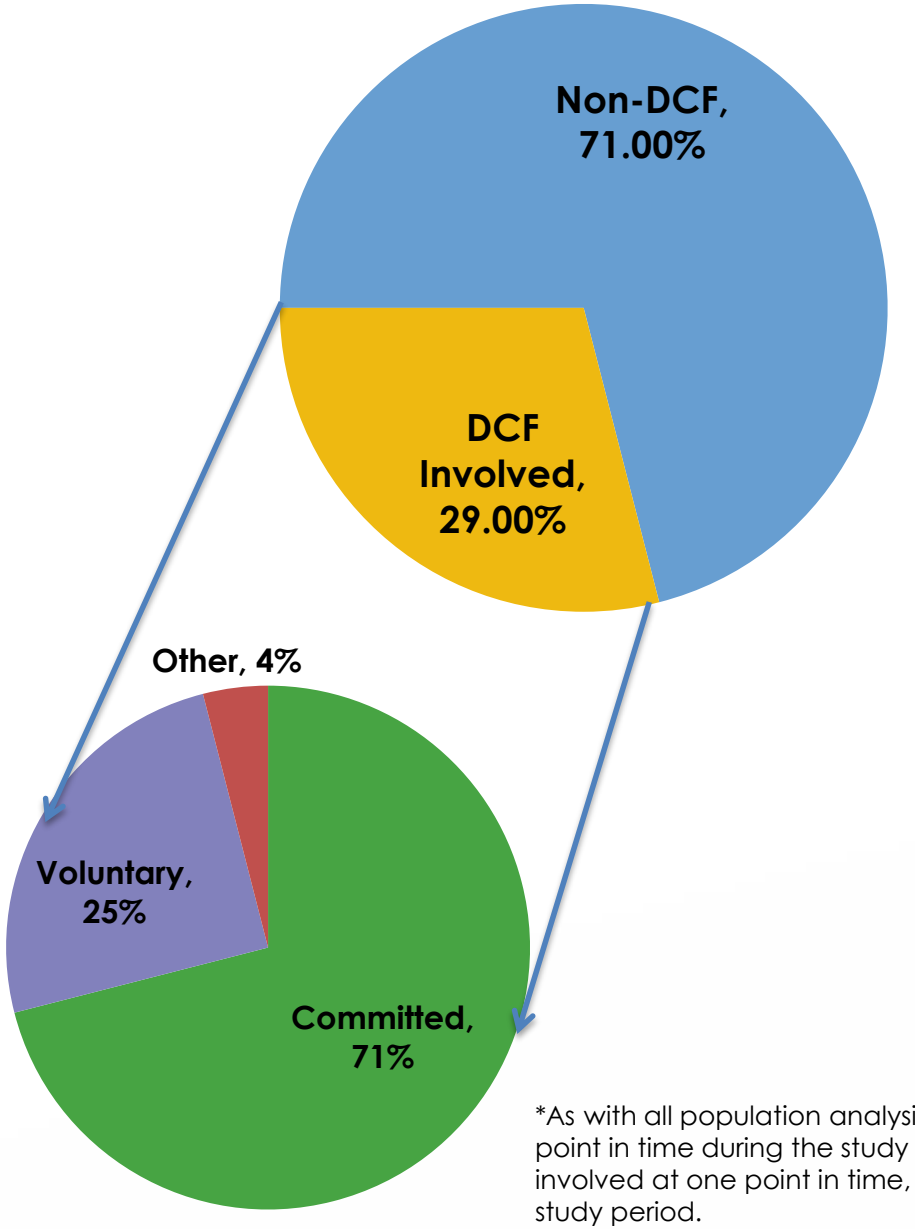


- Those living with the greatest economic need (I & H) are slightly under-represented
- Those in the middle range are slightly over-represented
- Those at the lowest level of need (A & B) are neither over or under represented
- Overall, economic status was not a significant predictor of inpatient utilization

Note: In order to be considered an Inpatient utilizer the member must have had at least 1 of the following episodes in the 2 year study period: IPF, IPF-State, IPDF, IPDH or an IPM.

Mental Health IPF Utilization – DCF Status

Percent of Total # of Episodes

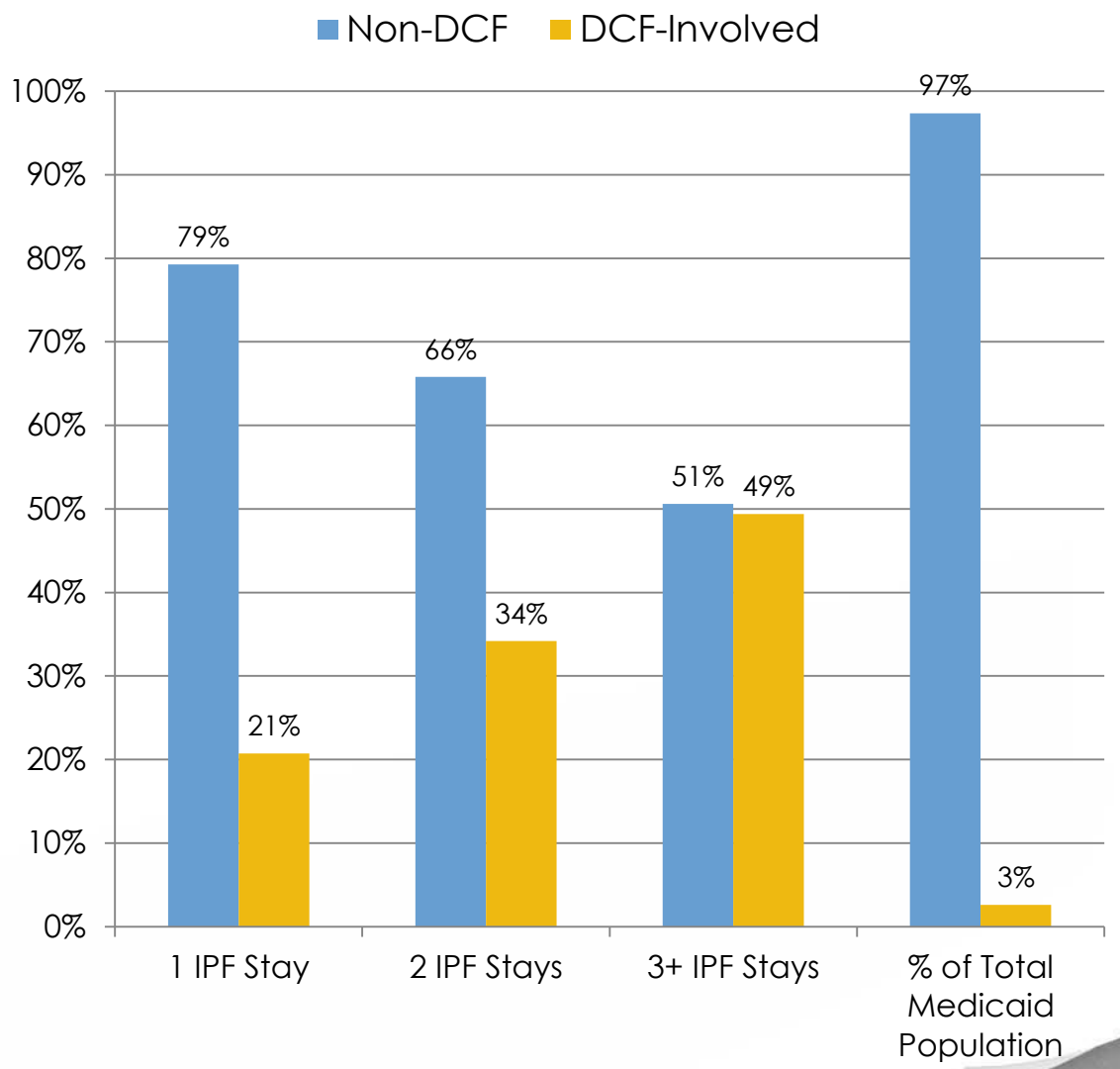


- Less than 3% of youth were identified as DCF involved, however they do utilize a significant portion (29%) of MH IPF episodes.*
- The DCF status of youth that had a MH IPF episode was most often ***Committed (71%),*** followed by ***Voluntary (25%).***

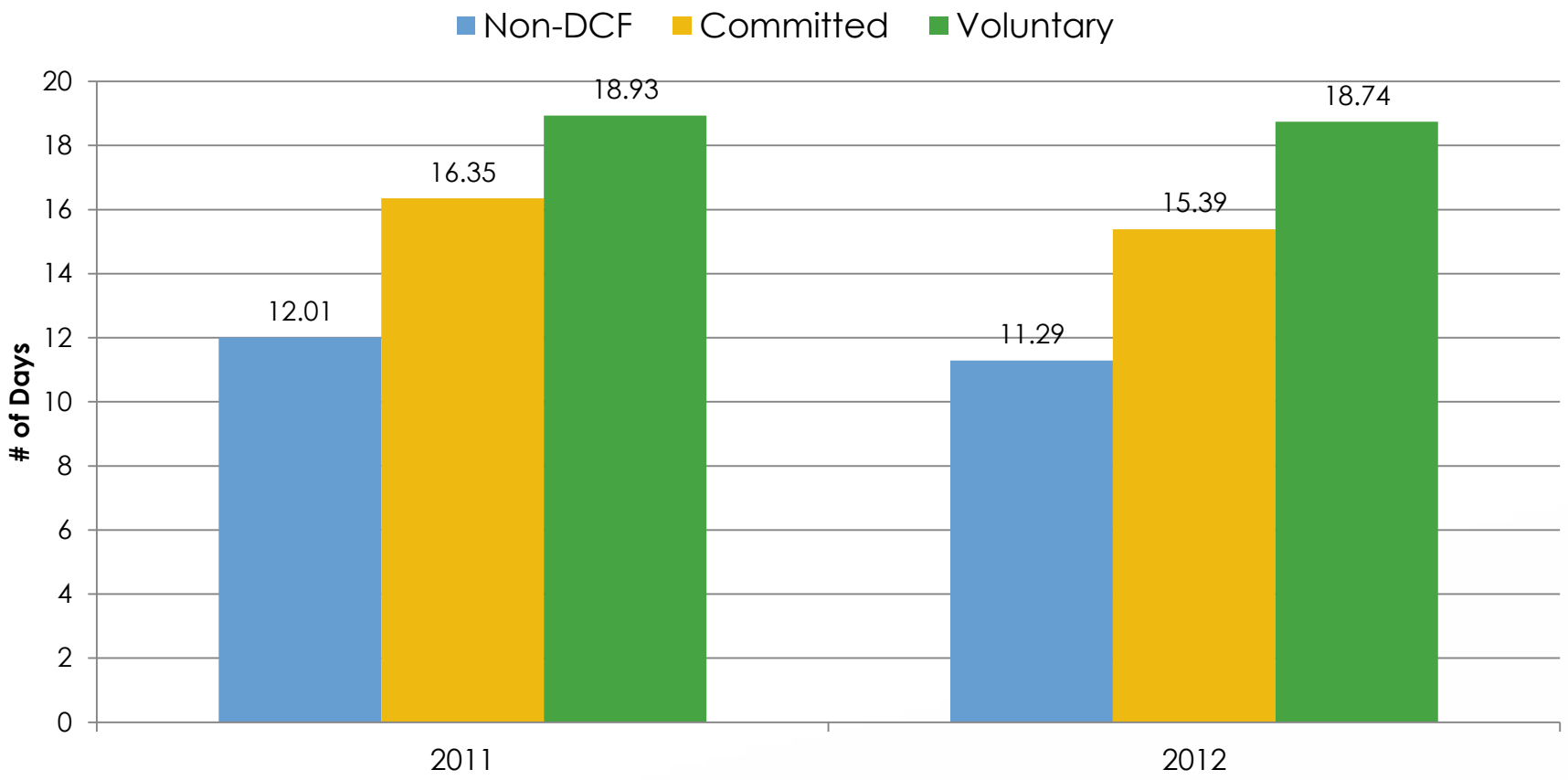
*As with all population analysis measures, DCF status was identified at one point in time during the study period. Thus, while 2.6% of youth were DCF involved at one point in time, 5.5% were DCF at any point in time during the study period.

Member-Level Analysis – IPF Frequency by DCF

- DCF-involved youth were over-represented in all three episode frequency categories.
- As the number of behavioral health IPF episodes by members increases, the over-representation of DCF-involved youth increases.

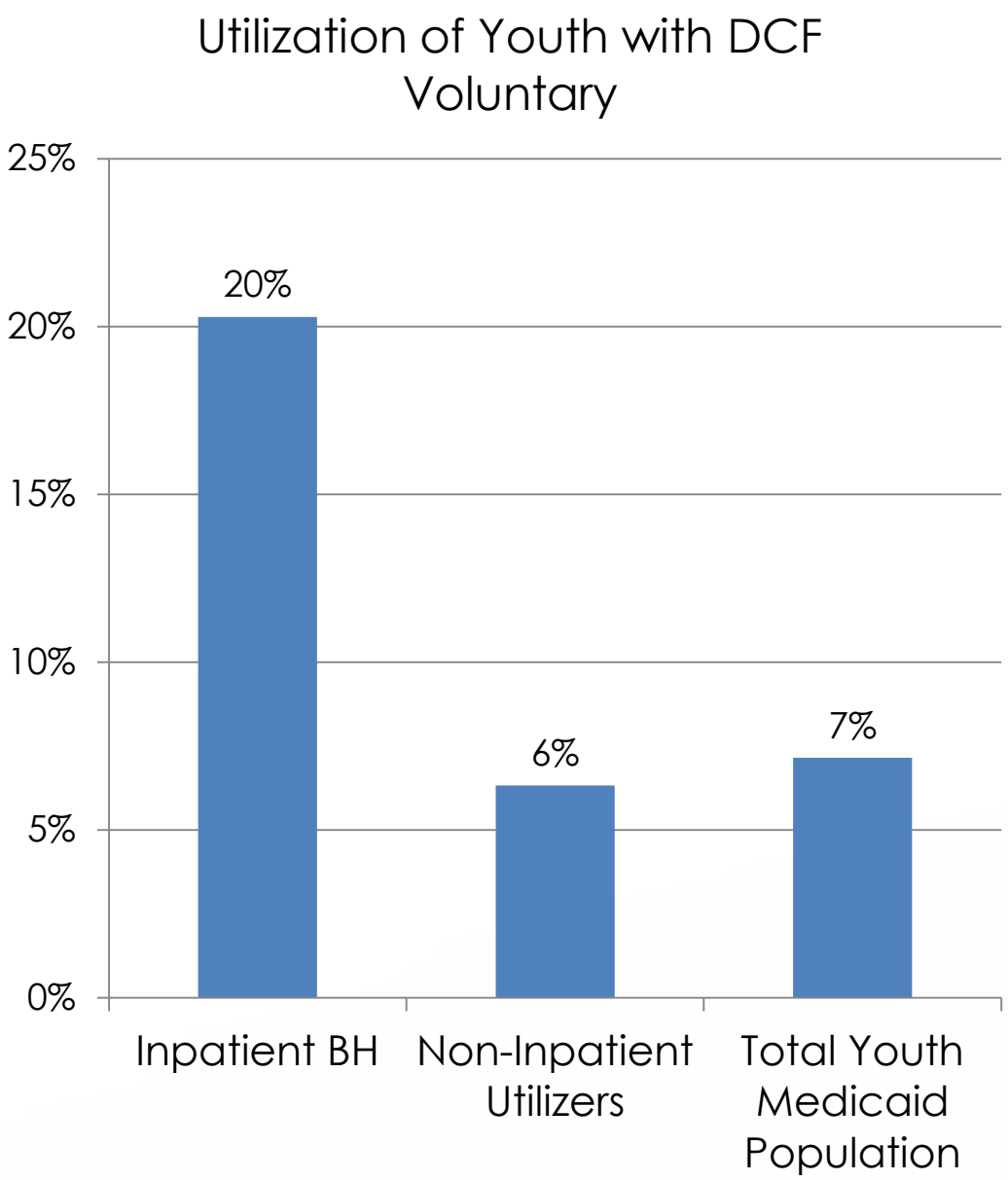


Mental Health IPF ALOS– DCF Status
All In-State Psych Hospitals, Excluding State (Solnit)



In both years, Non-DCF involved youth had the shortest ALOS, followed by DCF Committed, and DCF voluntary with the longest ALOS.

DCF Voluntary Services



- **Voluntary services youth comprise 7% of the total DCF Medicaid population but account for 20% of Inpatient BH episodes for DCF Involved Youth**
- **Contrary to expectations, Voluntary services youth are slightly under-represented in non-inpatient BH utilization**

DCF Status Summary - Implications

1: DCF involved youth are over-represented in their use of MH IPF episodes compared to their population rate.

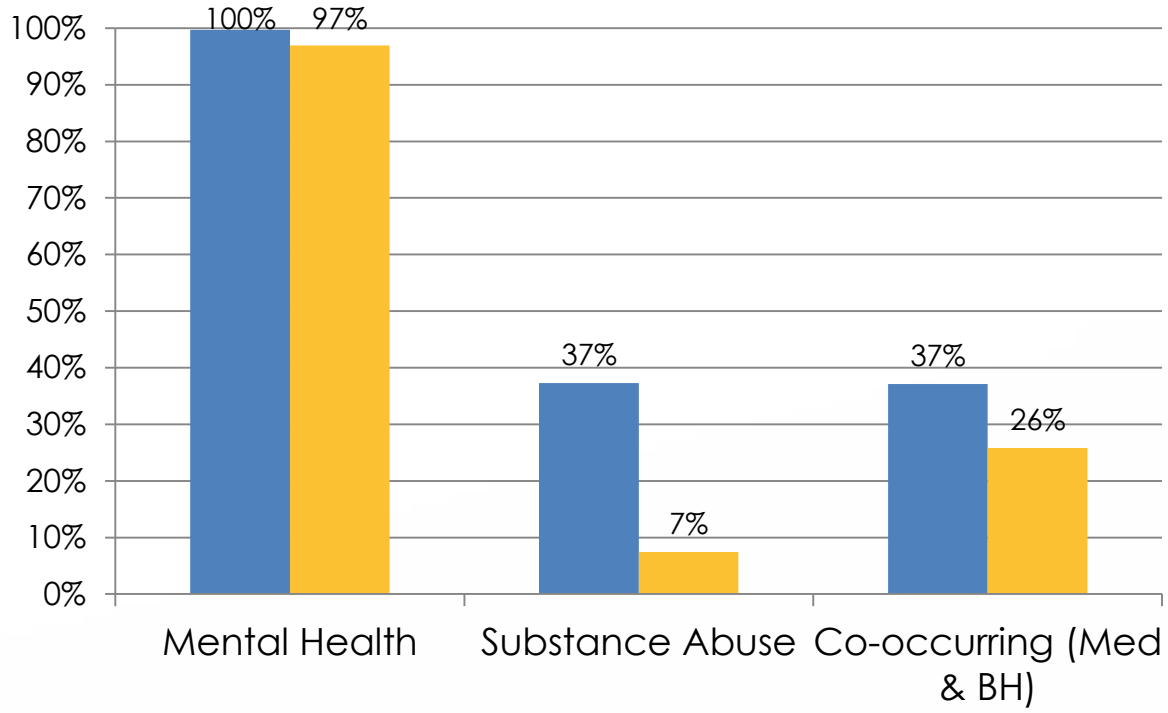
2: DCF involved youth are more likely to utilize MH IPF services multiple times than non-DCF youth.

3: Youth with DCF Voluntary services are more likely to have a longer MH IPF ALOS than non-DCF or Committed youth.

BH Inpatient and Non-Inpatient BH Utilizers Diagnoses

1: Nearly all youth receiving inpatient and other BH services have a mental health diagnosis.

2: Co-occurring substance abuse and medical comorbidity are more common among those that use inpatient care.



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IPF Diagnosis Summary

1 IPF Stay Most frequent diagnoses:

1. Mood Disorder
2. Child/Infancy Disorders
3. Anxiety Disorder
4. Other Mental Disorders

2 IPF Stays Most frequent diagnoses:

1. Mood Disorder
2. Child/Infancy Disorders
3. Anxiety Disorder
4. Psychotic Disorders

3 IPF Stays Most frequent diagnoses:

1. Mood Disorder
2. Child/Infancy Disorders
3. Psychotic Disorders
4. Anxiety Disorder

Risk Factors for an Inpatient Stay
(multiple regression analysis)

DIAGNOSIS

- Autism Spectrum Disorder predicted a higher likelihood for an additional inpatient stay for youth who had at least one IPF admission
- A diagnosis of ADHD indicated a lower likelihood of a subsequent hospitalization

GENDER & STATUS

- Female gender predicted a higher likelihood of an additional inpatient stay
- DCF Status also predicted subsequent inpatient utilization

SERVICE VARIABLES

- Non-adherence with ADHD medications, Mood Stabilizers, Antidepressants, and Antipsychotics
- Number of Therapeutic Drug Classes prescribed
- More ED BH visits and inpatient days during the 180 days prior

Next Steps/System Recommendations

Findings

Youth utilize BH services at rates well below those of adults and below prevalence rates of disorder.	Approximately half of all MH disorders and close to 80% of substance abuse disorders begin in childhood/adolescence.

Embed standardized screening for MH and SA disorders in primary care, school based clinics, CW, JJ, etc.

Provide more primary prevention programming.

Support expanded access to BH services through primary care, school based and specialty clinics.

Expand access to evidence based treatments in these settings.

Next Steps/System Recommendations

Findings

Non-adherence to various psychotropic medications used in the treatment of child and adolescent disorders was a risk factor for inpatient use as was prescribing of multiple therapeutic drug classes to particular children.

Further study of medication non-adherence and methods of promoting improved adherence is recommended.

Next Steps/System Recommendations

Findings

Autism predicted a higher likelihood for an additional inpatient stay

There appears to be further need for a variety of specialized treatment resources for children and adolescents with Autism.

Next Steps/System Recommendations

Findings

Adolescent girls are at higher risk for 3 or more visits to inpatient care. This may be rooted in the higher rate of certain types of traumatic exposure (sexual assault, sexual abuse) as well as gender differences in susceptibility to PTSD

Consider routine screening for trauma and PTSD for all hospital admissions but particularly for girls with previous hospitalizations.

Next Steps/System Recommendations

Findings

As children age, they become more likely to participate in any kind of BH service but particularly inpatient or ED care. Utilization of these services is even higher in adults.

Given this pattern of utilization by age, consider expanding capacity and access to BH prevention and early intervention.

Next Steps/System Recommendations

Findings

Racial and Ethnic disparities exist in inpatient utilization, particularly for Hispanic youth regarding access to inpatient care, and African American youth regarding longer LOS in inpatient.

Consider linking with other projects/efforts to better understand and address these health disparities.

Next Steps/System Recommendations

Findings

DCF youth comprise less than 3% of the total Medicaid population but account for 29% of MH IPF episodes and are far more likely to have multiple admissions and longer LOS. Voluntary services youth are particularly likely to be hospitalized and yet are under-represented in non-inpatient BH utilization.

Consider establishing an intensive service, such as High Fidelity Wrap-around, to serve families engaged with Voluntary services or where there is high utilization of Inpatient, ED, or Residential Care.

Next Steps/System Recommendations

Findings

Mood disorder is the most commonly identified diagnosis for individuals with 1,2, or 3 or more MH IPF admissions.

Consider further disseminating and supporting best practices for treating mood disorders in children and adolescents including;

Preventive approaches such as Coping with Depression Course, and the Penn Optimism and Resiliency Programs	**Treatment algorithms for primary care**	**Best practices such as Cognitive Behavioral Therapy (CBT), Interpersonal Psychotherapy (ITP-A), and the Modular Approach to the Treatment of Children (MATCH).**

Questions?