BHI’s Healthcare Barrier Index Capabilities
BHI’s Risk Identification and Stratification Approach Emphasizes Social Determinants of Health (SDOH)

- An understanding of clinical, socioeconomic and behavior factors enables a more complete view of an individual’s health status.

- BHI assembles a broad range of socioeconomic and behavioral factors including income, education, lack of vehicle access, social/family support, disabilities, alcohol and substance abuse, behavioral health, and more.

- These factors are used in BHI’s predictive models and used to compute a Healthcare Barrier Index for each individual and/or populations.

- Our HBI identifies members with low to high incidence of socioeconomic and behavioral factors that likely impact the member's ability to manage his/her health and help inform the most appropriate interventions for the member.

Source: Robert Wood Johnson Foundation.
BHI Leverages SDOH Drivers Data to Understand Vulnerabilities

Public data sources used to impute factors based on ZIP codes:

- Claims/Enrollment information used to derive member specific factors:
  - ICD-10 “Z” codes specifically address socioeconomic issues
  - Disabilities and major physical issues
  - Alcohol/substance abuse/behavioral health
  - Family composition and disabilities

Ability to integrate plan submitted variables
Nine Factors Drive the Most Actionable Understanding of Healthcare Barriers

Key Health Care Barriers

Access (4)
Competing Priorities (2)
Culture (1)
Emotional Behaviors (2)
Environment (3)
Finance (4)
Health Behavior (3)
Skills/Ability (3)
Social Support (1)

Source: Based on analysis of a national sample of members greater than $250K using BHI National Data.

>50% of High Cost Individuals Wrestle with Intense SDOH Issues

- Severe: 7,080 (13%)
- High: 6,466 (12%)
- Moderate: 17,346 (32%)
- Low: 23,139 (43%)

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### A Deeper Dive: Factors Embedded in BHI’s Healthcare Barrier Index (1/2)

<table>
<thead>
<tr>
<th>Determinant Domain</th>
<th>Factor</th>
<th>Description</th>
<th>Source</th>
<th>Factor Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access to Care</td>
<td>Access to PCP</td>
<td>Flagged as a barrier if distance between PCP and member’s ZIP code is greater than 25 miles</td>
<td>Medical Claims</td>
<td>Zip Code Level</td>
</tr>
<tr>
<td></td>
<td>Medically Underserved Area</td>
<td>Ratio of PCP to population</td>
<td>US Census/CMS/AMA</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Member’s Food Access</td>
<td>Food access thresholds: Urban: 1 mile</td>
<td>USDA Food Access</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Rural: 10 miles</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>No Vehicle</td>
<td>Percentage of households with no available vehicle estimate, 2010–2014 ACS</td>
<td>US Census</td>
<td></td>
</tr>
</tbody>
</table>
### A Deeper Dive: Factors Embedded in BHI’s Healthcare Barrier Index (2/2)

<table>
<thead>
<tr>
<th>Determinant Domain</th>
<th>Factor</th>
<th>Description</th>
<th>Source</th>
<th>Factor Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Competing Priorities</td>
<td>Family Composition – Number of Dependents</td>
<td>Number of dependents with same Subscriber ID</td>
<td>Member Enrollment</td>
<td>Member Level</td>
</tr>
<tr>
<td></td>
<td>“Z” Codes (Z636)</td>
<td>“Z” Codes – # dependents</td>
<td>Medical Claims</td>
<td></td>
</tr>
<tr>
<td>Emotional Behaviors</td>
<td>Behavioral Health</td>
<td>Based on claims for members with BH diagnosis in current and prior year</td>
<td>Medical Claims</td>
<td></td>
</tr>
</tbody>
</table>