Impact of Revised Food Packages on the Food Environment

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Two Studies

▲ Impact of the Revised WIC Food Packages on Small Vendors
▲ Access to WIC Foods in Tribal Areas
Rationale for Study of Small WIC Vendors

▲ Small WIC stores:
- Play an important role in the WIC program
- Are typically characterized by a limited availability of healthy food options
- Likely to be the most affected by the food package changes
- Critical to success
Specific Aims

▲ Examine the extent to which small stores were able to maintain their authorization with the WIC program;

▲ Understand the changes small vendors needed to make in order to comply with the new regulations as well as the challenges they faced in doing so; and

▲ Assess the availability of fresh produce and other new, healthy foods among small WIC stores pre- to post-policy.
Methodology

▲ Multi-method approach
▲ Longitudinal design
▲ Store inventories were conducted to assess food availability
  – Used modified NEMS-S¹
  – Conducted 275 pre- and 248 post-policy inventories

## Participating States and Stores

### Table 1. Characteristics of WIC vendors included in final study sample, by state

<table>
<thead>
<tr>
<th></th>
<th>NH</th>
<th>PA</th>
<th>WI</th>
<th>CO</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Sample</strong></td>
<td>45 (100)</td>
<td>93 (100)</td>
<td>73 (100)</td>
<td>37 (100)</td>
</tr>
<tr>
<td><strong>Vendor Size</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 register</td>
<td>23 (51.1)</td>
<td>70 (75.3)</td>
<td>48 (65.8)</td>
<td>2 (5.4)</td>
</tr>
<tr>
<td>2 registers</td>
<td>12 (26.7)</td>
<td>18 (19.4)</td>
<td>10 (13.7)</td>
<td>16 (43.2)</td>
</tr>
<tr>
<td>3 registers</td>
<td>7 (15.6)</td>
<td>1 (1.1)</td>
<td>11 (15.1)</td>
<td>9 (24.3)</td>
</tr>
<tr>
<td>4 registers</td>
<td>3 (6.7)</td>
<td>4 (4.3)</td>
<td>4 (5.5)</td>
<td>10 (27.0)</td>
</tr>
<tr>
<td><strong>Urbanicity</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Urban</td>
<td>20 (44.4)</td>
<td>81 (87.1)</td>
<td>50 (68.5)</td>
<td>7 (18.9)</td>
</tr>
<tr>
<td>Rural</td>
<td>25 (55.6)</td>
<td>12 (12.9)</td>
<td>23 (31.5)</td>
<td>30 (81.1)</td>
</tr>
<tr>
<td><strong>Store Type</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Convenience</td>
<td>11 (24.4)</td>
<td>4 (4.3)</td>
<td>1 (1.4)</td>
<td>0 (0)</td>
</tr>
<tr>
<td>Food mart / gas station</td>
<td>4 (8.9)</td>
<td>1 (1.1)</td>
<td>2 (2.7)</td>
<td>1 (2.7)</td>
</tr>
<tr>
<td>Corner store (“bodega”)</td>
<td>14 (31.1)</td>
<td>72 (77.4)</td>
<td>45 (61.6)</td>
<td>15 (40.5)</td>
</tr>
<tr>
<td>Grocery store</td>
<td>16 (35.6)</td>
<td>16 (17.2)</td>
<td>25 (34.3)</td>
<td>21 (56.8)</td>
</tr>
</tbody>
</table>
Findings

Availability of new, healthy WIC foods: MILK

▲ Significant increases in the availability of lowfat milk
  - only in NH and WI
  - only among stores with 1 register

▲ Significant increases in the availability of soy milk
  - all three study states
  - all store sizes

Figure 1. Percent of small WIC vendors with lowfat milk available, pre- and policy, by State
Findings

Availability of new, healthy WIC foods: FRUIT

▲ Significant increases in the availability of fruit pre- to post-implementation

- Fresh
  - Among 1 and 2 register stores
  - All three study states
- Canned and Frozen
  - Among 1 register stores
  - Only in Wisconsin

![Figure 2. Percent of small WIC vendors with fruit available, pre- and post-policy (n=211)](image)
Findings
Availability of new, healthy WIC foods: VEGETABLES

▲ Some significant increases in the availability of vegetables pre- to post-implementation

– Fresh
  – Among 1 register stores
  – Only in NH

– Frozen
  – Among 1 register stores
  – Only in PA

Figure 3. Percent of small WIC vendors with vegetables available, pre- and policy (n=211)
Findings

Availability of new, healthy WIC foods: WHOLE GRAINS

△ Significant increases in the availability of whole grain options pre- to post-implementation

- Brown rice, whole wheat tortillas, and whole grain bread
  - Among 1-4 register stores
  - All three study states
- Soft corn tortillas
  - Among 1 and 2 register stores
  - In PA only

Figure 4. Percent of small WIC vendors with brown rice, by number of registers (n=211)
Conclusions

Did the availability of fresh produce and other healthy foods increase among small WIC stores?

- Yes with some variation by state
- Stores with one and two registers saw most significant increases
- Some policy choices could be more influential than others (e.g. lowfat milk)
Opportunities to Enhance Access to WIC Foods in Tribal Areas

▲ Funding from Aetna and Altarum

▲ Partnered with Inter Tribal Council of AZ, Inc. (ITCA)

▲ Selected 3 local agencies for case study

▲ Multi-method approach
Findings from Inventories

Inventoried a total of 14 stores across the 3 tribes to assess whether met minimum stocking requirements

<table>
<thead>
<tr>
<th>Food Item</th>
<th>Vendors Meeting Criterion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infant Fruits and Vegetables</td>
<td>7 50%</td>
</tr>
<tr>
<td>Milk</td>
<td>9 64%</td>
</tr>
<tr>
<td>Infant Formula</td>
<td>9 64%</td>
</tr>
<tr>
<td>Canned Fish</td>
<td>9 64%</td>
</tr>
<tr>
<td>Cheese</td>
<td>10 71%</td>
</tr>
<tr>
<td>Whole-Wheat Bread</td>
<td>11 79%</td>
</tr>
<tr>
<td>Fresh Fruits and Vegetables</td>
<td>12 86%</td>
</tr>
<tr>
<td>Juice</td>
<td>12 86%</td>
</tr>
<tr>
<td>Infant Cereal</td>
<td>13 93%</td>
</tr>
<tr>
<td>Infant Meats</td>
<td>13 93%</td>
</tr>
</tbody>
</table>
Findings from Participant Interviews

▲ Two of the four major barriers identified by program participants were directly related to access to WIC foods

1. Limited selection and / or poor quality of produce

“The vegetables are shriveled up, so I don’t want to buy them.”
— WIC participant
Findings from Participant Interviews

2. Transportation

- Number of minutes to the closest store used to purchase WIC foods (n = 35)
  - <15 minutes: 68.6%
  - 15-30 minutes: 22.9%
  - 31-60 minutes: 8.6%

- Number of minutes to a store with a good selection of WIC foods (n = 34)
  - <15 minutes: 17.6%
  - 15-30 minutes: 14.7%
  - 31-60 minutes: 44.1%
  - More than 60 minutes: 23.5%
Findings from Vendors

▲ Two of the four major barriers identified by vendors were directly related supply and demand

1. Delivery of spoiled or damaged goods by some distributors

“It’s hard…we get one truck a week… I don’t get anything from [one distributor] because it comes in so rotten.”
— WIC vendor
Findings from Vendors

2. Difficulty anticipating demand and maintaining adequate supply of some WIC foods

“[I have to travel to get food] at least once or twice a month if I don’t predict it right.”

— WIC vendor
More Info?

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