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# Using State APCD Claims Data to Identify Children with High Mental-Health Needs to Improve Access & Reduce Inpatient Use

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# **Study Background**

- Purpose: Evaluate total mental-health expenditures for young people with significant mental-health utilization
  - Identify young people, ages 1–21 years, with high rates of mental-health service utilization that may benefit from a mobile-response-unit initiative
  - Provide baseline data to evaluate whether such an initiative improved outcomes and lowered costs
- Study population
  - Young people, ages 1–21 years, identified with mental-health claims, substance-use disorder claims, or self-inflicted injury claims in VT APCD commercial, Medicaid, and Medicare data for calendar year (CY) 2018

### **Study Background (cont.)**

- High utilizers were defined as young people, ages 1–21 years, with a mental-health and/or substance-use disorder diagnosis in CY2018 and any one of the following criteria:
  - 1 or more hospitalizations with a mental-health diagnosis
  - 1 or more ED visits with a mental-health diagnosis
  - 1 or more mental-health hospital diversion program stays
  - 1 or more residential (private, non-medical institution) stays
  - 4 or more home- and community-based services
  - 4 or more case-management services
- The Non-High utilizer group included all young people that had at least one mentalhealth diagnosis in 2018 but did not meet the additional criteria above

### **Reporting Stratifications & Measures**

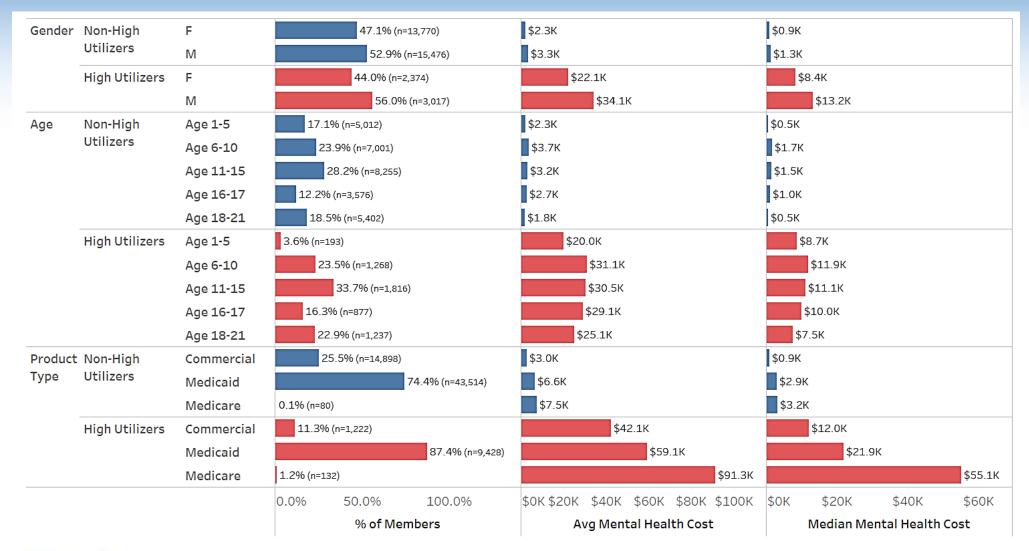
- Stratifications for young people with mental-health diagnoses identified using APCD data
  - High utilizers vs. non-high utilizers of mental-health services
  - Payer types: Commercial, Medicaid, Medicare
  - Age groups (1–5, 6–10, 11–15, 16–17, 18–21 years)
  - Gender
  - Hospital Service Areas (HSAs)
  - 3M<sup>™</sup> Clinical Risk Groups (CRGs)
  - SAMHSA mental-health and substance-abuse conditions
- Outcome measures
  - Total expenditures (i.e., allowed amounts) for claims with a mental-health diagnosis
  - Inpatient hospitalizations / ED visits with a mental-health diagnosis

# **Findings – Mental-Health Utilization & Cost**

Metric	Non-High Utilizers	High Utilizers	All Members
Number of members	29,246	5,391	34,637
Number of members with inpatient mental-health discharges	0	960	960
Number of members with mental-health ED visits	0	1,813	1,813
Number of members with ≥4 HCBS days *	0	585	585
Number of members with ≥4 case management services	0	3,438	3,438
Number of members with any residential PNMI treatment +	0	323	323
Number of members with any hospital diversion claim	0	298	298
Total mental-health cost (all members)	\$83,209,302	\$155,219,182	\$238,428,483
Average mental-health cost per member	\$2,845	\$28,792	\$6,884
Median total mental-health cost	\$1,055	\$10,418	\$1,477

- \* HCBS = Home and community-based services
- + PNMI = Private non-medical institution

### **Findings – Demographics**



#### **Findings – Total Mental-Health Cost Distribution**



**ONPOINT** Health Data

### Findings – Health Status Measured by 3M<sup>™</sup> CRGs

CRG	1 - Healthy	Non-High Utilizers	32.79%					
Category		High Utilizers	4.97%					
	2 - History of significant acute disease	Non-High Utilizers	8.84%					
		High Utilizers	4.79%					
	3 - Single minor chronic disease	Non-High Utilizers	28.97%					
		High Utilizers	25.77%					
	4 - Minor chronic disease in multiple organ systems	Non-High Utilizers	3.41%					
		High Utilizers	3.32%					
	5 - Significant dominant or moderate chonic disease	Non-High Utilizers	21.69%					
		High Utilizers	45.26%					
	6 - Significant chronic disease in multiple organ systems	Non-High Utilizers	3.69%					
		High Utilizers	14.77%					
	7 - Dominant chronic disease in ≥3 organ systems	Non-High Utilizers	0.05%					
		High Utilizers 0.07%						
	8 - Dominant and metastatic malignancies	Non-High Utilizers	0.08%					
		High Utilizers	0.09%					
	9 - Catastrophic	Non-High Utilizers	0.48%					
		High Utilizers	0.96%					
			0% 5% 10% 15% 20% 25% 30% 35% 40% 45% 50%					

% of Members

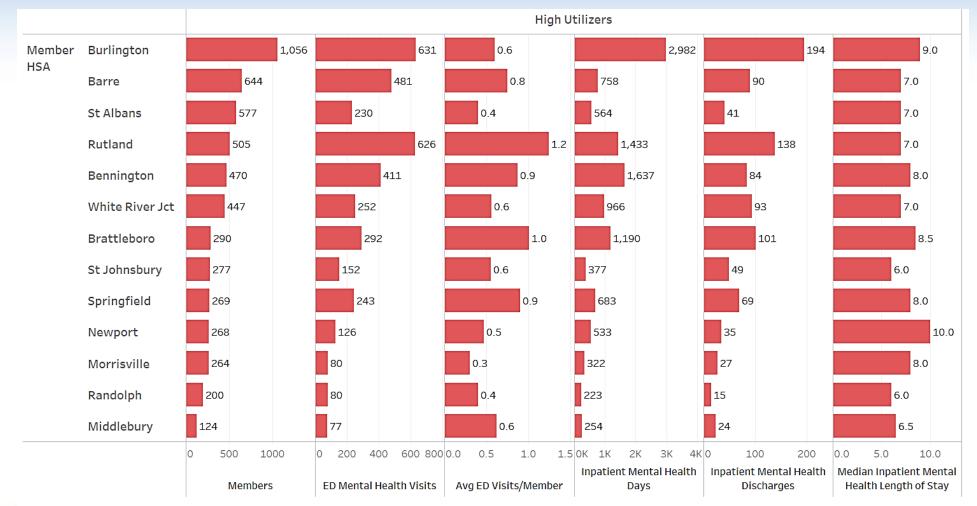
# Findings – SAMHSA Diagnosis Categories

#### **Percent of Group Population with Diagnosis**

SAMHSA Diagnosis	Suicide and Self-harm	Non-High Utilizers	0.1%							
		-	0.170			0.001				
Groups		High Utilizers				9.9%				
	Schizophrenia and Other	Non-High Utilizers	0.1%							
	Psychotic Disorders	High Utilizers		2.9%						
	Personality Disorders	Non-High Utilizers	0.1%							
		High Utilizers	1.2%							
	Impulse Control Disorders	Non-High Utilizers	0.2%							
		High Utilizers	1.8	%						
	Alcohol-related Disorders	Non-High Utilizers	0.6%							
		High Utilizers		4.0%						
	Conduct Disorder	Non-High Utilizers	1.69	б						
		High Utilizers				9.3%				
	Oppositional Defiant Disorder	Non-High Utilizers	1.3%							
		High Utilizers			7.2%					
	Pervasive Developmental	Non-High Utilizers		4.3%						
	Disorders	High Utilizers				9.9%				
	Developmental Disorders	Non-High Utilizers								28.2%
		High Utilizers							24.4%	
			0.0%	4.0%	8.0%	12.0%	16.0%	20.0%	24.0%	28.0%
			% of Members							

# **Findings – High Utilizers**

#### **Emergency Department & Inpatient Utilization by HSA**



# Conclusions

- Compared to the non-high utilizer group, pediatric patients categorized as high utilizers had...
  - Higher proportions of patients that were male, patients that were 11 years or older, and patients enrolled in Medicaid
  - Average total mental-health service expenditures approximately 10 times greater
  - Substantially higher proportions in all SAMHSA diagnostic categories except developmental disorders
- Regional counts of individuals categorized as high utilizers did not necessarily indicate where the highest acute care or interventions were needed
- APCDs are valuable for assessing pediatric populations with high mental-health service utilization and identifying populations with highest acute needs who may benefit from alternative interventions



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