Use of a Population-Based Survey to Describe the Health of Boston’s Public Housing Residents
About Partners in Health and Housing

- Prevention Research Center funded by CDC
- Made up of four equal partners:
  - Boston University School of Public Health
  - Community Committee for Health Promotion
  - Boston Housing Authority
  - Boston Public Health Commission
- Mission: We work to improve the health of public housing residents by engaging them in community-centered research
BRFSS and Boston BRFSS

- Behavioral Risk Factor Surveillance System (BRFSS)
  - CDC’s annual national random digit dial survey
  - Asks about health, access to care, risk behaviors

- Boston BRFSS
  - Modified version administered every 2 years by Boston Public Health Commission
  - Includes question that identifies residents living in buildings of the Boston Housing Authority

Partners in Health and Housing Prevention Research Center
Prevention Research Center designated by the Centers for Disease Control and Prevention
Describing the health of public housing residents

- Compared Boston’s public housing residents with other residents of the city
  - Health status (excellent / good / fair / poor)
  - Access to and utilization of health services
  - Health behaviors
- Goal was to describe and compare two populations . . .
  - . . . not to evaluate whether residence in public housing causes these differences

Partners in Health and Housing Prevention Research Center
Prevention Research Center designated by the Centers for Disease Control and Prevention
Approach

- Prevalence Odds Ratio (POR) compares health indicators for public housing residents and other city residents

- Sequential analysis
  - Calculated crude POR (with 95% CI)
  - Then adjusted for (in order, and cumulatively):
    - Gender and age
    - Race/ethnicity
    - Education and income
## Results: Health Status*

<table>
<thead>
<tr>
<th>Health Status Indicator</th>
<th>Crude POR</th>
<th>Fully adjusted POR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fair or poor health status</td>
<td>4.57 (2.46, 8.49)</td>
<td>1.81 (1.12, 2.93)</td>
</tr>
<tr>
<td>Hypertension (ever diagnosed)</td>
<td>2.57 (1.59, 4.15)</td>
<td>1.67 (1.01, 2.77)</td>
</tr>
<tr>
<td>High cholesterol (ever diagnosed)</td>
<td>1.34 (0.85, 2.13)</td>
<td>1.17 (0.65, 2.11)</td>
</tr>
<tr>
<td>Asthma (current)</td>
<td>2.46 (1.77, 3.42)</td>
<td>1.57 (0.92, 2.65)</td>
</tr>
<tr>
<td>Diabetes (ever diagnosed)</td>
<td>3.35 (1.40, 8.00)</td>
<td>1.77 (0.60, 5.17)</td>
</tr>
<tr>
<td>Obesity</td>
<td>1.91 (1.30, 2.82)</td>
<td>1.24 (0.76, 2.02)</td>
</tr>
<tr>
<td>Disabled for ≥1 year</td>
<td>2.38 (1.49, 3.82)</td>
<td>1.38 (0.66, 2.86)</td>
</tr>
<tr>
<td>Missing ≥6 teeth</td>
<td>2.60 (1.78, 3.78)</td>
<td>1.49 (0.85, 2.60)</td>
</tr>
<tr>
<td>Felt sad, blue, or depressed 15 days in past month</td>
<td>3.12 (1.86, 5.24)</td>
<td>1.24 (0.62, 2.50)</td>
</tr>
</tbody>
</table>

*Blue type indicates statistically significant result.
Comments on results for health status

- **All** indicators of poor health more prevalent among public housing residents (POR>1.0)
  - Most crude results are statistically significant
  - Most adjusted results are not significant
- Because goal is descriptive, crude PORs are of greater interest
  - Crude PORs range from 1.9 (for obesity) to 4.6 (for fair/poor health status)
## Results: Barriers to Access and Preventive Screenings*

<table>
<thead>
<tr>
<th>Access / preventive screening</th>
<th>Crude POR</th>
<th>Fully adjusted POR</th>
</tr>
</thead>
<tbody>
<tr>
<td>No health insurance</td>
<td>0.94 (0.51, 1.73)</td>
<td>0.49 (0.21, 1.15)</td>
</tr>
<tr>
<td>Financial barrier to medical care</td>
<td>1.36 (0.78, 2.36)</td>
<td>0.75 (0.41, 1.38)</td>
</tr>
<tr>
<td>No cholesterol screening in past 5 years</td>
<td>0.51 (0.18, 1.47)</td>
<td>0.61 (0.23, 1.65)</td>
</tr>
<tr>
<td>No clinical breast exam in past 2 years (women only)</td>
<td>0.51 (0.31, 0.85)</td>
<td>0.41 (0.26, 0.65)</td>
</tr>
<tr>
<td>No Pap test in past 3 years (women only)</td>
<td>0.49 (0.20, 1.21)</td>
<td>0.51 (0.24, 1.09)</td>
</tr>
<tr>
<td>Teeth not cleaned in &gt; 2 years</td>
<td><strong>2.18 (1.39, 3.42)</strong></td>
<td>1.39 (0.77, 2.48)</td>
</tr>
</tbody>
</table>

*Blue type indicates statistically significant result.
Comments on access and screening

- Most indicators of poor access / lack of screening are less prevalent among public housing residents (POR<1.0)

- Statistically significant crude results:
  - Female residents only half as likely not to have had breast exam
  - But residents more than twice as likely not to have had their teeth cleaned
### Results: Risk Behaviors*

<table>
<thead>
<tr>
<th>Risk Behavior</th>
<th>Crude POR</th>
<th>Fully adjusted POR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smoker (current)</td>
<td>1.99 (1.34, 2.97)</td>
<td>2.29 (1.03, 5.08)</td>
</tr>
<tr>
<td>Binge drinking episode in past month</td>
<td>0.52 (0.29, 0.95)</td>
<td>0.81 (0.55, 1.20)</td>
</tr>
<tr>
<td>Insufficient physical activity</td>
<td>1.43 (1.07, 1.92)</td>
<td>0.86 (0.73, 1.02)</td>
</tr>
<tr>
<td>Marijuana use (past year)</td>
<td>0.39 (0.15, 1.05)</td>
<td>0.52 (0.23, 1.17)</td>
</tr>
<tr>
<td>Illicit drug use (ever used)</td>
<td>0.91 (0.70, 1.20)</td>
<td>2.57 (0.73, 9.09)</td>
</tr>
</tbody>
</table>

*Blue type indicates statistically significant result.
Mixed results for risk behaviors

- Smoking and binge drinking were more commonly reported by public housing residents (statistically significant).
- Marijuana use was less commonly reported by public housing residents (approaches statistical significance).
Closing Thoughts

- Public housing residents reported poorer health status across many outcomes
- Yet access and utilization equal or exceed that of other Boston residents
  - Public housing residents more likely to qualify for public sources of health coverage
  - Boston has extensive network of community health centers, many near public housing
  - Housing subsidy may allow health care spending
This presentation summarizes a published research article: