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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

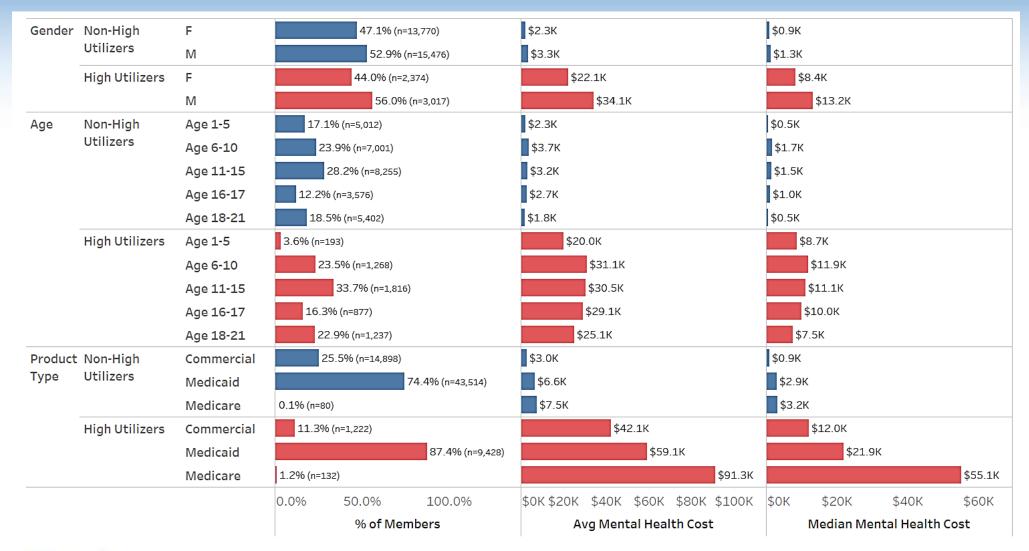
- Stratifications for young people with mental-health diagnoses identified using APCD data
 - High utilizers vs. non-high utilizers of mental-health services
 - Payer types: Commercial, Medicaid, Medicare
 - Age groups (1–5, 6–10, 11–15, 16–17, 18–21 years)
 - Gender
 - Hospital Service Areas (HSAs)
 - 3M[™] 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[™] 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

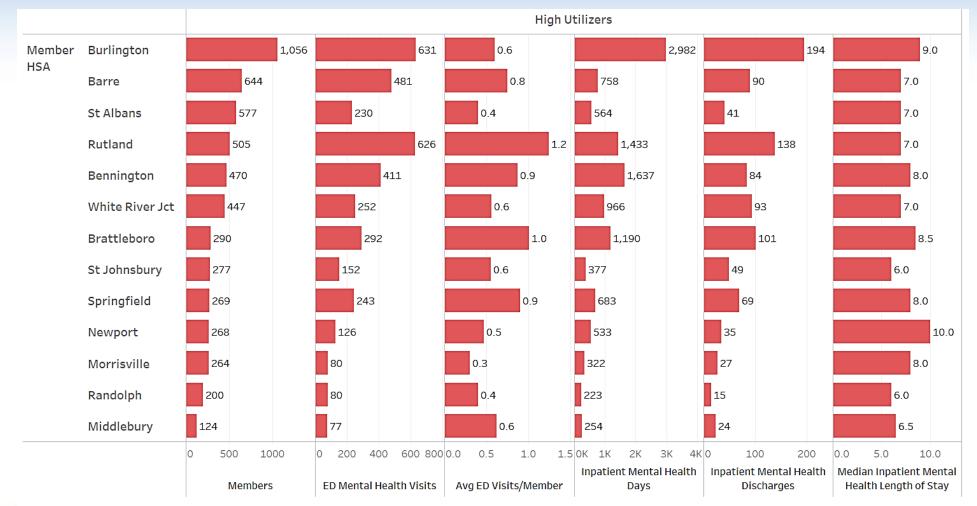
Findings – SAMHSA Diagnosis Categories

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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