Nutrition and Aging Resource Center

Your Health, Your Way, Your Table

Implementation of an Improved Collaborative Malnutrition-Focused Transitions of Care and Referral Process Based on Identified Gaps between Healthcare Entities and Aging Services

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Background and Purpose

A. Goal:

To further enhance collaborative community malnutrition transitions of care for recently discharged home delivered meal (HDM) recipients at risk for malnutrition through high-value nutrition care interventions provided through registered dietitian nutritionists (RDN) home visitations.

B. Objectives:

1) Increase post-acute care generated malnutrition referrals to the Area Agencies on Aging HDM program.

2) Integrate bi-directional closed-loop malnutrition-focused intra- and inter-organizational communication pathways for aging services and healthcare entities.

3) Demonstrate the added-value of an RDN in-home comprehensive malnutrition assessment.

4) Characterize HDM recipients' nutritional status and social determinants of health (SDoH) including Medicaid recipients.

C. Overview of Project:

The University of Utah in partnership with Utah Area Agencies on Aging (AAA), Utah State Department of Health and Human Services as well as other key stakeholders received a 2019 Administration for Community Living Nutrition Innovations Grant to implement an added-value collaborative malnutrition-focused transitions of care process aimed at breaking the cycle of malnutrition and re-hospitalization. This project will enhance healthcare and community partnerships to test an innovative evidence-based program in demonstrating the value of the aging services network in addressing malnutrition.

D. Project Results:

- The integration of bi-directional communication between the Area Agencies on Aging and healthcare entities provided improved malnutrition educational and therapeutic coordination.
- The incorporation of the social determinants of health into the Comprehensive Malnutrition Assessments (CMA) provided a more in-depth insight to characterize the needs of HDM recipients. (see Appendix A)

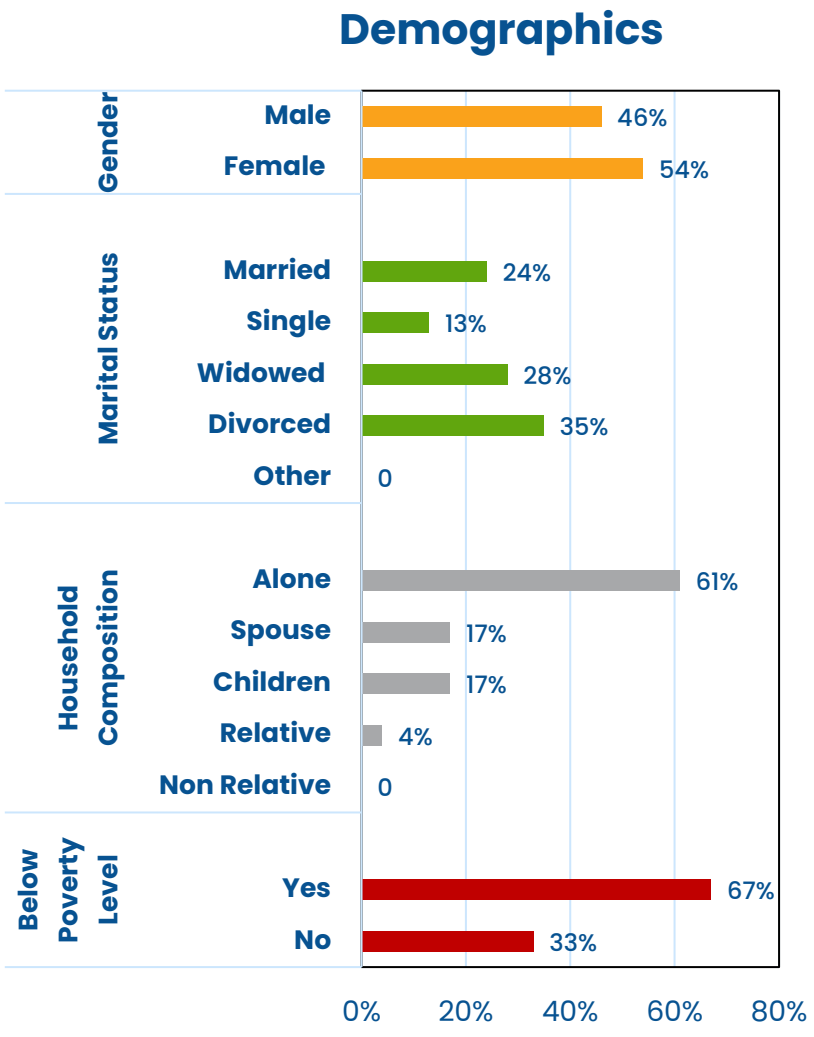
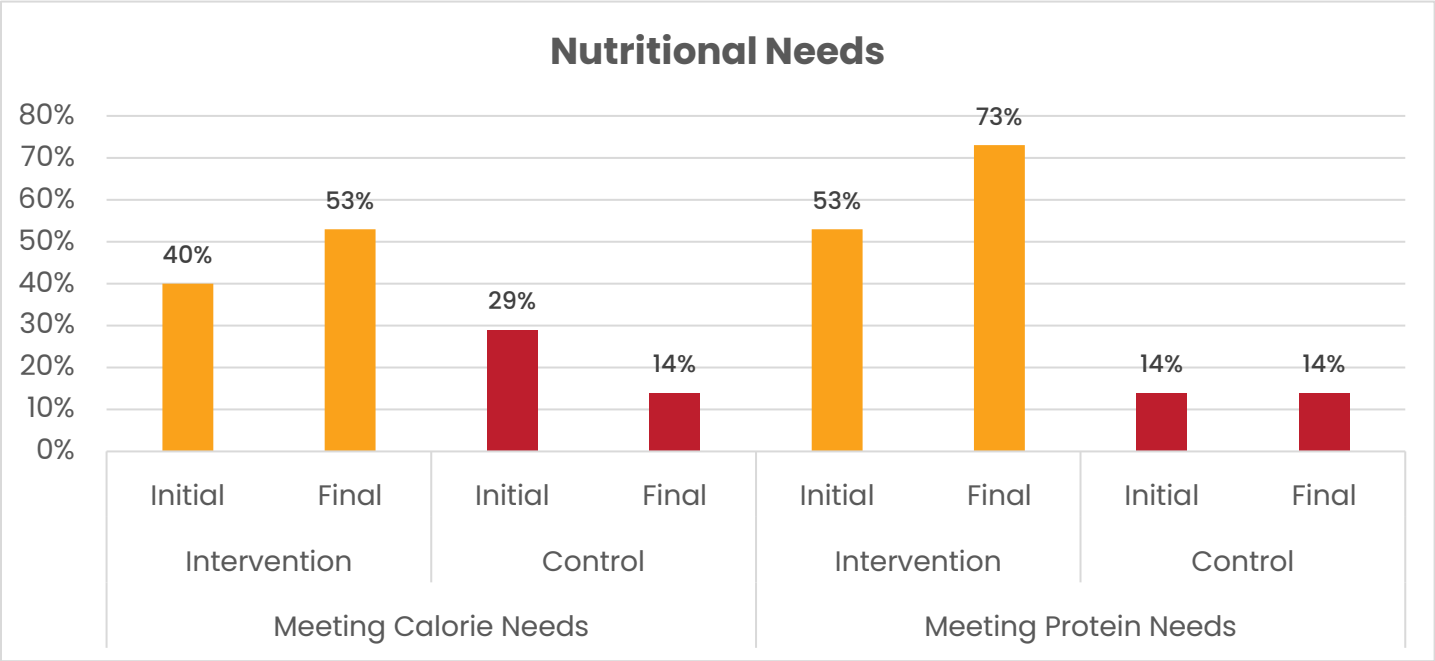


Figure A. Demographic composition of the HDM study participants.

- The more in-depth CMA provided the RDN with data to develop more actionable nutrition therapy and follow-up which resulted in notable improvements for the intervention group in meeting nutritional needs (see Figure B). In addition, improvements were found in physical nutritional status, fall risk, and timed get-up and go for the intervention group compared to controls.

Figure B. Percentage of participants meeting nutritional needs between groups during study period.



Partners and Project Staff

A. Partners:

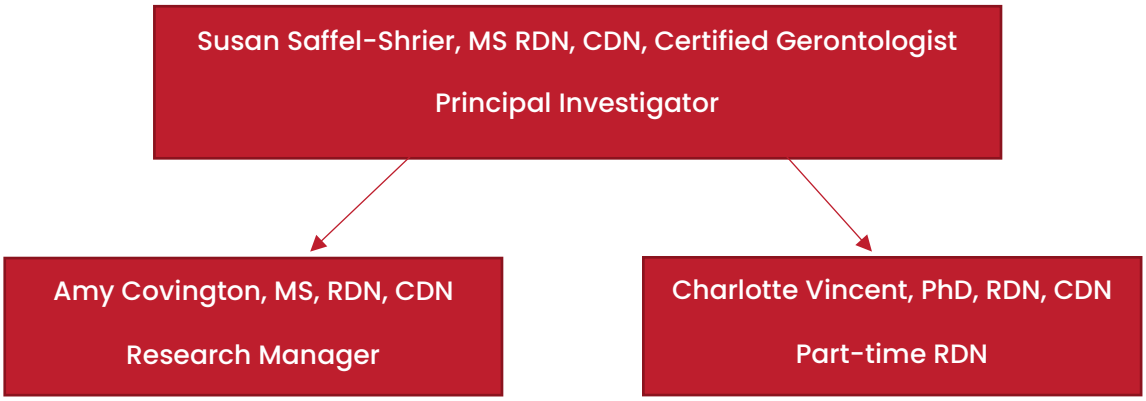
- Four Area Agencies on Aging providing services in both rural and urban settings.
- Two home health agencies also providing services in both rural and urban settings.
- University of Utah Hospital, Post-Acute Care Collaborative (UPAC) providing community patient referrals.

B. Project Staff Roles:

a. FTE:
   - 2.1

b. List staff title and general responsibilities:
   - Principal Investigator: Provided oversight to all aspects of the grant, attended AAA and home health partner case conferences, attended UPAC meetings and conducted 1:1 malnutrition assessments and follow-up visits.
   - Project Dietitians: Conducted 1:1 MNT to clients, Social Isolation Survey interviews (see Appendix B), attended AAA and home health partner case conferences, attended UPAC meetings and conducted 1:1 malnutrition assessments and follow-up visits, tracked compliance with REDCap data entry, tracked referrals.

c. Organizational Chart for innovation project:



Funding and Sustainability

A. Initial Funding:

- 2019 Administration for Community Living Nutrition Innovations Grant
- In Kind Match including: recruitment, referrals, initial intake data, staff meetings
- 0.01 FTE state-funded project RDN salary time

B. Continued Funding:

- ACL Malnutrition continuation grant "Advancing Health Equity Among Congregate Meal Program Participants through Utilizing Appropriate Malnutrition, Frailty and Social Determinants of Health Screening, Assessments and Interventions".

C. Sustainability:

A popular statement among aging services professionals is that "Senior Nutrition Programs (SNP) provided more than a meal." Of course, a nutritious meal is a significant contribution to proper nutrition and health. However, to truly impact the health of older adults, it is imperative to assess root causes of poor nutrition and the contributing factors. Provision of validated nutrition screening and assessment can bridge identified health needs. In addition, imbedding the social determinants of health within nutrition screening and assessment can provide excellent information on what issues need to be addressed that will have the most impact on nutritional health. This in turn, can significantly improve not only nutrition but improve overall health, body strength and independence leading to reduced healthcare costs.

Currently, nutrition screening is required in the SNP. The actual utilization of this screening information appears to vary and the screening tool utilized is not validated. Follow-up assessments are rarely or ever performed. By providing a process that includes utilization of a validated screening and a registered dietitian nutritionist (RDN) comprehensive nutrition assessment, nutrition health clarity can be obtained. Understanding and implementing the actionable findings of a comprehensive malnutrition assessment can have the greatest social, economic and health impact.

The expansion of the SNP to include validated screening and RDN-driven comprehensive malnutrition assessments can enhance the relevance of the SNP as an integral component of health services that could lead to national health policy. The ACL funded continuation grant that will further investigate nutrition screening and assessment services can provide further clarity on the role of the SNP in the health and wellbeing of older adults.

Recruitment

A. Participants

a. List Requirements

- 60+ years of age
- Eligible for Older American Act Nutrition Program HDM
- Recently discharged from hospital, rehabilitation or skill nursing facility
- Positive nutrition risk screening
- Exclusions: Active cancer treatment, severe dementia, hospice

b. What recruitment methods were used?

Successful:

- Partner scheduled meetings: Study was briefly presented and the recruitment process was discussed at all monthly case conferences and staff meetings. Study information was added to some AAA initial intake database and discussed with clients.
- Rolling recruitment: Referrals were accepted at any time during the study period. Nutrition visits were schedule shortly after receipt of referral. Appointments were based on participants availability.
- Correctly identifying the appropriate contact person with each partner. This required frequent review of referral procedures.
- Receiving discharge data from partner hospital and providing data to home health agencies and appropriate health care providers.
- Expanded recruitment to include an additional Community Nursing Services (CNS) home health office.

Not successful:

- Flyers (see Appendix C): Due to COVID-19 pandemic, study partners were meeting virtually. Routinely dropped off flyers for home health staff but they too were limiting time in their offices.
- University of Utah Post-Acute Care: Due to the COVID-19 pandemic, meetings with community partners were discontinued.
- Referral Pathways: Due to the COVID-19 pandemic, the referral pathways were non-operable and other referral processes needed to be implemented. The major component of the referral pathways that were non operable were related to increased agency and participant safety protocols. This increased the work demand of our partners that resulted in reduced referrals.

B. Marketing Tips

Successful:

- Regular presentations and attendance at partner staff meetings, detailed referral protocols and frequent reviews of processes.
- Co-investigator presented information at local Aging Services meetings.
- Meals on Wheels (MOW) drivers gave out flyers with the meals.
- During Covid-19 pandemic lockdown we created and distributed "Holistic Health Hacks" (HHH) as a means to stay connected with our partners and to educate health professionals and participants. (see Appendix D)
- Davis County AAA asked us to provide them with an article about nutrition for older adults and our study so they could include it in their monthly newsletter. (see Appendix E)
- Presented to community outreach group at the University of Utah.

Not Successful:

- Providing recruitment flyers without discussion and follow up.

Tools

A. Technology

- REDCap Electronic Data Capture program is a secure web application for building and managing online surveys and databases. The CMA database was built and utilized through REDCap.
- iPads were used when actively collecting data without the need of internet services at the home visitations.
- Virtual meeting options with partners.

B. Resources

- Utilized Utah State Prison for printing needs via contract with Utah State Division of Aging Services

Project Timeline

2019

May 2019

- Submitted grant proposal for 2019 ACL Innovations in Nutrition Grant.

Fall 2019: September, October, November

- ACL Innovations in Nutrition Grant Awarded.
- Both University of Utah and Utah State Division of Aging and Adult Services IRBs approved.

2020

Winter 2019-2020: December, January, February

- CMA tool revised on REDCap electronic data collection web application.
- Recruitment in-services held for all study partners.
- Researchers joined a Utah State Malnutrition Advocacy Taskforce.
- In-home visitations were implemented.

Spring 2020: March, April, May

- The University of Utah Vice President for Research suspended all human subject research which included home visitations due to COVID-19 pandemic.
- Researchers submitted and received approval for a modified IRB to replace home visitations with telehealth.
- Created Home Health Hacks (HHH)

Summer 2020: June, July, August

- The University of Utah petition to re-instate home visitations was approved.
- Partner re-engagement to discuss the study referral protocol.
- Principal Investigator (PI) was interviewed by ProPublica on malnutrition and COVID-19 pandemic.

Fall 2020: September, October, November

- Referral and enrollment rates increased.
- Virtual team meetings were held with each partner.
- Researchers will contribute to Utah Malnutrition Advocacy Taskforce White paper.

2021

Winter 2020-2021: December, January, February

- Team meetings with partners were attended virtually.
- Social Isolation Survey conducted with participants upon completion of the study.

Spring 2021: March, April, May

- Referral and enrollment continued from all partners.
- Team meetings with partners were attended virtually.

Summer 2021: June, July, August

- Researchers updated referral process with partners with reduced COVID-19 pandemic threat.
- Team meetings with partners were attended virtually.
- REDCap data entry reviewed.
- Researchers invited to revise Nutrition Assessment chapter for the Academy of Nutrition and Dietetics handbook "Nutrition Throughout the Continuum of Care."

Fall 2021: September, October, November

- Virtual partner staff meetings continued.
- Referrals were received from partner in-home and telephone assessments.
- REDCap data entry accuracy was ongoing.
- In-home assessments increased coordination of services.
- Malnutrition White Paper development continued.

2022

Winter 2021-22: December, January, February

- All partners informed of enrollment end date of January 1, 2022.
- Study in-home assessments will be completed in July 2022.
- Social Isolation survey data reviewed.
- Malnutrition White Paper sent out for review.

Spring 2022: March, April, May

- REDCap data entry review continued.

Summer 2022: June, July, August

- Final REDCap data review.
- Data analysis was performed.
- Study results presented at the Utah Division of Aging Services Annual Training Meeting.

Frequently Asked Questions

Q: Can a participant be on hospice?

A: No, persons on hospice receive comfort care only and are not eligible.

Q: Does a participant need to be underweight?

A: No, persons can be of normal or overweight and have poor nutrition.

Q: Can a participant be experiencing homelessness?

A: Yes, as long as the researchers have a means to contact the participant. Examples include homeless shelter, cell phone etc. The AAA will also need to be willing to deliver MOW to them.

Q: Do participants need to be on MOW prior to enrollment?

A: No, the study staff can assist in arranging MOW after the participant has enrolled.

Q: Do participants need to pay for MOWs?

A: It is not required that MOW participants pay for the meals.

Q: Do participants need to drive to the study appointments?

A: No, the study staff will come to participant homes.

Q: What does it mean to be homebound?

A: Homebound mainly means that a person needs assistance with traveling.

Q: Do participants have to eat a lot of vegetables?

A: The HDM meals will contain vegetables as one component of each meal. We encourage but do not required vegetables to be eaten.

Q: When will home visits be conducted?

A: Home visits can be arranged based on both the staff and participant's schedule. The staff have flexible schedules.

Q: Can the home visit include family members?

A: Yes, family or whomever the participant wishes can be at the home visit.

Advice for Replication

- Be as flexible as possible while adhering to the parameters of your research design and protocol.
- Build strong relationships with your study partners before pursuing a joint research project.
- Clarify partner time and personnel commitments to the project.
- Consider unlikely partners within or outside the study parameters.

Appendix List

A. Comprehensive Malnutrition Assessment (CMA): This instrument was used to collect all patient information from RDN nutrition assessment visits.

B. Social Isolation Survey: This survey was conducted at the end of participant's six-month study period.

C. Study Flyer: This flyer was used for recruitment purposes.

D. Holistic Health Hacks (HHH): These are a group of educational handouts that were provided to participants, partners, and other healthcare professionals during the Covid-19 pandemic.

E. Newsletter Article: This article was provided to the Davis County AAA for their monthly newsletter to highlight our study.