Welcome to
“Findings from the Nutrition Services Program Process Study and Meal Cost Analysis”

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Facilitator: Magda Hageman

The webinar will begin at 3:30 p.m. Eastern Daylight Time
Findings from the AOA Nutrition Programs Process Study and Meal Cost Analysis

National Evaluation Results Webinar
The National Resource Center on Nutrition and Aging

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Title III-C Nutrition Services Program (AOA Nutrition Programs)

• Adequate nutrition is critical for people of all ages, but especially important for older adults

• Title III-C Nutrition Services Program (AOA Nutrition Programs) plays a vital role in ensuring needs of older adults are met

• Nutrition services
  – Congregate and home-delivered meals
  – Nutrition screening, assessment, education and counseling

• Other types of services
  – Health promotion
  – Medical screening
  – Social or recreational activities
Overview of AOA Nutrition Programs

• Funding and administration
  – ACL awards grants to SUAs based on share of population aged 60 and older
  – AAAs administer programs within planning and service area (PSAs)
  – AAAs award grants/contracts to LSPs to provide services
  – Other funding (e.g., in-kind and participant contributions, and donations)
  – Congregate meals and services provided at LSP meal sites; home-delivered meals provided to homebound clients by meal sites, central kitchens, or other organizations

• Target population
  – People aged 60 and older and their spouses of any age
  – Those with greatest economic or social need
  – Low-income, minority, rural, limited English proficiency, at risk of institutionalization

• Program services
  – Congregate/home-delivered meals that comply with Federal nutrition standards
  – Nutrition screening, education, assessment, and counseling services
AOA Nutrition Programs Evaluation Objectives

1. Process study
   – Provide information to support program planning
   – Analyze program structure, administration, staffing, coordination, processes, and service delivery

2. Cost study
   – Estimate the average cost of a congregate and a home-delivered meal
   – Assess variation in costs by select characteristics of local providers
   – Provide information to make funding decisions

3. Client outcomes study (ongoing)
   – Assess program effectiveness using a variety of outcomes:
     • Diet quality based on 24-hour dietary recall
     • Food security, socialization, longer-term health and institutionalization

Process Study
Study Design

- 56 SUAs responded (100% response rate*)
  - Census of SUAs

- 333 AAAs responded (92% response rate*)
  - Sample of AAAs

- 199 LSPs responded (85% response rate*)
  - Sample of LSPs from Responding AAAs

*Response rate for web surveys; agencies also received fax-back surveys

Survey Topic Areas

- Access to Services
- Budget and Fiscal
- Consumer Direction
- Emergency Services and Planning
- Facilities and Equipment
- Food Safety
- Funding/Resource Allocation
- Integration with Other Programs and Partnerships
- Medicaid Waivers
- Nutrition Counseling, Education, Assessments
- Organizational Structure
- Participant Contributions
- Prioritization of Services and Waiting Lists
- Program Characteristics
- Quality Assurance and Monitoring
- Referrals
- State and Area Plans
- Targeting
- Technology and Data
- Training and Technical Assistance
Analysis Methods

• Descriptive analysis: percentages, means, and medians

• Grouping agencies together
  – Statistics for SUAs include SUAs that also function as AAAs, where possible
  – Statistics for AAAs include AAAs that also function as LSPs, where possible

• Analysis weights
  – Weights not needed for SUA analysis
  – Weights used for AAA and LSP analyses
    • Based on weighted data, the AAA and LSP findings are nationally-representative of population of AAAs and LSPs

• Study limitations
  – Sampling error
  – Item nonresponse

Organizational Structure of National Aging Network

• SUAs
  – 56 SUAs: one in 50 States, DC, and 5 territories
  – SUAs oversee a median of 12 AAAs, with a low of 1 and high of 59
  – 80 percent have a Nutrition Program Administrator (NPA)
    • For many agencies, this is a registered dietitian or state-credentialed nutrition professional

• AAAs
  – 629 AAAs in Title III-C NSP, down from 668 in 1995
  – 62 percent are public organizations
  – Provide nutrition services to an average of 2,561 people per year (congregate nutrition) and 1,376 people per year (home-delivered)

• LSPs
  – 61 percent are private, nonprofit agencies, similar to 1995
  – Provide nutrition services to an average of 942 people per year (congregate nutrition) and 443 people per year (home-delivered)

Source: SUA survey; AAA survey and LSP survey, weighted data; Tables III.1, III.2, and III.3.
Congregate Meal Program Characteristics

**Percentage of LSPs Providing Congregate Meals**

<table>
<thead>
<tr>
<th>Year</th>
<th>Congregate Meals</th>
</tr>
</thead>
<tbody>
<tr>
<td>1995</td>
<td>95</td>
</tr>
<tr>
<td>2015</td>
<td>93</td>
</tr>
</tbody>
</table>

**Number of Congregate Sites per LSP, 2015**

- 1: 23%
- 2 to 5: 8%
- 6 to 10: 23%
- 11 or more: 60%

Source: LSP survey, weighted data, Tables III.7 and III.8.

**LSP Provision of Congregate Meals on Weekends (Percentage)**

- 1995: 11
- 2015: 100

**Percentage of Congregate Sites Offering Breakfast, Lunch, or Dinner, 2015**

- Breakfast: 11
- Lunch: 100
- Dinner: 11

Source: LSP survey, weighted data, Tables III.7 and III.8.
Home-Delivered Meal Program Characteristics

**Percentage of LSPs Providing Home-Delivered Meals**

<table>
<thead>
<tr>
<th>Year</th>
<th>1995</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Home-Delivered Meals</td>
<td>81%</td>
<td>87%</td>
</tr>
</tbody>
</table>

**Number of Days Per Week Deliveries Made to Clients' Homes**

<table>
<thead>
<tr>
<th>Days</th>
<th>1 to 4</th>
<th>5</th>
<th>6 or 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage</td>
<td>2%</td>
<td>10%</td>
<td>88%</td>
</tr>
</tbody>
</table>

Source: LSP survey, weighted data, Tables III.7 and III.11.

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**Number of Meals Provided to a Client at Each Visit**

- 1: 8%
- 2 to 4: 7%
- 5: 4%
- 6 or more: 80%

**Meal Production Methods**

- Central Kitchen: 44%
- On-site Production: 40%
- Catering or Vendor Contract: 53%

1. Percentages do not sum to 100 due to rounding.
2. Multiple answers allowed

Source: LSP survey, weighted data, Tables III.11 and III.12.
Percentage of LSPs that Offer Special or Therapeutic Diets

<table>
<thead>
<tr>
<th>Diet Type</th>
<th>Congregate Meals</th>
<th>Home-Delivered Meals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diabetic</td>
<td>24</td>
<td>34</td>
</tr>
<tr>
<td>Low-sodium</td>
<td>42</td>
<td>51</td>
</tr>
<tr>
<td>Modified-texture</td>
<td>10</td>
<td>12</td>
</tr>
<tr>
<td>Vegetarian</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>Kosher</td>
<td>5</td>
<td>9</td>
</tr>
<tr>
<td>Any</td>
<td>63</td>
<td>79</td>
</tr>
</tbody>
</table>

Source: LSP survey, weighted data, Tables III.10 and III.12.

Other Nutrition and Non-Nutrition Services

- Nutrition services provided by LSPs
  - Nutrition education (77 percent)
  - Nutrition screening and assessment (52 percent)
  - Nutrition counseling (28 percent)
- Non-nutrition services
  - Transportation to and from meal sites (76 percent)
  - Health promotion and disease prevention activities (63 percent)
  - Social activities (62 percent)
  - Case management (53 percent)
  - Assistance with chores or housekeeping (34 percent)
  - Grocery assistance (28 percent)

Source: LSP survey, weighted data, Table III.7.
Quality of Program Services Provided

• AAAs use variety of methods to ensure quality of nutrition education
  – 58 percent of AAAs require credentialed nutrition professional to conduct education
  – 45 percent of AAAs conduct survey of program participant needs and use of evidence-based education programs
  – 68 percent use curricula from a reliable, science-based organization

• Nearly all (96 percent) AAAs and LSPs require service personnel to have food safety and sanitation training

• Reported instances of food-borne illness are very rare
  – 5 incidents total in past three years across all 333 AAAs in sample

Source: LSP survey, AAA survey, weighted data, Tables III.32 and III.33.
Program Process Study Takeaways

- AoA nutrition programs provide a continuum of nutrition services, in addition to meals, to participants. This includes nutrition screening, assessment, education, and counseling.

- AoA nutrition programs are closely linked to other parts of the nation’s home- and community-based care system through cross-referrals and coordination of service delivery

- From 1995 to 2015:
  - LSPs congregate meal provision has decreased slightly and home-delivered meal provision has increased
  - There has been an expansion in weekend meals by congregate meal providers
  - There has been an increase in the percentage of congregate meal and home-delivered meal providers that make “modified” meals available (e.g., low in fat, sodium, calories)
Meal Cost Analysis

Meal Cost Analysis Objectives

- Answer two key research questions:
  1. What is the average cost of a congregate and home-delivered meal provided under the AOA Nutrition Programs?
  2. Do these average costs vary by how meals are prepared or by other program characteristics?

- Enable providers to assess their own total costs for meals relative to similar providers

- Provide ACL with information about the cost effectiveness of meal preparation and service approaches
Meal Cost Analysis Sample

Collected LSP-level data from 103 LSPs that:

• Completed the LSP survey
• Provided information about their congregate and home-delivery distribution meal sites

1 congregate meal site from each of the 98 LSPs with a congregate meal program
1 home-delivery distribution site from each of the 94 LSPs with a home-delivered meal program
1 home-delivery route from each home-delivery distribution site

Final sample included LSPs (1) that used various meal preparation methods; (2) from different geographic regions; (3) served rural, suburban, and urban areas; and (4) that were both large and small.

Meal Cost Analysis Methods

• Used a three-step “build up” approach:
  1. Identified a standard set of resources used to prepare, serve, and deliver meals (includes donated or in-kind resources)
  2. Collected data from each LSP on the cost of each resource
     - Most data collected at the LSP-level
     - Some data collected at the selected meal site- and route-levels
  3. Calculated, or “built up,” weighted estimates of the average cost of a congregate and a home-delivered meal

• Compared costs over time
• Analyzed costs by program characteristics
Resources Used to Prepare, Serve, and Deliver Meals

<table>
<thead>
<tr>
<th>Purchased resources</th>
<th>Donated or in-kind resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paid labor</td>
<td>Volunteer labor</td>
</tr>
<tr>
<td>Food</td>
<td>Food</td>
</tr>
<tr>
<td>Vendor payments</td>
<td>Facilities</td>
</tr>
<tr>
<td>Supplies</td>
<td>Equipment</td>
</tr>
<tr>
<td>Meal delivery (vehicles, gasoline, insurance)</td>
<td>Other insurance</td>
</tr>
<tr>
<td>Other</td>
<td>Meal delivery (gasoline)</td>
</tr>
</tbody>
</table>

Average Total Meal Cost: Congregate Meal

Average total cost: $10.69  Average paid cost: $9.30

Component Cost, as Percentage of Total Cost

- Paid Labor: $3.69 (35%)
- Purchased nonlabor: $5.61 (52%)
- Volunteer labor: $0.90 (8%)
- Donated nonlabor: $0.49 (5%)

Breakdown of purchased nonlabor costs ($5.61):
- Food: $1.28
- Vendor payments: $3.06
- Nonfood meal supplies: $0.20
- Facilities: $0.69
- Equipment: $0.15
- Delivery to sites (vehicles, gasoline, car insurance): $0.02
- Insurance: $0.09
- Other resources: $0.12

Source: AOA Nutrition Programs Evaluation meal cost analysis, Table II.1 and Figure II.1. Weighted data.
**Average Total Meal Cost: Home-Delivered Meal**

Average total cost: $11.06  
Average paid cost: $9.00

![Component Cost, as Percentage of Total Cost]

- **Paid labor**: $3.05  
- **Purchased nonlabor**: $5.95  
- **Volunteer labor**: $1.57  
- **Donated nonlabor**: $0.49

**Breakdown of purchased nonlabor costs ($5.95):**
- Food: $1.14
- Vendor payments: $3.42
- Nonfood meal supplies: $0.22
- Facilities: $0.48
- Equipment: $0.14
- Delivery to sites and homes (vehicles, gasoline, car insurance): $0.33
- Insurance: $0.08
- Other resources: $0.14

Source: AOA Nutrition Programs Evaluation meal cost analysis Table II.1 and Figure II.1. Weighted data.

**Changes in Average Total Meal Costs Over Time**

<table>
<thead>
<tr>
<th>Year</th>
<th>Congregate meal</th>
<th>Home-delivered meal</th>
</tr>
</thead>
<tbody>
<tr>
<td>1995</td>
<td>$8.07</td>
<td>$10.69</td>
</tr>
<tr>
<td>2015</td>
<td>$8.29</td>
<td>$11.06</td>
</tr>
</tbody>
</table>

Source: AOA Nutrition Programs Evaluation meal cost analysis, Table II.2; Ponza et al. (data collected in 1995, reported in 1996). Weighted data. Adjusted to 2015 dollars.
Average Total Meal Cost, 1995 and 2015

Source: AOA Nutrition Programs Evaluation meal cost analysis, Table II.2; Ponza et al. (data collected in 1995, reported in 1996). Weighted data. 2015 dollars.

Average Total Meal Cost by Meal Production Method

Source: AOA Nutrition Programs Evaluation meal cost analysis, Tables III.1 and III.2; LSP and AAA process study surveys. Weighted data.
**Average Total Meal Cost by LSP Service Area Urbanicity**

<table>
<thead>
<tr>
<th>Urban</th>
<th>Suburban</th>
<th>Rural or frontier</th>
<th>All programs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Congregate meal</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Value of donations</td>
<td>$1.16</td>
<td>$1.34</td>
<td>$1.17</td>
</tr>
<tr>
<td>Home-delivered meal</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Value of donations</td>
<td>$2.05</td>
<td>$2.70</td>
<td>$2.02</td>
</tr>
<tr>
<td>Paid costs</td>
<td>$9.71</td>
<td>$9.13</td>
<td>$8.84</td>
</tr>
</tbody>
</table>

Source: AOA Nutrition Programs Evaluation meal cost analysis, Tables III.3 and III.4; LSP and AAA process study surveys. Weighted data.

**Average Total Meal Cost by Geographic Region**

<table>
<thead>
<tr>
<th>Northeast</th>
<th>South</th>
<th>Midwest</th>
<th>West</th>
<th>All programs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Congregate meal</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Value of donations</td>
<td>$1.82</td>
<td>$0.39</td>
<td>$1.83</td>
<td>$1.61</td>
</tr>
<tr>
<td>Paid costs</td>
<td>$9.21</td>
<td>$8.75</td>
<td>$9.14</td>
<td>$10.52</td>
</tr>
<tr>
<td>Home-delivered meal</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Value of donations</td>
<td>$2.90</td>
<td>$0.59</td>
<td>$2.98</td>
<td>$1.16</td>
</tr>
<tr>
<td>Paid costs</td>
<td>$6.58</td>
<td>$7.63</td>
<td>$9.30</td>
<td>$13.16</td>
</tr>
</tbody>
</table>

Source: AOA Nutrition Programs Evaluation meal cost analysis, Tables III.5 and III.6; LSP and AAA process study surveys. Weighted data.
### Average Total Meal Cost by Program Size

<table>
<thead>
<tr>
<th>Program Type</th>
<th>Small</th>
<th>Large</th>
<th>All Programs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Congregate meal</td>
<td>$9.50</td>
<td>$1.20</td>
<td>$1.39</td>
</tr>
<tr>
<td></td>
<td>$9.93</td>
<td>$9.00</td>
<td>$9.93</td>
</tr>
<tr>
<td>Home-delivered meal</td>
<td>$6.95</td>
<td>$7.18</td>
<td>$7.18</td>
</tr>
<tr>
<td></td>
<td>$9.30</td>
<td>$2.06</td>
<td>$9.00</td>
</tr>
</tbody>
</table>

**Source:** AOA Nutrition Programs Evaluation meal cost analysis, Tables III.7 and III.8; LSP and AAA process study surveys. Weighted data.

**Note:** Large congregate meal programs and large home-delivery meal programs are those that serve 1,000 or more meals a week.

### Meal Cost Analysis Takeaways

- **AOA Nutrition Programs** total meal costs have risen since 1995, in large part due to a rise in food costs.

- Program characteristics that appeared to have lower costs in 1995 still appear most cost-effective:
  - Central or off-site kitchen prepared meals cost less than other methods
  - Meals in southern region have lowest cost, and meals in western region have highest cost
  - Meals produced in large programs cost less than those produced in small programs
  - Congregate meals cost less in urban service areas, while home-delivered meals cost less in rural service areas

**Note:** 1995 data collected by Ponza et al. in 1995, but reported in 1996.
For More Information

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Thank you!

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