Maryland’s Innovations in Nutrition Programs and Services Capstone Report

Submitted by:
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Title: Maryland’s Innovations in Nutrition Programs and Services

Key Innovation Project Parameters:

- Population (age, demographic characteristics): Age 60 and older, persons at risk of hospital readmission, and/or malnutrition.
- Geography (statewide): Urban, suburban, and rural settings.
- Service Delivery Settings: Community settings; initial distribution site of meal packages was in the hospital, at discharge.
- Staffing Model (paid/unpaid, FTEs):
  - Maryland Department of Aging: 0.75 FTE Project Coordinator, with in-kind support of senior staff, and involvement of Older Americans Act (OAA) Nutrition Program Manager (in-kind not counted since the OAA is a federal program and could not be applied for budget purposes).
  - Consulting Registered Dietitian Firm: procured to assist with specific components.
  - Subgrantees: Maintaining Active Citizens, Inc, (MAC Inc.) a Maryland Area Agency on Aging and the Maryland Food Bank. Both were engaged and paid for time and expertise devoted to the project based on executed agreements.
- Total Federal Grant Funds received: $245,975
- Total State funding leveraged (cash/ in-kind): $85,236
- Total number of dedicated staff: 0.75 FTE

Background:

The purpose of Maryland’s Innovations in Nutrition Services Project was to transform the Maryland Department of Aging’s Senior Nutrition Program using the epidemic of older adult malnutrition as the catalyst to introduce evidence based practices, cost-cutting measures, innovative meal products, and efficient service delivery methods to forge new health care linkages and expand service to older adults in the community.
The project had four main components:

1) Design a replicable model for a hospital post-discharge malnutrition care pathway. Four Maryland Area Agencies on Aging (AAA’s) participated in testing and developing a Community Based Malnutrition Pathways Toolkit that outlines how to effectively partner with healthcare to address malnutrition.

2) Create meal packages for older adults transitioning from hospital to home. Medically-tailored, shelf-stable meal packages were developed and piloted in four hospitals. Older adults with malnutrition, food insecurity, and/or high risk of readmission were targeted for distribution with the goal of reducing healthcare costs and readmissions. It was projected that statewide implementation of the packages would also reduce the average statewide meal cost and increase the number of home delivered meals available statewide.

3) Perform cognitive and validation testing of the Maryland Home Delivered Meal Screening tool. An “app” and companion training manual were created, which is being distributed throughout the State of Maryland and shared with each State Unit on Aging across the country. The screening tool assists community-based staff to identify appropriate nutrition services for frail older adults.

4) Reach at least 400 older adults through community malnutrition awareness workshops for seniors at risk for falls entitled, “Stepping Up Your Nutrition” and test the effectiveness of the workshops. Data was collected from more than 400 older adults that participated in the workshop. A manuscript documenting the impact of the program is in the final stages of being submitted to a peer reviewed journal.
Project Partners:

1) Community Based Malnutrition Pathways Toolkit
   a) Area Agencies on Aging (AAAs): Four very different AAAs were selected in order to gain the widest perspective on the usefulness of the toolkit. a. Baltimore City (government, part of a health department, large urban area, diverse population, significant poverty), b. Carroll County (rural), c. Eastern Shore/MAC Inc. (rural, successful partnership with regional hospital), d. Washington County (rural, proven partnership with hospital system).
   b) Bethesda NEWtrition & Wellness Solutions (BNWS): A Consultant RD Firm assisted with training AAAs about national and local healthcare system payment models.

2) Meal Packages
   a) The Maryland Food Bank: A non-profit food distributor purchased foods, assembled, and transported meal packages to hospitals and post-discharge sites. Created a companion educational resource guide designed to help participants locate food resources in the community.
   b) Bethesda NEWtrition & Wellness Solutions (BNWS): The Consultant RD Firm created menus, provided consultation to the Maryland Food Bank on procurement questions, and designed educational materials for both hospital staff and patients. BNWS assisted with analyzing meal cost impacts and determining the feasibility of sustaining the meal packages in the future.
   c) Maryland Hospitals: Four hospitals were selected based on interest in the project, readiness to implement the program, and ability to provide or partner with another organization to give patients a post-discharge meal package approximately one week after discharge. The hospital partners included: Peninsula Medical Center, University of Maryland (St Joseph and Medical Center campuses), and Atlantic General.
3) Home Delivered Meal Screening Tool

The University of Maryland, School of Nutrition Science, under the leadership of Dr. Nadine Sayhoun and Anna Vaudin, PhD student developed the original tool, in consultation with the Maryland Department of Aging. The University offered significant expertise and identified implications for further research, planning, and evaluation.

4) Stepping Up Your Nutrition

The Maryland Living Well Center of Excellence (LWCE), housed within MAC, Inc. developed an innovative and award-winning malnutrition awareness workshop under a separate and earlier Administration for Community Living grant, with the Maryland Department of Aging contributing to the content. Matthew L Smith, a respected researcher in the effectiveness of evidence-based disease prevention initiatives for seniors was identified and served as evaluator.

**Barriers:**

1) Community Based Malnutrition Pathways Toolkit: The Maryland Department of Aging played a more significant role than anticipated in providing assistance to the RD Consultants to ensure the creation of a toolkit that effectively maximized the role, operation, and services of the aging network’s AAAs. The philosophy, culture, and embedded community role of the AAAs in Maryland are a microcosm of the nation. We knew that it would be important to understand the unique role of the AAAs to build a replicable toolkit.

2) Meal Packages: The menus were sourced online using products from vendors such as Walmart and the Dollar Store. Rather than using those sources initially, our partner procured food items from their usual vendors. Because the meal packages were medically tailored, the usual vendors experienced significant and additional time burdens in meeting our demands
and this caused project delays. However, once they approached the menu-specific sources, we found that individual stores could not provide sufficient quantities which resulted in delays in securing additional food, as well as use-by date limits. Also, healthcare impacts data has had significant delays due to the late meal package implementation. Lastly, the AAA meal cost analysis could not be independently conducted without significant assistance from our Department.

3) Home Delivered Meal Screening Tool: Delays occurred because this project was a part of the PhD student’s thesis which covered many sub-projects. Approvals to move forward with the larger thesis project caused delays in implementing our project, and subsequently there were delays in securing access to seniors to perform the cognitive testing and validation process.

4) Stepping Up Your Nutrition - Adoption of this workshop was better than anticipated, but we encountered problems pulling data from a database, which caused significant delays. Data collection was not uniform across conditions; therefore, multiple sets of analyses needed to be performed.

Successes and Lessons Learned:

1) Community Based Malnutrition Pathways Toolkit
   a) Successes: The toolkit has replicable value and can be used by any AAA across the nation. The table on Pages 21-22 of the toolkit have garnered significant interest from both healthcare and community organizations, alike. One AAA has received funding to implement the process in their agency.
   b) Lessons Learned: Plan sufficient time for your staff to manage and be significantly engaged in projects that involve AAA training, since consultants often will not have the context to develop SNP-applicable materials and trainings independently, even if they are content experts.
2) Meal Packages
   a) Successes: The meal package project received excellent acceptance and usage by patients and succeeded in its client-centered goals. We were able to create the first medically-tailored, shelf-stable meal package for older adults in our state and possibly for the nation.
   b) Lessons Learned: Anticipate delays in the learning curve, capturing data and receiving outcomes. Do not allow subgrantees to put your work plan timeline at risk. Intervene early to address problems.

3) Home Delivered Meal Screening Tool
   a) Successes: The tool was improved, our local AAAs now have an “app” for their use and a current manual for implementation.
   b) Lessons Learned: Universities and the aging network work at different paces. This can affect deliverable timeliness.

4) Stepping Up Your Nutrition
   a) Successes: Met or exceeded programmatic and health outcomes. The workshops are sustainable and offered nationally via https://www.steppingupyournutrition.com/.
   b) Lessons Learned: Use of a proven, award winning tool can strengthen a new project’s outcomes and success.

Products:

Malnutrition Pathway

- **Appendix A**: AAA Webinar: “AAAs: Hub for Community Supports Addressing Social Determinants of Health.”
- **Appendix B**: Toolkit: “Addressing Malnutrition in Community Living Older Adults: A Toolkit for Area Agencies on Aging.”

7
● **Appendix C**: Maryland Primary Care Plus (MDPCP) Webinar for Care Transformation Organizations: “Screening for Unmet Social Needs and Identifying Community Resources.”

**Meal Package Program**

● **Appendix D**: Brochure: Home-Delivered Meal Program Health Outcomes.

● **Appendix E**: MDoA Presentation at the Living Well Center of Excellence Academy: “Post-Discharge Meals Address Important Service Gap.”


● **Appendix H**: Report: “Post-Discharge Meal Distribution Programs”

● **Appendix I**: Food & Nutrition Conference & Exposition Poster Presentation: “A Post-Discharge Medically Tailored Meal Program for Older Adults in Maryland.”

● **Appendix J**: Healthcare Outcomes Summary
  
  Currently reviewing data, will provide once available and no later than in the final report.  
  
  (3/1/2020)

● **Appendix K**: Presentation: “The Maryland Discharge Meal Program Closing Meeting.”

**Meal Packages Peer Network:**

● **Appendix L**: Webinar: “Meal Packages Peer Network: Learn About Slack.”

● **Appendix M**: Peer Network Quarterly Conference Call Presentations.

**Senior Nutrition Program Meal Costs:**

● **Appendix N**: Report: “Reducing Meal Cost in Maryland.”

**Home Delivered Meals Screening Tool**


**Malnutrition Workshop- Stepping Up Your Nutrition**
• **Appendix P**: Health Quality Innovators and West Health Webinar: “Hidden Dangers and Costs Behind Geriatric Malnutrition.”

• **Appendix Q**: Stepping Up Your Nutrition Conference Presentations

• **Appendix R**: Manuscript Submission: “Addressing Fall-Related Risk through a Brief Intervention for Malnutrition Among Older Adults: Stepping Up Your Nutrition.”

  Currently under review, pending acceptance for journal publication.

*Replication Tools:*

• **Appendix B**: Toolkit: “Addressing Malnutrition in Community Living Older Adults: A Toolkit for Area Agencies on Aging.”

• **Appendix F**: Maryland Discharge Meal Program Materials.

• **Appendix H**: Report: “Post-Discharge Meal Distribution Programs”


*Outcomes:*

- Systems level outcomes

  • The Stepping Up Your Nutrition program is sustainable and is offered nationally via [https://www.steppingupyouournutrition.com/](https://www.steppingupyouournutrition.com/).

  • The meal packages are available within Maryland at: [https://sites.google.com/bnws.co/bnws-meals/home](https://sites.google.com/bnws.co/bnws-meals/home)

  • The Toolkit: “Addressing Malnutrition in Community Living Older Adults: A Toolkit for Area Agencies on Aging” is being implemented in one AAA in Maryland, 4 received in-depth training and all AAAs have received the materials.
Programmatic outcomes

- Stepping Up Your Nutrition is now embedded in Maryland’s statewide aging network, after this grant supported the implementation of 52 workshops across 11 counties, serving 540 participants. This workshop continues to gain recognition and use across the state of Maryland and the nation.

Client Centered outcomes:

- Changes in health:
  
  A. Baseline Data: Malnutrition and Falls Risk of Community Based Participants

  **STEPPING UP YOUR NUTRITION Risk at baseline (n =429)**

  **SCREEN II – Nutritional Risk**
  - Average risk score 44.1 (±8.4)
    - 70% high nutrition risk
    - 20% moderate nutrition risk
    - 10% no/low nutrition risk

  **Nutrition Barriers and Meal Isolation**
  - 17% “never/rarely” eat with someone daily
  - 17% “often/sometimes” ran out of food
  - 53% “often/sometimes” skipped meals

  **Fall-Related Risk**
  - 21% reported a recent fall
    - 48% of those who fell reported an injury
  - 16% fearful of falling “a lot”
    - 27% fearful of falling “somewhat”

  B. Evaluation of Stepping Up Your Nutrition (SUYN) Workshops:

  - SUYN is reaching those at high nutrition risk who would otherwise go unnoticed.
● Those with higher baseline SCREEN II (malnutrition) risk scores reported other nutrition risk (confirmatory).

● Persons with higher baseline SCREEN II (malnutrition) risk scores reported worse nutrition knowledge and confidence, showing that they need additional attention.

● Persons with higher baseline SCREEN II (malnutrition) risk scores attended SUYN + Stepping On (showing that those with higher risk are getting into additional programming to reduce fall risk). No other differences in knowledge or risk (other than age and fear of falling) existed between people who went to SUYN vs. SUYN + Stepping On. This demonstrates there is no systematic bias that would make some older adults continue on in the Stepping On program after SUYN.

● Persons who attended SUYN before Stepping On had better workshop attendance than those who only went to Stepping On (confirms the value of “zero” sessions).

● Comparing baseline and 7-week follow-up for Stepping On participants, there was an overwhelming improvement for fall-related risk and confidence. It is unclear how much of this is attributed to SUYN, but at least there is overall benefits for those who went to Stepping On.

  o Service utilization (i.e., number of times service was used – emergency department usage, hospital admissions, wellness class attendance, etc). We are currently reviewing data for persons who received meal packages, and will provide once available and no later than in the final report. (3/1/2020)

  o Non-health related perceptions (i.e., satisfaction with program).
A. Meal Packages: See MDMP program summary, which includes:

- 95% of clients felt packages helped them recover after being in the hospital.
- 92% of clients felt packages met their nutritional needs based on their health condition.
- 89% of clients felt said it was easy to get the packages at hospital discharge and at the follow-up visit.
- 85% of clients felt packages helped them manage their health condition.
- 82% of clients felt packages provided them with food they would have otherwise been able to buy or shop for.
- 82% of clients felt packages provided them with something to eat when they had difficulty preparing their own meals.
- 86% of clients felt packages helped them eat healthier food.

*Impact (fiscal and non-fiscal)*

Our Department partnered closely with a number of healthcare and AAA partners to fulfill this grant. These relationships continue and enhance each organization’s ability to serve our clients effectively.

Examples of the Project’s Impact:

- One AAA has received funding to hire a dietitian and implement the malnutrition pathway.
- The RD consultants will continue offering the meal packages to healthcare and AAAs.
- A number of pilot projects have stemmed from our partnership with the hospitals.
- Another Department grant will be implementing the meal packages with subgrantees.
- The peer network group established for this project continues and it’s management is shared with several peer organizations throughout the country.
Implications for New Projects:

This grant project was very ambitious. It contained a number of small projects that required oversight, management, and collection of data. The recommendation would be not to put too many projects into one grant proposal and consider what is absolutely critical to achieving the project goals and what is manageable within the project’s timeframe. The important thing to remember when preparing grant proposals is that they are not scored on the number of products within a grant rather, whether you will meet the goals of the grant and assurances to the funder that the grant will accomplish all deliverables.