Identifying Neighborhoods Likely to Have High Concentrations of SNAP Eligible but Not Enrolled Persons

Michael Martinez-Schiferl
Data & Evaluation Analyst
Colorado Department of Human Services

Presentation for NAWRS Annual Meeting
August 19, 2013
Overview

• Background and Purpose
• Methodology, Data, and Examples
• Maps
• Notes and Caveats
• Next Steps
The State of Colorado has undertaken a number of initiatives aimed at improving access to the Colorado Food Assistance Program, including partnering with community-based organizations to:
- provide outreach
- application assistance
- general information on the Supplemental Nutrition Assistance Program (SNAP)

While the State, local governments, and community-based organizations maintain data on need within their localities, better data are always needed to continue to understand need and improve access.

Work Support Strategies
- Grant-funded project
- In year 2 out of 3 of the grant implementation period
- Among the project goals in Colorado is increasing the percentage of those eligible for SNAP who are participating in the program
Objective

• Estimate the number of persons eligible but not enrolled (EBNE) in SNAP to help identify, with as much precision as possible, the localities where high concentrations of SNAP EBNE persons live
• Provide information with which the State, local governments, and community-based organizations might base decisions concerning where additional SNAP outreach efforts are needed
  - Identify neighborhoods and areas where enhanced outreach efforts are most likely to be fruitful.
Identifying a Method and Data with Which to Estimate SNAP Eligibility

Being a state agency, we have lots of information on SNAP enrollment

How to estimate eligibility:
1. American Community Survey (ACS) Public Use Microdata Sample (PUMS)
   - Microdata with income and demographic information for individuals in the sample
   - Smallest geographic identifier is a Public Use Microdata Area (PUMA)—too big of an area to be useful in targeting outreach

2. American Fact Finder ACS Tables
   - No microdata but tables have estimates for a population under a certain poverty level
   - Statistics for smaller areas of geography including Census Tracts
The SNAP Program Access Index

• The SNAP PAI is not, strictly speaking, a measure of participation among people eligible for benefits
• FNS regularly publishes estimates of the participation rate among SNAP eligibles in a more precise way—analysis and reports from Mathematica Policy Research based on Census survey microdata
  - Longer lag time
  - Same limitations with PUMA geographic identifier
The SNAP Program Access Index

Example 2011 Calculation for Colorado

<table>
<thead>
<tr>
<th>SNAP Participants</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Monthly SNAP Participants</td>
<td>465,192</td>
</tr>
<tr>
<td>Persons Receiving Disaster Food Assistance</td>
<td>- 0</td>
</tr>
<tr>
<td>Adjusted Average Monthly SNAP Participants</td>
<td>465,192</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Rough Estimate of SNAP Eligible</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Persons Under 125% of Poverty (2011 1-Yr ACS)</td>
<td>905,066</td>
</tr>
<tr>
<td>Average Monthly FDPIR Participants</td>
<td>- 556</td>
</tr>
<tr>
<td>Adjusted Number of Persons Under 125% of Poverty</td>
<td>904,510</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Colorado SNAP Program Access Index</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>=465,192/904,510</td>
<td>0.514</td>
</tr>
</tbody>
</table>

904,510 – 465,192 = 439,198

The calculation suggests that there were roughly 439,000 persons eligible but not enrolled in SNAP in 2011 across Colorado.
Adapting the SNAP PAI

Calculating the SNAP PAI for Smaller Geographies
• Requires using ACS 5-Year data tabulations from the American Fact Finder
• Doesn’t perform adjustments for
  – SNAP Disaster Assistance
  – FDPIR Participation
County Map – SNAP PAI in 2011

SNAP Program Access Index

0.178 – 0.463
0.464 – 0.557
0.558 – 0.711
0.712 – 0.941

Estimates based on 2011 CBMS caseload data and 2011 ACS 5-year estimates.
County Map – SNAP EBNE in 2011

Number of Persons EBNE in SNAP

Source: 2011 CBMS SNAP caseload data and 2011 ACS 5-year estimates
Census Tract Map – SNAP EBNE in 2011

Number of Persons EBNE in SNAP

Source: 2011 CBMS SNAP caseload data and 2011 ACS 5-year estimates
Census Tract Map – SNAP EBNE in 2011

Number of Persons

- 0 – 99
- 100 – 499
- 500 – 999
- 1,000 – 3,347

Source: 2011 CBMS SNAP caseload data and 2011 ACS 5-year estimates
Online Interactive Map

- Zoom in/out and pan to see street boundaries for Census Tracts
- Click on a Census Tract for a popup with additional information
- Overlay county, zip code, and school district boundaries

http://dola.colorado.gov/gis-cms/content/snap-eligible-not-enrolled
Notes and Caveats

Use of the SNAP PAI methodology appears to overestimate the total number of SNAP EBNE persons in Colorado, when comparing to the FNS official eligibility estimates produced by Mathematica Policy Research.

Factors likely to contribute to the estimate being too high

• The SNAP PAI Methodology doesn’t account for certain categorical eligibility restrictions:
  - Status for students of higher-education institutions
  - Documentation status
  - Work status for able bodied adults without dependent children

Factors likely to contribute to the estimate being too low

• Use of 125% poverty instead of 130% poverty
• Use of 2011 ACS 5-Year sample versus 2011 ACS 1-Year sample

Other factors

• Difference in timing between 5-Year ACS sample and SNAP enrollment data
Next Steps

• Formally publish the research report online, including details regarding the methodology
• Develop a toolkit on how counties and local communities can use these estimates in performing SNAP outreach
• Consider additional refinements to methodology including:
  - Other ACS American Fact Finder tables to account for undocumented persons and students
  - Use of 1-year ACS PUMS and a method of ‘allocating’ the estimates from PUMAs to Census Tracts
Backup
## Notes and Caveats – 5-Yr vs. 1-Yr ACS

<table>
<thead>
<tr>
<th>County</th>
<th>Total Persons</th>
<th>Avg Monthly Persons Receiving SNAP in CY 2011</th>
<th>Persons Under 125% FPL</th>
<th>PAI</th>
<th>Number Eligible but not Enrolled in SNAP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adams</td>
<td>429,513</td>
<td>54,179</td>
<td>78,986</td>
<td>0.686</td>
<td>24,807</td>
</tr>
<tr>
<td>Arapahoe</td>
<td>557,950</td>
<td>51,217</td>
<td>90,108</td>
<td>0.568</td>
<td>38,891</td>
</tr>
<tr>
<td>Boulder</td>
<td>284,040</td>
<td>16,904</td>
<td>47,625</td>
<td>0.355</td>
<td>30,721</td>
</tr>
<tr>
<td>Denver</td>
<td>579,281</td>
<td>85,646</td>
<td>141,965</td>
<td>0.603</td>
<td>56,319</td>
</tr>
<tr>
<td>Douglas</td>
<td>279,771</td>
<td>6,329</td>
<td>13,253</td>
<td>0.478</td>
<td>6,924</td>
</tr>
<tr>
<td>El Paso</td>
<td>592,364</td>
<td>64,745</td>
<td>91,097</td>
<td>0.711</td>
<td>26,352</td>
</tr>
<tr>
<td>Jefferson</td>
<td>524,360</td>
<td>64,745</td>
<td>91,097</td>
<td>0.711</td>
<td>26,352</td>
</tr>
<tr>
<td>Larimer</td>
<td>288,100</td>
<td>22,912</td>
<td>49,855</td>
<td>0.460</td>
<td>26,943</td>
</tr>
<tr>
<td>Mesa</td>
<td>142,002</td>
<td>16,758</td>
<td>23,444</td>
<td>0.715</td>
<td>6,686</td>
</tr>
<tr>
<td>Pueblo</td>
<td>153,307</td>
<td>32,747</td>
<td>36,225</td>
<td>0.904</td>
<td>3,478</td>
</tr>
<tr>
<td>Weld</td>
<td>242,360</td>
<td>32,747</td>
<td>43,843</td>
<td>0.747</td>
<td>11,096</td>
</tr>
<tr>
<td>Balance of State</td>
<td>779,112</td>
<td>69,239</td>
<td>132,096</td>
<td>0.524</td>
<td>62,857</td>
</tr>
<tr>
<td>Colorado Total</td>
<td>4,852,160</td>
<td>485,825</td>
<td>806,207</td>
<td>0.603</td>
<td>320,382</td>
</tr>
</tbody>
</table>

Generally, the use of the 2011 5-Year ACS tends to underestimate the population for Colorado (especially those under 125% FPL); the result is a likely higher than actual PAI and lower than actual estimate of the number of persons EBNE in SNAP.
Denver County
Number of Persons Eligible but not Enrolled in SNAP by Census Tract, 2011

Number of Persons
- 0 – 99
- 100 – 499
- 500 – 999
- 1,000 – 3,347

Source: 2011 CBMS SNAP caseload data and 2011 ACS 5-year estimates
Denver County
Number of Persons Eligible but not Enrolled in SNAP by Census Tract with ZIP Code Overlay, 2011

NOTES:
ZIP Code labeled Denver ZIP Codes 80265, 80290, 80293, 80294, and 80299, which exist as one block areas in downtown Zip Code 80202 are not shown.

Source: 2011 CBMS SNAP caseload data and 2011 ACS 5-year estimates
NOTES:
ZIP Code labeled
Denver ZIP Codes 80265, 80290, 80293, 80294, and 80299, which exist as one block areas in downtown Zip Code 80202 are not shown.

Source: 2011 CBMS SNAP caseload data and 2011 ACS 5-year estimates
Denver County
Number of Persons Eligible but not Enrolled in SNAP by Census Tract with ZIP Code Overlay, 2011

NOTES:
Census Tract labeled Denver ZIP Codes 80265, 80290, 80293, 80294, and 80299, which exist as one block areas in downtown Zip Code 80202 are not shown.

Source: 2011 CBMS SNAP caseload data and 2011 ACS 5-year estimates