

2017 Grantee

Assessing Malnutrition Risk Through a Home Visitation Program in Utah

Summary:

To demonstrate an evidence-based relationship, University of Utah School of Medicine looked at the impact of targeted nutrition home visitation assessments and care planning on the health outcomes of recently discharged home delivered meal (HDM) recipients at malnutrition risk.

Table of Contents

Home Visit Preparation with HDM Initial Malnutrition Assessment....	3
Summary Brief	4

Home Visit Preparation with HDM Initial

Malnutrition Assessment

List of items for home visit preparation and sample malnutrition assessment.



Appendix B

Home Visitation Program Model Guide

1. Home Visit Preparation with HDM Initial Malnutrition Assessment
2. PowerPoint Presentation: "Guide to a Successful Nutrition Home Visit"

Home Visit Preparation

1. Review past patient records (medical, AAA, HH)
2. Discuss, when appropriate, with other providers
3. Call to remind patient you are coming
4. Review "Home Visitation" power point presentation

Name: _____	Assessment Date: _____	DOB: _____	Age: _____	Sex: _____	M/F
Address: _____	apt# _____	City: _____	Zip: _____	County: _____	
Phone: (____) _____ - _____	Email: _____				
Referred by: _____					

HDM Initial Malnutrition Assessment

Demographic/Social

Marital status: Married Single Widowed Divorced Other _____

Caregiver/ Contact Person: _____ Relation: _____ Phone: (____) _____ - _____

Household Composition:

Alone Spouse/partner Spouse and children Child/children Relative Non-relative

Other _____

Medical benefits:

Medicare Medicaid None Other _____

Finances: Below national poverty level? Yes No

Independently manages all finances and money

- Independently manages daily purchases but needs assistance with paying bills/ banking/ large transactions
- Unable to manage finances

Currently receiving the following services:

- Food stamps Weatherization Lifeline Food Bank/Pantry Medicaid Waiver
- Subsidized Housing Homemaker program Veteran Spouse of Veteran Home Health Aide
- Nursing Speech Therapy Occupational Therapy Physical Therapy Senior Companion
- Other _____

Race or ethnic background:

- Caucasian Asian, Pacific Islander African American Hispanic American Indian/native Alaskan
- Other _____

Legal Guardian? Yes No Name: _____ Phone: (____) _____ - _____

Pets? Yes No If yes describe: _____

Pets provided with: Pet food Table scraps Both

Perceived Wellbeing

Would you say your physical health over the past year has: Improved Stayed same Become worse

Explain why: _____

Would you say your mental health or emotional state over the past year has: Improved Stayed same Become worse

Explain why: _____

Would you say your ability to get around and take care of yourself, and to do things for yourself and other people over the past year has: Improved Stayed same Become worse

Explain why: _____

Medical/Physical

Primary Doctor: Name: _____ Phone: (____) _____ - _____

Recent hospital discharge date: _____ Admission Diagnosis: _____

History of hospitalization (past 3 years):

Admission date: _____ Admission Diagnosis: _____

Admission date: _____ Admission Diagnosis: _____

Admission date: _____ Admission Diagnosis: _____

Current medical diagnosis: _____

Self-assessed pain scale: Are you dealing with any pain? Yes No Location: _____

If yes rate your pain on a scale 1-10 (1 no pain, 10 worst pain)

1.....2.....3.....4.....5.....6.....7.....8.....9.....10

<u>Medications</u>	
Analgesics	Diuretics
Antacids	Insulin/hypoglycemic Agents
Antibiotics	H ₂ Blockers
Anticoagulants	Laxatives
Anticonvulsants	Lipid Lowering
Antihypertensive	Non-Steroidal
Anti-Parkinsonian	Psychotherapeutic Drugs
Cardiac Glycosides	Steroids

<u>Dietary Supplements/Herbals</u>	<u>Dose</u>
<u>Vitamin/Mineral</u>	
<u>Nutrition/Herbal Supplement</u>	
<u>OTC</u>	

Additional details / notes

(Check most appropriate box)

- Independently takes medications as prescribed (correct dose and times)
- Ability to take medications independently from prefilled daily pill dispenser
- Unable to take medications independently

Risk factors for fall and injury, i.e., identify any conditions about this patient that increase his/her risk of falling or injury (*check all that apply*)

Orthostatic hypotension osteoporosis gait problem impaired balance confusion Parkinsonism
 pain inadequate assistive device(s) other

Additional details / notes

History of falls, trip, and/or stumble? Yes No _____# in the past 6 months _____# GLF (explain)

Bone fractures in the past 6 month? Yes No _____# in the past 6 months (explain/location)

Sensory impairments affecting functioning (*check all that apply*)

Hearing: Conversation difficulties deaf uses corrective aid

Vision: Uses corrective lenses Blind

Additional details / notes

Cognitive/Behavioral

Mini-Cognitive Test

- a. Ask patient to repeat three unrelated nouns. Then tell them you will be asking them to repeat the words later.
- b. Instruct patient to draw a clock. Have patient perform task after each instruction item.
 - i. Draw clock face
 - ii. Place numbers on face
 - iii. Place hands on clock to read 11:10
 - iv. Repeat the three nouns.
- c. Interpretation:
 - i. Give one point for each recalled word after the clock draw distracter
 - ii. A score of zero indicates positive screen for dementia
 - iii. A score of one or two with an abnormal CDT* indicates positive screen for dementia
 - iv. A score of one or two with a normal CDT* indicates negative screen for dementia
 - v. A score of three indicates negative screen for dementia

(*CDT – clock drawing test)

Date: _____ Score: _____

d. Past Scores

Date: _____ Score: _____

Date: _____ Score: _____

Anxiety Yes No How long?__(Days/Weeks/ Months/Years)

Depression: Yes No How long?__(Days/Weeks/Months/Years)

Mood changes: Yes No How long?__(Days/Weeks/Months/Years)

Patient Health Questionnaire (PHQ-2):

Over the past two weeks, how often has the patient been bothered by any of the following problems?

e. Little interest or pleasure in doing things

0 = not at all

1 = several days

2 = more than half the days

3 = nearly every day

f. Feeling down, depressed, or hopeless

0 = not at all

1 = several days

2 = more than half the days

3 = nearly every day

Date:_____ Score: _____

Functional

Shopping:

Grocery shopping provided by: Spouse/Family Friend Other _____

Frequency:_____per (Week/Month)

Food Preparation:

(Check most appropriate box)

Able to plan, prepare, and serve balanced meals if supplied with ingredients

Able to heat and serve pre-made meals

Unable to prepare, heat or serve meals

Cooking Facilities (check all that apply): Stove Microwave Refrigeration Plumbing/water

Kitchen stocked with adequate food preparation equipment/tools? Yes No _____

Able to independently use all food preparation equipment/tools? Yes No _____

Kitchen is clean and tidy? Yes No _____

Fridge is well stocked? Yes No _____

Pantry is well stocked? Yes No _____

Foods in kitchen are within expiration dates? Yes No _____

Safely reaches items on low and high shelves? Yes No _____

Meal preparation: Self (times/week____) Other person (times/week____) Nutrition services (times/week____)

Additional details / notes

Home environment

Living room:

- Cluttered _____
- Couch/chair- patient able to stand from: _____
- Rugs _____
- Adequate Lighting _____

Bedroom:

Patient able to get on and off of bed? Yes No

Bathroom: (check all that apply)

- Shower handles Hand held shower Shower chair Commode Raised toilet seat
- Floor condition good Rugs Shower/ Tub Walk-in

Additional details / notes

Safety considerations: _____

Physical Self-Maintenance Scale (PSMS)

Activities of Daily Living

Descending numbered items represent worsening states of function. Choose the item that best describes the resident's functional status. Scores in all categories should then be totaled. The higher the final score, the greater the degree of impairment.

A. Toileting

- 1 Cares for self at toilet completely, no incontinence.
- 2 Needs to be reminded or needs help in cleaning self, or has rare (weekly at most) accidents.
- 3 Soiling or wetting while asleep more than once a week.
- 4 Soiling or wetting while awake more than once a week.
- 5 No control of bowels or bladder.

Score:

B. Feeding

- 1 Eats without assistance.
- 2 Eats with minor assistance at mealtimes and/or with special preparation of food, or help in cleaning up after meals.
- 3 Feeds self with moderate assistance and is untidy.
- 4 Requires extensive assistance for all meals.
- 5 Does not feed self at all and resists efforts of others to feed him/her.

Score:

C. Dressing

- 1 Dresses, undresses, and selects close from own wardrobe.

- 2 Dresses and undresses self with minor assistance.
- 3 Needs moderate assistance in dressing or selection of clothes.
- 4 Needs major assistance in dressing, but cooperates with efforts of others to help.
- 5 Completely unable to dress self and resists efforts of others to help.

Score:

D. Grooming

- 1 Always neatly dressed, well groomed, without assistance.
- 2 Grooms self adequately with occasional minor assistance, e.g., shaving.
- 3 Needs moderate and regular assistance or supervision in grooming.
- 4 Needs total grooming care, but remain well-groomed after help from others.
- 5 Actively negates all efforts of others to maintain grooming.

Score:

E. Physical Ambulation

- 1 Goes about grounds and surrounding area (e.g., town or city) on their own.
- 2 Ambulates within residence or about one block distances.
- 3 Ambulates with assistance of (check one)
 - Another person railing cane walker
 - Wheelchair – gets in and out without help
 - Wheelchair – needs help getting in and out
- 4 Sits unsupported in chair or wheelchair, but cannot propel self without help.
- 5 Bedridden more than half the time.

Score:

F. Bathing

- 1 Bathes self (tub, shower, sponge bath) without help.
- 2 Bathes self with help in getting in and out of tub.
- 3 Washes face and hands only, but cannot bathe rest of body.
- 4 Does not wash self but is cooperative with those who bathe him/her.
- 5 Does not try to wash self, and resists efforts to keep him/her clean.

Score:

Total of all scores:

The higher the final score, the greater the degree of impairment with a total score of seven representing the lowest level of impairment, and a total score of 30 representing the highest level of impairment.

Additional details / notes

Nutrition

Weight: _____ Height: _____

(a) Any unintentional weight change in the past six months? Yes No Loss Gain

(b) How much weight change? _____ lbs/kg in the past _____ weeks/ months

(c) Appetite: Good Fair Poor _____

Estimated Requirements:

Calories: _____ - _____ kcal/day	Protein: _____ - _____ g/day
Based on: _____ - _____ kcal/kg	Based on: _____ - _____ g/kg

24hr Dietary Recall

<u>Meal</u>	<u>Food Item</u>	<u>Quantity</u>	<u>Calories</u>	<u>Protein</u>
Breakfast				
AM Snack				
Lunch				
PM snack				
Dinner				

Before Bed				
Total				

Are you following any specific diet at home? Yes No (if yes explain)_____

NFPE Checklist

Region	Location	Task	Mild	Moderate	Severe
<i>Skin</i>	Globally	<ul style="list-style-type: none"> • Dermatitis, rashes, petechiae, ecchymosis, scaliness, dryness. 			
<i>Head</i>	Hair	<ul style="list-style-type: none"> • Touch and observe for the following: thinness, dullness, dryness, brittleness, patchy growth and easily pluck able. 			
	Temporalis	<ul style="list-style-type: none"> • Palpate temporal muscles. Check for fullness and firmness. Observe for depression, hollowing. 			
	Eyes	<ul style="list-style-type: none"> • Orbital pads: Gently palpate area below eyes. Observe for darkness, hollowness, and/or loose skin. 			
		<ul style="list-style-type: none"> • Observe for cracked or reddened corners of eyes, foamy (Bitot's Spots) areas on sclera; dull, dry or rough sclera; dull, milky, opaque cornea. 			
	Mouth	Have patient open mouth and shine penlight into oral cavity. Next, have patient stick out tongue. Observe: <ul style="list-style-type: none"> • Mucosa: pallor, dryness, decreased salivary flow, ulcerations (mucositis) 			
		<ul style="list-style-type: none"> • Tongue: magenta or beefy red color; smooth, slick appearance (glossitis) (Swallowing Impaired? Yes <input type="checkbox"/> No <input type="checkbox"/>) (Chewing Impaired? Yes <input type="checkbox"/> No <input type="checkbox"/>) 			
	Teeth	<ul style="list-style-type: none"> • Observe for tooth decay, missing teeth. (Dentition: Teeth <input type="checkbox"/> Edentulous <input type="checkbox"/>) (Dentures: Upper <input type="checkbox"/> Lower <input type="checkbox"/>) 			
	Gums	<ul style="list-style-type: none"> • Observe for sponginess, bleeding; swollen, red, receding gums. 			
Lips	<ul style="list-style-type: none"> • Observe for bilateral cracks at corners of mouth, redness (angular stomatitis/cheilosis). 				
<i>Upper Body</i>	Deltoid	<ul style="list-style-type: none"> • Palpate muscles around the shoulders (deltoid muscles) for fullness and firmness. Observe for squaring of shoulders. 			

	Clavicle	<ul style="list-style-type: none"> Gently palpate above and below the clavicle for fullness and firmness. Observe for prominence of clavicle. 			
	Ribs	<ul style="list-style-type: none"> Have patient sit forward and palpate ribs. 			
	Triceps Skinfold	<ul style="list-style-type: none"> Have patient bend arm at 90 degree angle with upper arm perpendicular to body; if patient unable to cooperate, bend elbow at 90 degrees and place forearm horizontally across body if possible; grasp upper arm midway between shoulder and elbow with palm and fingers and gradually pull skin away from arm with fingers while wiggling slightly to separate fat from muscle. 			
	Interosseous	<ul style="list-style-type: none"> Have patient make okay sign with thumb and first finger and while palpating interosseous muscle between thumb and first finger and the interosseous muscles between remaining fingers. Check for fullness and firmness. Observe for depression. 			
		<ul style="list-style-type: none"> Observe fingernails for missing, misshapen (spoon shaped), splintered, transverse ridging, discoloration, dullness, lackluster appearance, mottling. 			

Grip Strength

Dominant Hand: Right <input type="checkbox"/> Left <input type="checkbox"/>	
Right Hand:	Left Hand:
_____	_____
_____	_____
_____	_____
Avg.	Avg.

Nutrition Diagnosis:

Functional Deficits:

Care Plan:

Goals:

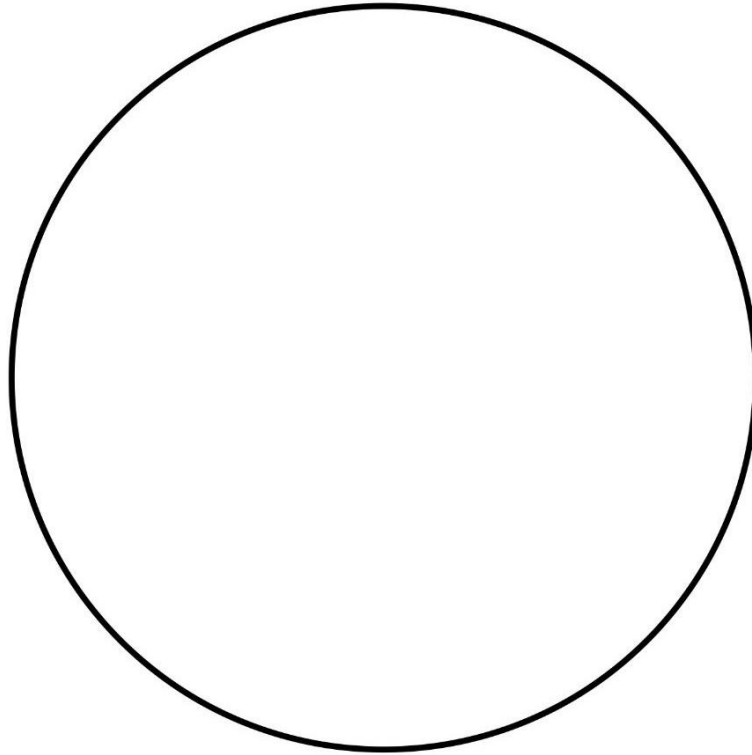
1) _____

2) _____

3) _____

Clock Drawing

ID: _____ Date: _____



References

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2. Borson S, Scanlan JM, Watanabe J et al. Improving identification of cognitive impairment in primary care. *Int J Geriatr Psychiatry* 2006;21: 349-355.
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4. Tsoi K, Chan J et al. Cognitive tests to detect dementia: A systematic review and meta-analysis. *JAMA Intern Med*. 2015; E1 -E9 .
5. McCarten J, Anderson P et al. Screening for cognitive impairment in an elderly veteran population: Acceptability and results using different versions of the Mini-Cog. *J Am Geriatr Soc* 2011; 59: 309-213.
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Summary Brief

Snapshot of project and findings.



ORGANIZATION:

University of Utah School of Medicine



**BRIDGING HIGH QUALITY MALNUTRITION SCREENING,
ASSESSMENT, AND INTERVENTION FOR OLDER ADULTS FROM
HOSPITAL TO HOME: IMPACT OF NUTRITION HOME VISITATIONS**

ABOUT US

The University of Utah School of Medicine combines excellence in teaching, research, and clinical expertise to train tomorrow's physicians for the rapidly changing world of medicine. With a faculty of more than 1,000 physicians and researchers and 22 clinical and basic science departments, the School of Medicine trains the majority of Utah physicians, and is widely recognized for interdisciplinary research in the genetics of disease, cancer, biomedical informatics, infectious diseases, and other areas of leading-edge medicine.

PROJECT PURPOSE

To demonstrate an evidence-based relationship of targeted nutrition home visitation assessments and care planning on the health outcomes of recently discharged home delivered meal (HDM) recipients at malnutrition risk.

PROJECT LENGTH

- Two years

KEY PARAMETERS

- **Population targeted:** Home delivered meal program participants
- **Geographic setting:** Urban, rural and frontier communities
- **Service delivery setting:** Client homes
- **Services offered:** Care coordination, nutrition-focused home visitation and care planning
- **Number of staff/FTEs dedicated to innovation project:** 1.35
- **Total grant funds received:** \$240,096
- **Total project period:** Two years (2017 – 2019)
- **Total funding leveraged from organization (cash/in-kind):** \$145,862

PROJECT COMPONENTS

- Nutrition-focused home visitation program
- Care coordination and care transition services

SUCCESSES AND LESSONS LEARNED

Successes

- The development of study protocols, training in-services and resource materials were essential to the development and implementation of a home visitation model. Malnutrition referral protocols were devised in collaboration with the area agency on aging (AAA) partners as well as the University of Utah Hospital and Clinics, considering each partner's unique situation.

SUCCESSSES AND LESSONS LEARNED, CONT.

Successes

- A home visitation model was developed, and is modifiable for implementation in diverse care settings, to address the nutrition care of older adults. This model includes a detailed assessment form that can easily be tailored to the individual site and older population receiving nutrition services.

Lessons Learned

- Recruitment was the most significant project challenge. To gain more insight into recruitment barriers, project staff began to regularly attend staff meetings and gathered in-depth information and conducted detailed analysis of the recruitment process. Through trial and error various improvements were tested and implemented and, recruitment was enhanced.

PROJECT IMPACT

- The most significant impact of this project was the improved understanding of malnutrition by health services workers, clients and their families and caregivers. This improved understanding included the multiple causal factors for malnutrition and the differentiation between assessment and screening. An enhanced understanding of the risks and health impact of malnutrition, and the need for malnutrition assessment to address this risk, elucidated the need for coordinated services.

ADVICE FOR PEERS

- The recruitment process was the most challenging aspect of administering the project. Introduction and incorporation of a new protocol, project staff representation at staff meetings of all partner organizations, required in-depth discussion and planning taking into consideration the demanding work schedules for all involved. Organizations are advised to develop a deep understanding of the organizational structure of each project partner and ensure the development and implementation of a project plan with the appropriate distinct task allocations for optimal project coordination and oversight support. Ongoing assessment and re-evaluation of project structure and protocols, and incremental adjustments as indicated, can optimize project effectiveness.
- Creation of the team-based recruitment processes that were not routine for the partner organizations required the introduction of added staff responsibilities. This meant team input and buy-in was essential to recruitment success. Regularly scheduled staff meetings were found to be helpful in resolving these issues.

