Risk Factors for High Utilizers of the Emergency Department Among Health Home Enrollees
Whitepaper Distribution

- Whitepaper will be posted on the Health Home website: https://www.health.ny.gov/health_care/medicaid/program/medicaid_health_homes/performance/index.htm


- Both documents will be posted in Atrium
Purpose/Goals

- Introduce and define Health Home High Utilizers of the Emergency Department
- Highlight differences between entire Medicaid population and Health Home utilization
- Identify risk factors that are associated with Health Home High Utilizers of the Emergency Department
- Discuss how results should be used
- Share future plans
Initial Health Home Population

- Health Home enrolled members
- Removed dually eligible (Medicaid and Medicare) members
- Calendar years
  - 2013
  - 2014
  - 2015
Emergency Department (ED) Utilization

- ED utilization between Jan 1, 2013 and Dec 31, 2015
  - All ED utilization during the individual calendar year
  - Regardless of when a member was enrolled during calendar year

- Modified version of the Healthcare Effectiveness Data and Information Set (HEDIS) Ambulatory Care (AMB) measure
  - Mental health and substance use utilization included
  - HEDIS is a set of standardized performance measures, developed and maintained by the NCQA
Medicaid vs. Health Home Utilization

- Health Home ED rate slightly more than 3x higher than that of entire Medicaid population
  - Byproduct of successful targeting of complex individuals
  - Suggests Health Home members are in fact medically complex, high-risk enrollees
Distribution of HH ED Use

- On average, 55% of HH members use the ED in any specific calendar year
  - Roughly 45% do not use the ED, compared to 70% in entire Medicaid population
Defining High Utilizers

- High Utilizers of ED Services * make up 8% of the HH Population
- Non High Utilizers of ED Services* make up 92%

High Utilizers of ED Services has 50% of ED visits by HH Members

Non High Utilizers of ED Services* has 50% of ED visits by HH Members

*6 or more ED visits in a calendar year
ED Utilization Rates

ED Visits Per 1,000 Member Months

- All HH: 2013 - 165, 2014 - 163, 2015 - 161
- Group HU: 2013 - 1,001, 2014 - 1,005, 2015 - 1,003
### Factors Examined

<table>
<thead>
<tr>
<th>Demographics</th>
<th>Populations of Interest</th>
<th>Utilization Factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>HIV</td>
<td>Duration of continuous Health Home enrollment</td>
</tr>
<tr>
<td>Gender</td>
<td>Serious Mental Illness</td>
<td>Inpatient utilization in the three months before an ED visit</td>
</tr>
<tr>
<td>Location in NYS</td>
<td>Substance Use Disorder</td>
<td></td>
</tr>
<tr>
<td>Region in NYS</td>
<td>Chronic only</td>
<td></td>
</tr>
<tr>
<td>Race/Ethnicity</td>
<td>HARP enrolled</td>
<td></td>
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<tr>
<td>SSI</td>
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</tbody>
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Odds of being a High Utilizer

- Used an odds ratio to explain association between being a high utilizer and the population characteristics

### Table 6: Health Home Odds Ratios for High Utilizers by Populations of Interest

<table>
<thead>
<tr>
<th>Medical Populations</th>
<th>2013 Odds Ratio</th>
<th>95% CI</th>
<th>2014 Odds Ratio</th>
<th>95% CI</th>
<th>2015 Odds Ratio</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chronic Only</td>
<td>HIV</td>
<td>2.2</td>
<td>1.9 - 2.6</td>
<td>2.4</td>
<td>2.1 - 2.7</td>
<td>2.5</td>
</tr>
<tr>
<td></td>
<td>SMI</td>
<td>4.9</td>
<td>4.3 - 5.6</td>
<td>4.8</td>
<td>4.3 - 5.3</td>
<td>5.1</td>
</tr>
<tr>
<td></td>
<td>SUD</td>
<td>6.3</td>
<td>5.4 - 7.2</td>
<td>6.3</td>
<td>5.7 - 7.1</td>
<td>7.0</td>
</tr>
</tbody>
</table>

HARP Enrolled

<table>
<thead>
<tr>
<th>Yes</th>
<th>2013 Odds Ratio</th>
<th>95% CI</th>
<th>2014 Odds Ratio</th>
<th>95% CI</th>
<th>2015 Odds Ratio</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>NA²</td>
<td>NA³</td>
<td>NA³</td>
<td>NA³</td>
<td>1.2</td>
<td>1.1 - 1.3</td>
</tr>
</tbody>
</table>

A specific group has a X times greater odds of being a high utilizer than the reference group.

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1. Includes only non-dual, enrolled Health Home members.
2. Medical Populations are not mutually exclusive. Members may belong to more than one group with the exception of Chronic Only.
3. NA = Not applicable, HARP program did not start until 2015.
Notable Risk Factors Identified

- Demographics
  - Location & region in NYS
  - Race/Ethnicity

- Populations of Interest
  - Serious Mental Illness
  - Substance Use Disorder

- Utilization Factors
  - Inpatient Utilization in the three months before an ED visit
What should Health Homes do next?

- Review the whitepaper
  - posted in Atrium
  - posted on Health Home Performance Management webpage

- Start a conversation!

- Get thinking about specific cohorts and interventions to affect change
Future Plans

- Additional whitepapers for Health Home analysis
- Develop formal predictive model
  - Target members at risk of becoming high utilizers of the ED
- Explore inpatient events that could correlate with high utilization within the ED
Questions?

Submit questions to
https://apps.health.ny.gov/pubdoh/health_care/medicaid/program/medicaid_health_homes/emailHealthHome.action
Select: Performance Management