

# The Maryland Discharge Meal Program Closing Meeting

September 20, 2019

**Onsite meeting:** 

1-3pm (12:30 lunch)Brookletts Place- Talbot County Senior Center400 Brooklets AvenueEaston, MD 21601

<u>Conference Call</u> 605-313-5371 Code: 138333 #





# Welcome and Introductions



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## AGENDA

- Welcome and Introductions
  - Maryland Department of Aging
- Program Implementation
  - Project Rationale Judy Simon, Maryland Department of Aging
  - Menus, Educational Materials and Costs Susannah Edwards, Bethesda NEWtrition & Wellness Solutions
  - Procurement, Packaging and Delivery-Rick Condon, Maryland Food Bank
- Program Impacts
  - Patient Feedback Laura Sena, Maryland Department of Aging
  - Data Outcomes Alice Chan & Paula Cope, University of Maryland St. Joseph Medical Center
- Hospital & Community Partner Perspectives
- Next Steps Maryland Department of Aging





# **Pilot Program Implementation**



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# Project Rationale

Judy Simon, Maryland Department of Aging









ANNUAL ESTIMATED MEDICAL COST:

\$340,440,992

That equals roughly \$55 per person

### COST FOR ADDRESSING MALNUTRITION IN THESE 8 COMMON CONDITIONS:







## MEAL PACKAGES: ADDRESS SERVICE GAP

- Gaps exist in serving nutritionally-vulnerable patients during the first week (or more) post-discharge
  - Research demonstrates ROI for post-discharge, medically tailored meals
  - Local service providers exist, but lack immediate delivery solutions
- Patients at risk for:
  - Malnutrition, dehydration, fluid overload and other complications
  - Results in increased healthcare costs and readmissions
- Area Agencies on Aging (AAAs):
  - Cost-efficient solutions to identify, prevent, and heal malnutrition
  - Address social isolation and behavioral health issues
  - Impact social determinants of health
- Post-discharge meal package distribution options (after initial package provided at hospital):
  - Transitional care clinic possible incentive
  - Community-based organizations (MAP)
  - CHWs visiting patients at home



## A Look Back

Planning:

mplementation:

Evaluation: 2 months

4 months

8 months

- Aug. 2018 Sept. 2018: Established partners, surveyed pilot sites (target population, diet types, outcomes, etc.)
- Oct. 2018: Kickoff meeting, draft menu
- Nov. 2018 Mar. 2019: Finalized menu, educational materials, sourced and packaged foods
- Apr. 2019 July 2019: Distribution of meal packages to patients
- Aug. 2019 Sep. 2019: Feedback collection and outcome analysis





### PILOT SITE PATHWAYS

	Peninsula Regional Medical Center	Atlantic General Hospital	University of Maryland St. Joseph Medical Center	University of Maryland Medical Center
Patients	Diagnosis of CHF, COPD, and/or DM & at high risk for readmission	Positive food insecurity screening and/or high readmission risk (CHF, DM, COPD)	High risk readmission, frequent ED utilizers with comorbid conditions	New diagnosis of DM, COPD, hypertension, or CHF and food insecurity/poor food access
Outcomes	30-day readmission, ED use, health-related QOL	Readmission rate, patient satisfaction, changes in nutrition knowledge	satisfaction, changes in specific clinical indicators	
Screening & Referral	Hospital case management staff evaluate at admission; refer to transitional care team (social worker, CHW)	Screening completed by nursing; positive screens referred to dietitians for assessment	Inpatient nurse manager scores risk, refers to CHW or Transitional Care Center team	Screening conducted by nurses and community health workers
Storage	Population Health Department at PRMC and MAC	Patient Center Medical Home (PCMH) office and hospital	Kitchenette at UM SJMC	Coordinated Care Center at UM MC
Provision	Initial package at discharge, follow up package delivered by transitional care team within 24 h of discharge	Initial package at discharge, follow up package by Worcester MAP	Initial package at discharge, follow up package during home visit or at Transitional Care Center visit	3-day package at discharge, follow up package during home visit or at Transition Care Program visit



Susannah Edwards, Bethesda NEWtrition & Wellness Solutions



## Menu Design Process

- Focus on malnutrition post hospital discharge
- Goal: Medically-tailored, shelf-stable meals for 12 days
- Surveyed the hospitals to discover what health conditions were highest rate of readmission
  - Diabetes, CHF, COPD
- Nutritional considerations
  - Appropriate for health conditions, meeting DRI, appealing & varied, familiar
- Other considerations
  - Ease of meal preparation, single-serving sizes, easy to open containers
- Edibility criteria
  - Age, medical conditions  $\rightarrow$  dietary restrictions, home environment



## Educational Materials

- Materials for Hospitals & Staff
  - Eligibility criteria
  - Distribution instructions
  - Menu overview/nutritionals
- Materials for Patients
  - Menu for breakfast, lunch, dinner and snacks
  - Nutrition education
  - Community-based food resources



MDMP Patient Selection Flowsheet



Grant funds from the Administration for Community Living (ACL), Grant Number 90INNU0002-02-01 and the Maryland Department of Aging assisted in the development of this material. Its contents are solely the responsibility of the authoris and do not necessarily represent the official position or policies of the ACL or Department.	

MARYLAND Department of Aging



	Carb-Controlled, Heart-Healthy					
	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6
Breakfast	Corn Flakes, Fruit Cup, Granola Bar, Milk 68g of Carbs	Oatmeal, Granola Bar, Milk 46g of Carbs	Cereal, Craisins, Milk 64g of Carbs	Corn Flakes, Fruit Cup, Granola Bar, Milk 68g of Carbs	Cereal, Fruit Cup, Milk 58g of Carbs	Oatmeal, Granola Bar, Milk 46g of Carbs
Lunch	Crackers, Tuna, Tomato Soup, Mayo Packet 45g of Carbs	Rice & Quinoa, Corn Cup, Salsa, Protein Bar 68g of Carbs	Tuna, Corn Cup, Vegetable Soup, Crackers, Peanut Butter 53g of Carbs	Chicken, Crackers, Chicken Noodle Soup, Carrot Cup, Craisins 57g of Carbs	Crackers, Tuna, Tomato Soup, Peanut Butter 56g of Carbs	Rice & Quinoa, Vegetable Soup 57g of Carbs
Dinner	Pasta, Chicken, Green Bean Cup, Yogurt 60g of Carbs	Raisins, Chicken, Carrot Cup, Mayo Packet, Crackers 48g of Carbs	Salmon, Pasta, Green Bean Cup, Mayo Packet 45g of Carbs	Pasta, Tuna, Green Bean Cup, Mayo Packet 44g of Carbs	Chicken, Raisins, Crackers, Mayo Packet, Carrot Cup 48g of Carbs	Salmon, Pasta, Green Bean Cup, Mayo Packet 45g of Carbs
Snacks	Crackers, Peanut Butter 33g of Carbs	Fruit Snacks, Yogurt, Applesauce 54g of Carbs	Fruit Cup, Yogurt, Granola Bar 46g of Carbs	Yogurt, Applesauce, Raisins 57g of Carbs	Applesauce, Yogurt, Granola Bar 49g of Carbs	Yogurt, Fruit Snacks, Protein Bar 51g of Carbs
Totals <sup>1</sup>	Kcal Pro Fat CHO Na+ K+   1630 76 62 206 2035 1875   g g g mg mg	Kcal Pro Fat CHO Na+ K+   1560 70 47 216 1850 1779   g g g mg mg	Kcal Pro Fat CHO Na+ K+   1598 79 57 208 1890 2018   g g g mg mg mg	Kcal Pro Fat CHO Na+ K+   1480 68 39 226 1855 1743   g g g mg mg mg	Kcal Pro Fat CHO Na+ K+   1598 71 60 211 1685 2269   g g g mg mg	Kcal Pro Fat CHO Na+ K+   1520 78 44 199 1545 1486   g g g mg mg mg

	Enhanced Healing (high-protein, high-energy)						
	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	
Breakfast	Corn Flakes, Fruit Cup, Granola Bar, Milk	Oatmeal, Craisins, Granola Bar, Milk	Cereal, Craisins, Granola Bar, Milk	Corn Flakes, Fruit Cup, Granola Bar, Milk	Cereal, Fruit Cup, Granola Bar, Milk	Oatmeal, Raisins, Granola Bar, Milk	
Lunch	Tuna, Crackers, Tomato Soup, Mayo Packet	Rice & Quinoa, Corn Cup, Salsa, Protein Bar	Tuna, Corn Cup, Vegetable Soup, Crackers, Peanut Butter	Chicken, Crackers, Chicken Noodle Soup, Raisins	Tuna, Crackers, Tomato Soup, Peanut butter	Rice & Quinoa, Corn Cup, Vegetable Soup, Yogurt	
Dinner		Chicken, Raisins, Crackers, Mayo Packet, Carrot Cup, Chocolate Milk	Salmon, Mac & Cheese, Green Bean Cup	Rice & Quinoa, Tuna, Green Bean Cup, Mayo Packet, Yogurt	Chicken, Mac & Cheese, Carrot Cup	Salmon, Pasta, Carrot Cup, Mayo Packet	
Snacks		Pretzels, Peanut Butter, Ensure, Applesauce, Yogurt	Fruit Cup, Yogurt, Protein Bar, Fruit Snacks, Ensure	Applesauce, Ensure, Chocolate Milk, Protein Bar	Fruit Snacks, Yogurt, Ensure, Applesauce, Protein Bar	Fruit Cup, Ensure, Protein Bar, Crackers, Peanut Butter	
Totals <sup>1</sup>	Kcal Pro Fat CHO Na+ K+   2430 123 75 334 2850 2789   g g g mg mg	Kcal Pro Fat CHO Na+ K+   2360 99 76 322 2740 2895   g g g mg mg	Kcal Pro Fat CHO Na+ K+   2018 110 65 265 2565 2507   g g g mg mg mg	Kcal Pro Fat CHO Na+ K+   1970 105 58 274 2270 2684   g g g mg mg mg	Kcal Pro Fat CHO Na+ K+   2018 106 67 266 2365 2499   g g g mg mg	Kcal Pro Fat CHO Na+ K+   2430 105 77 334 2465 2750   g g g mg mg	

<sup>1</sup>Nutrition facts are estimates based on most accurate data and may not reflect the exact nutritional makeup of the meal packages. Days 1-3 and Days 4-6 are packaged together and a client may not eat everything in the exact order as described on this page.



### Each patient only gets one type of meal plan

Use the Patient Selection Flowsheet to help you determine which meal plan is right for your patient



Your patient will either get a **Carb-Controlled, Heart-Healthy** or a **Enhanced Healing** meal package plan.

Here are the differences between the two:



Additional information for both meal package plans:

- Easy to prepare. Requires:
  - Spreading with a knife
  - Opening a can
  - Pulling off a cap
  - Mixing
  - Puncturing with a straw
  - Pulling open a package

- Additional kitchen items required:
- nife
- Bowls & plates
- Forks, knives & spoons
- Can opener

Water

- Microwave
- Optional: scissors (if patient has difficulty opening packages)

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\*SOURCE: Dietary Reference Intakes for Energy, Carbohydrate, Fiber, Fat, Fatty Acids, Cholesterol, Protein, and Amino Acids (2002/2005). https://www.ncbi.nlm.nih.gov/books/NBK56068/table/summarytables.t5/?report=objectonly



### What's in your



**Breakfast** Blueberry Muffin, Mixed Fruit Cup, PB & Dark Chocolate Granola Bar Lunch Tuna, Classic Tomato Soup, Wheat Crackers, Mayonnaise To-Go Dinner Barilla Pasta (1/2 bag), Premium Chicken (1/2 can), Green Beans, Blended Yogurt **Snacks** Wheat Crackers, Natural Peanut Butter, Lowfat Milk

#### **Breakfast** Ouaker Oatmeal. PB & Dark Chocolate Granola Bar. Lowfat Milk Lunch Brown Rice & Quinoa, Sweet Corn, Picante Sauce, Chocolate Deluxe Protein Bar **Dinner** Premium Chicken (1/2 can), Raisins, Diced Carrots, Mayonnaise To-Go, Wheat Crackers Snacks Fruit Snacks, Blended Yogurt, Applesauce

Breakfast

Breakfast Cereal, Craisins, Lowfat Milk

Lunch

**Dinner** 

Mayonnaise To-Go

Snacks

Chocolate Granola Bar

**Nutritional Content** 

Carbohydrates 190 - 220 grams per day 45 - 70 grams per meal 15 - 25 grams per snack

Sodium 1500 - 2000 mg/day



Tuna, Sweet Corn, Hearty Vegetable Soup, Wheat Crackers, Natural Peanut Butter Pink Salmon, Barilla Pasta (1/2 bag), Green Beans,

Day 3

Mixed Fruit Cup, Blended Yogurt, PB & Dark



### **Carb-Controlled, Heart-Healthy** Meal Packages



### **Carb-Controlled, Heart-Healthy Meal Packages**

The Carb-Controlled, Heart Healthy meal package is designed to provide you with the food you need to help you recover after your visit to the hospital.

### **Balanced carbohvdrates**

Carbohydrates (carbs) from the food you eat effect your blood sugar. These meals and snacks are balanced with the right amount of carbs to keep your blood sugar under control throughout the day.

### Low salt

Getting too much sodium (salt) can raise your blood pressure and be bad for your heart health. These meals are low in salt to keep your heart healthy and your blood pressure under control.

<u>Pro Tip</u> Be sure not to add any salt to these foods. Try other seasonings, like garlic powder, dried herbs, Mrs. Dash Salt-Free seasoning, or other saltfree seasonings.



http://www.mrsdash.com/products/seasoning-blends/%C2%AE-original-blend

### Easy to prepare

These foods were chosen because they are singleserve, easy to prepare, and can be kept at room temperature for up to six months.

We want you to stay healthy once you leave the hospital. Enjoy these foods on us!

In addition to these meal packages, you may also need: Water, bowls & plates, forks, knives & spoons, can opener, microwave, scissors



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## Program Costs

Cost	Carb-Controlled/ Heart Healthy	Enhanced Healing	Typical Home Delivered Meal*
Per day (3 meals + 2 snacks)			
Food	\$8.56	\$11.56	\$9.30
Total**	\$10.57	\$14.27	\$16.68
Per patient for 12 days			
Food	\$102.72	\$138.67	\$111.60
Total**	\$126.84	\$171.23	\$200.16

Product sourcing – sourced from grocery retail stores (Target, Walmart, Dollar Tree)

\*3 meals/2 snacks and 12 consecutive days of meals are not available through existing home delivered meals programs. These costs reflect the average food cost/meal = \$3.10 and total cost \$5.56 to deliver a home delivered meal. The per day cost listed multiplies these figures by 3, which also provides 100% Reference Daily Intake.

\*\*Total costs for the meal package includes an additional 35% for overhead, labor, transportation. Home Delivered Meals food and total costs are based on reports submitted to the Maryland Department of Aging from statewide Area Agencies on Aging.





# Procurement, Packaging & Delivery

Rick Condon, Maryland Food Bank





## Procurement and Packaging

- Procurement process obtaining foods directly from retail stores
  - Outside the normal process for MFB, which is through distributors directly
  - Led to delays in receipt of items to build kits
    - Retail sites did not have needed quantities on hand to service the need
  - Created shelf-life issues on a small amount of items
- Transportation of kitting items from retailers proved difficult
  - Several trips were required due to inventory availability
- Kitting process
  - More complex than traditional MFB kitting projects
  - Overall hours for kitting 152 staff hours and 180 volunteer hours
  - Storage was a non-issue







## Deliveries to Hospital sites

- Due to the small scale of project MFB initially designed delivery from Baltimore
  - As program moved forward MFB shuttled product to Salisbury site and delivered from there for ES sites
- Minimum Order requirements
  - Based on costs to MFB in order to maintain costs
  - Most likely too large for hospital sites
    - Modify size options in any future pilots
- Little to no difficulty with access to locations



## Please Share...

- Lessons learned
  - The procurement process was more costly than need be as product was bought at retail pricing
    - Create enough lead time to allow distributor and nutritionist to develop menu items (unbranded) that are diet appropriate
    - Ship full cases to site to allow for client choice based on dietary restrictions
- Benefits to your organization
  - Allowed MFB to gain further insight into Food as Medicine programs





# Program Impacts



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# Data Outcomes

Alice Chan & Paula Cope, University of Maryland St. Joseph Medical Center



### **General Demographics**

- Four participating hospitals:
  - Peninsula Regional Medical Center, (PRMC), Atlantic General Hospital (AGH), UM Medical Center (UMMC), UM St. Joseph Medical Center (SJMC)
  - Total participant =78 patients:
    - PRMC: 18
    - AGH: 14
    - UMMC: 14
    - SJMC: 32





Reasons for Providing Package & Diet type

Per Tracking Forms, of the 78 patients who participated:

- Food Insecurity = 38%
- Diabetic = 27%
- CHF = 23%
- COPD = 12%

22% of participants had food insecurity& diagnosis to determine type of packageprovided.





## Challenges in CRISP data

• Unable to group run consortium data as 1 panel

• When analyzing individual hospital data, participant number is too small, CRISP can only show data with 11 or more patients and above for HIPAA reasons.



### SJMC CRISP data

32 patients uploaded, 5 not found in CRISP •



IP, OBV, and ED Visits

### IP, OBV, and ED Visits and Charges in the Last 12 Months (Jul. 2018 to Jun. 2019) Select one or more bubbles to view patient details

3

2

0

### Total Number of Members on Panel that could contribute to analysis

	1 Month	3 Months	6 Months	12 Months
Total Number of Patients in Panel that could contribute to analysis	23	5		

Percent of Members on the Panel with 1 or more Visits

Time Period	Total Number of Patients with a visit - Pre	Total Number of Patients with a visit - Post	Total Number of Patients with a visit - Pre %	Total Number of Patients with a visit - Post %	Change in Number of Patients
1 Month	23	11	100.0%	47.8%	-52.2%
3 Months	5	2	100.0%	40.0%	-60.0%
6 Months	0	0			
12 Months	D	0			

### Average Charge per Member

Time Period	Total Number of Patients with at least 1 visit pre or post	Total charges - Pre	Total charges - Post	Average Charge per patient - Pre	Average Charge per patient - Post	Total Charges per Patients change
1 Month	23	\$615,051	\$130,191	\$26,741	\$11,836	(\$14,906)
3 Months	5	\$219,693	\$54,339	\$43,939	\$27,169	(\$16,769)



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# Patient Feedback

Laura Sena, Maryland Department of Aging





## Patient Feedback Survey Results

"Do you feel the meal packages"	NUMBER	PERCENTAGE				
Helped you recover after being in the hospital?						
Yes	37	95%				
No	2	5%				
Kept you from losing weight?						
Yes	20	54%				
No	17	46%				
Helped you manage your health condition (for example, hypertension, diabetes, etc.)?						
Yes	33	85%				
No	6	15%				
Provided you with food that you wouldn't have otherwise been able to buy or shop for?						
Yes	31	82%				
No	7	18%				
Provided you with something to eat when you had difficulty preparing your own meals?						
Yes	32	<b>82%</b>				
No	7	18%				
Helped you eat healthier food?						
Yes	32	86%				
No	5	14%				





	NUMBER	PERCENTAGE			
Considering all the meal packages combined, how much of the food did you eat?					
¼ or less	3	8%			
1/2 or less	10	26%			
¾ or less	7	18%			
Almost all	19	<b>49%</b>			
Do you feel the foods met your nutritional needs based on your health condition?					
Yes	35	92%			
No	3	8%			
Did you have any trouble opening the food packages?					
Yes	4	10%			
No	35	90%			
Was it easy to get the meal packages home from your hospital discharge and follow-up visit	(if applicable)?				
Yes	32	<b>89%</b>			
No	4	11%			
Did the second meal packages make it more likely for you to attend your follow-up visit?					
Yes	12	<b>50%</b>			
No	12	50%			
N/A	14	~			





	NUMBER	PERCENTAGE			
Did you find the "What's In Your Bag" menus provided helpful?					
Yes	31	84%			
Νο	6	16%			
Did the pilot program help you connect to organization(s) that provide wellness, meals, final	ncial, housing, o	aregiver			
supports (or similar services)?					
Yes	14	39%			
No	22	61%			
Did the pilot program help you connect to program(s) that can help you eat better, like senio	r centers, food	pantries,			
SNAP, etc.?					
Yes	15	41%			
No	22	59%			
Of the foods you received what were your top 3 favorites?					
Tuna	15	~			
Cereal	10	~			
Fruit Cups	8	~			
Of the foods you received, what were your 3 least favorite?					
Vegetables (Carrots, Corn, Green Beans)	4	~			
Rice & Quinoa	3	~			
Salmon	3	~			



## Participant Quotes

"[I] can't drive for a few weeks, so this was extremely helpful!"

"[I] didn't have to worry about getting out to buy food."

"Made it so I didn't have to bother my daughter to shop."

"Thankful for the Ensure [as it is] expensive."

"I'm overweight so the fruit cups and Craisins were great snacks."





Atlantic General Hospital, Peninsula Regional Medical Center, University of Maryland Medical Center, University of Maryland St. Joseph Medical Center, Maintaining Active Citizens, Inc., Worcester County Health Department



## Please Share...

- Patient case study
- Lessons learned (eg, staffing, patient selection, etc.)
- Feasible next steps (What would you like the program to look like going forward? Number and type of meals and price point?)





# Next Steps

Judy Simon, Maryland Department of Aging

