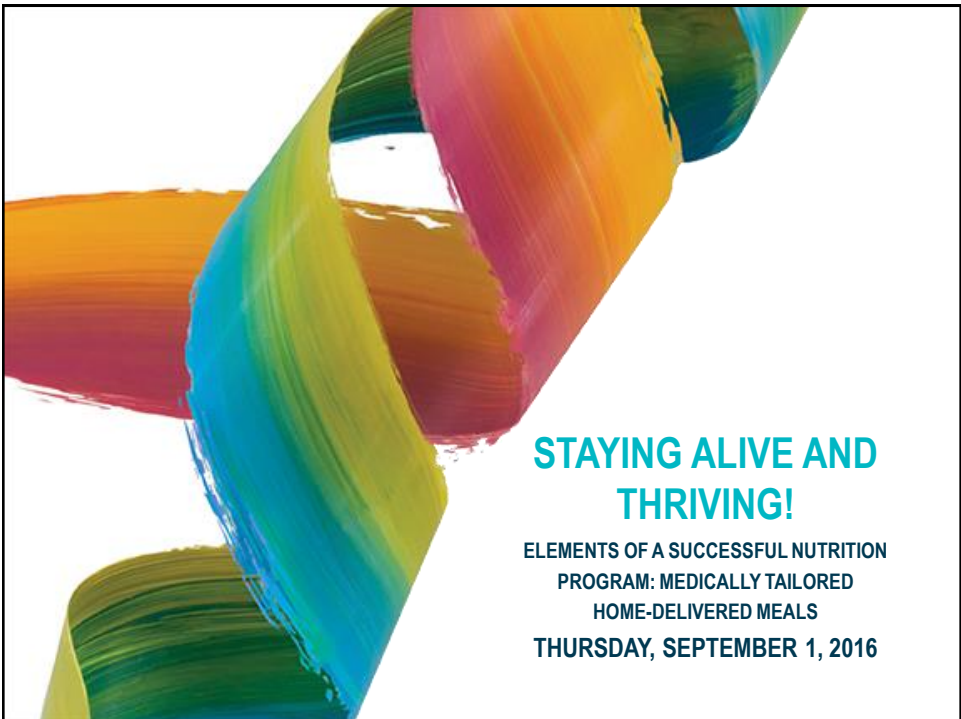




## **TOGETHER WE RISE**

MEALS ON WHEELS ANNUAL CONFERENCE & EXPO

AUGUST 31 – SEPTEMBER 2, 2016



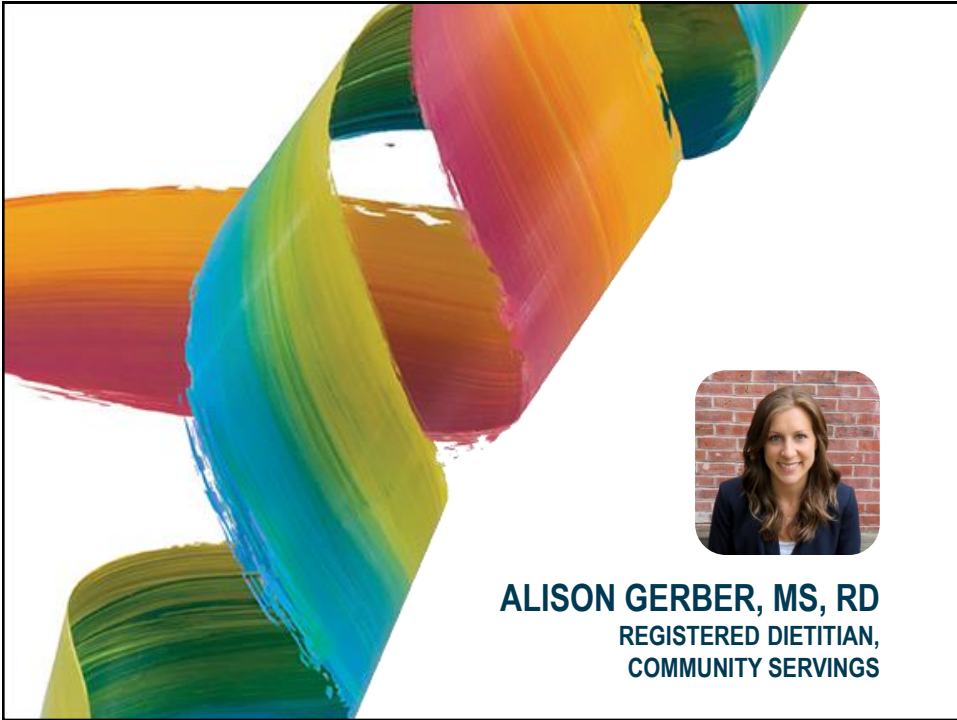
## **STAYING ALIVE AND THRIVING!**

ELEMENTS OF A SUCCESSFUL NUTRITION

PROGRAM: MEDICALLY TAILORED

HOME-DELIVERED MEALS

THURSDAY, SEPTEMBER 1, 2016



**ALISON GERBER, MS, RD**  
REGISTERED DIETITIAN,  
COMMUNITY SERVICINGS

## OUR MISSION



**Community Servings** is a Massachusetts-based not-for-profit organization with a 26 year history of providing **medically tailored meals** and **nutrition services** to homebound individuals and their families coping with critical and chronic illnesses.

## OUR HISTORY IS TIED TO THE AIDS CRISIS



Founded in 1990 to provide home-delivered meals to individuals living with HIV/AIDS, we initially served **30** people a day in Roxbury and Dorchester.

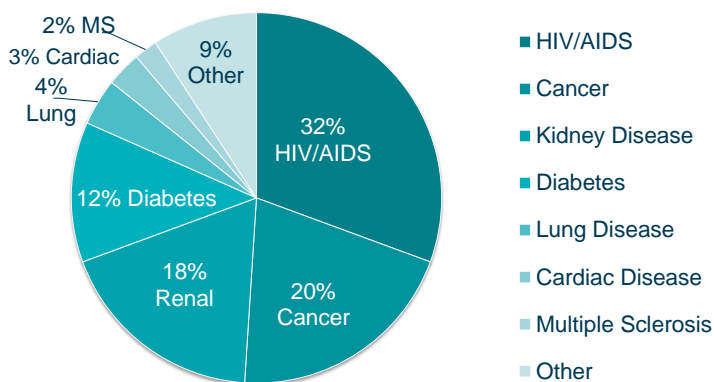
We now serve **1,000** clients each day in 20 cities and towns in Massachusetts, regardless of illness.



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## OUR CLIENTS: **HOMEBOUNDED WITH 35+ ILLNESSES**



**71%** of clients have **multiple diagnoses**

**30%** age 60+    **43%** age 45-60

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## COMMUNITIES WE SERVE

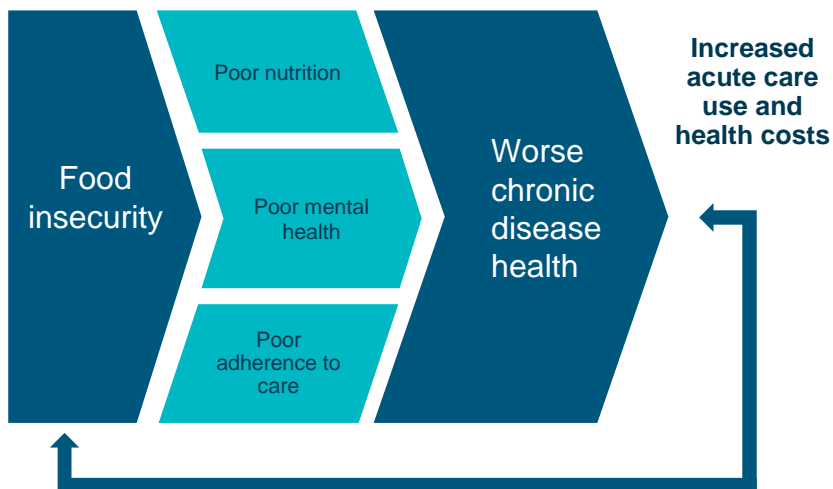
- 20 cities and towns in Massachusetts
- **92%** of our clients are **living in poverty.**



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## VICIOUS CYCLE OF FOOD INSECURITY AND POOR HEALTH



Source: Weiser et al., Am J Clin Nutr, 2011; Sheri Weiser MD, MPH., UCSF

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## OLDER ADULTS ARE AT HIGH RISK FOR POOR NUTRITION

**30%** are diagnosed with heart disease



**1 in 4** has been diagnosed with diabetes



Nearly **2 in 3** have multiple chronic conditions



**1 in 5** households with an older adult has an annual income of <\$25,000 / year

Sources: CDC State of Aging and Health in America, American Diabetes Association, U.S. Census

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## OUR NUTRITION INTERVENTION

### Medically Tailored Home-Delivered Meals

- 17+ diets, up to three combinations per client
- Appetizing, culturally appropriate foods
- Meals made from scratch

### Additional Services

- Individualized nutrition counseling
- Disease-specific nutrition education
- Nausea care packages



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## OUR NUTRITION INTERVENTION

- 5 entrees
- 4 soups
- 4-5 salads
- 2-3 pieces of fruit
- 2 yogurts
- 2 cereals
- A quart of milk
- 5 desserts (may include fruit)
- Bread\*



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## OUR DIETS

- Regular\*
- Diabetic
- Renal
- Low-Fat
- Low Fiber
- Low Vitamin K
- Low Sodium/Bland
- Vegetarian
- Soft
- No Nuts
- No Red Meat
- No Dairy
- No Eggs
- No Fish/Shellfish
- No Poultry
- No Citrus/Tomato
- Children's Menu

Any client may combine **up to 3 diets** from the above.

Ex: Diabetic + Renal + Low-Fiber

Ex: Low Sodium + Low Fat + Vegetarian

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## WHY MEDICALLY TAILORED MEALS?

**Low sodium and DASH diets:** reduced risk of cardiovascular disease, stroke<sup>1-4</sup>

**Renal diets:** reduces progression of kidney disease and death among patients with CKD<sup>5,6</sup>

**Medical nutrition therapy for diabetes:** drop in blood sugar, HbA1c, cholesterol and weight<sup>7</sup>

**Early nutrition intervention in cancer:** improves outcomes, including nutritional status, weight, treatment tolerance, and quality of life<sup>8,9</sup>



1. Moore, Hypertension, 2001; 2. Bray, Am J Cardiol. 2004; 3. Troyer, Am J Clin Nutr. 2010; 4. Strazullo, BMJ, 2009. 5. McMahon EJ, Cochrane Database Syst Rev, 2015. 6. Foque, BMJ, 1992. 7. Boaz, J Amr Diet Assoc, 1995. 8. Capra, Nutrition. 2001;17:769-772. 9. Marin Caro, Clin Nutr. 2007;26:289-301

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## MOTIVATING OUR SICK CLIENTS TO EAT



Appetizing,  
culturally  
appropriate  
foods

Medically  
tailored diet  
plans

Nutrition  
counseling  
and  
education

**Taste trumps  
nutrition science.**

“No one can live  
on foods of  
penitence.”

- Molly Katzen

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## 2015 CLIENT SURVEY RESULTS:



**72%** of respondents feel that meals are helping them meet their **weight goals**.

**78%** of respondents report eating 75-100% of their meals.



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## REGULAR DIET: NOT SO "REGULAR"

- Colorful (often local) vegetables and fruits
- Low in Sodium (but not in flavor!)
- Healthy fats



- At least ½ whole grains
- Fiber-rich
- Lean protein sources, include vegetarian
- Low-fat dairy

...more like a **Prevention diet**.

Image Source: [www.fastmed.com/health-resources/fastmed-blog/the-perfect-healthy-plate-of-food-infographic](http://www.fastmed.com/health-resources/fastmed-blog/the-perfect-healthy-plate-of-food-infographic)

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## SPECIAL DIET GUIDELINES

- Nutrition department creates and maintains evidence-based **guidelines** for each special diet vs. using a **set menu rotation**
- Allows for **creativity, flexibility**, and use of **seasonal** abundance produce and **donated** items
- Requires frequent/daily **collaboration** between nutrition and kitchen teams
- Nutrition team conducts monthly **nutrition analysis** of meals and collects feedback from clients

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## SPECIAL DIETS: COLLABORATION



### WORKING WITH THE KITCHEN ON THE MEALS:

- What foods can be included in special diets?
- Does this recipe meet the guidelines for XX diet?
- What foods are culturally appropriate for our diverse clients?

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## SPECIAL DIETS: QUALITY CONTROL



### NUTRIENT ANALYSIS OF HOME-DELIVERED MEALS:

- Weigh meals, procure recipes, conduct nutrient analysis
- Compare results of the nutrients in our meals against our nutrient goals and special diet guidelines
- Meet with executive chef to adjust as needed

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## SPECIAL DIETS: RENAL DIET GUIDELINES

- Restrict high-potassium fruits and vegetables (>200mg / serving)
- Limit whole grains, beans (high in phosphorus and potassium)
- Provide less fluid by providing stews instead of soups
- Restrict sodium
- Limit dairy (high in phosphorus)

### Example of guidelines provided to our Chefs

	☑ ALLOWED	⊘ NOT ALLOWED	Weekly Bag
Entrées	<p><b>Vegetables:</b> Asparagus, cabbage, carrots, cauliflower, celery, corn, cucumber, eggplant, kale, lettuce, onions, mushrooms, green peas, radish, summer squash, zucchini, green &amp; red peppers</p> <p><b>Starches:</b> Pasta, white rice, orzo, couscous, whole grain starch OK once per week</p> <p><b>Protein:</b> Tofu, chicken, turkey, beef, egg, fish, shellfish</p>	<p><b>Vegetables:</b> Artichokes, beets, &gt;¼ cup broccoli/kohlrabi, Brussels sprouts, okra, parsnips, plantain, potatoes (white, sweet, yams), pumpkin, rutabagas, spinach, Swiss chard, Bok choy, tomatoes, squash (winter, acorn, Hubbard), cooked arugula</p> <p><b>Starches:</b> Brown rice, beans, barley, whole grains</p> <p><b>Protein:</b> Tempeh, processed/cured meat and poultry, cheese, beans</p>	5 different renal diet entrees (marked with an R)

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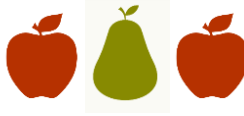
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## SPECIAL DIETS: CONTENTS OF A RENAL BAG

### Entrees

- 1 Summer vegetable quiche, orzo with celery and cranberries, side of cauliflowerer
- 2 Curried chicken breast with turmeric basmati rice and peas, side of asparagus
- 3 Ground turkey meatloaf with red pepper sauce, bowtie pasta with mushroom, and zucchini, side of green beans
- 4 Garlic and mustard roasted lamb leg with quinoa pilaf, side of peas
- 5 Citrus salmon with couscous and peppers, side of carrots

### 3 Pieces of Fruit



### Salads

- 1 Hard-boiled eggs
- 2 Chicken salad
- 3 Mixed green salad
- 4 Cucumber salad
- 5 Carrot and lemon salad

### Desserts

- 1 Cut up watermelon
- 2 Pound cake
- 3 Canned peaches
- 4 Shortbread cookies
- 5 Small slice of apple pie

### Cereal

- 1 Bag of Rice Krispies
- 2 Bag of Corn Flakes

### Stews

- 1 Beef and vegetable chili
- 2 Chicken paprikash with noodles



1 Quart of Milk

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## SPECIAL DIETS: DIABETIC DIET GUIDELINES

- Provide balanced amount of carbohydrate-containing foods
- Focus on carbohydrate quality: whole vs refined grains, beans, fruits for dessert, limited sugar
- Increase servings of non-starchy vegetables
- Lean protein choices: red meat 1x/wk, vegetarian entrees, fish, poultry

### Example of guidelines provided to our Chefs

	☑ ALLOWED	⊘ NOT ALLOWED	Weekly Bag
Entrées	<b>Vegetables:</b> All vegetables OK. <b>Starches:</b> Whole grains (barley, brown rice, quinoa, whole grain pasta, etc), corn, potato, sweet potato/yam, taro, plantain, all beans, lentils *Limit to 6 oz serving <b>Protein:</b> All OK.	<b>Vegetables:</b> n/a <b>Starch:</b> Candied yams, refined grains (white rice, pasta, white breadcrumbs) *Except for renal and low fiber combination <b>Protein:</b> n/a	5 different diabetic entrees: 1 or less with red meat (lamb/beef) 1 or more with fish/seafood/vegetarian 2 or less with starch

1. American Diabetes Association. Standards of Medical Care in Diabetes—2015. Diabetes Care 2015;38(Suppl. 1):S1–S94 2. Evert AB, Boucher JL, Cypress M, et al. Nutrition therapy recommendations for the management of adults with diabetes. Diabetes Care 2014;37(Suppl. 1):S120–S143 3. Ley S, Hamby O, Mohan V, Hu F, et al. Prevention and Management of Type 2 Diabetes: Dietary Components and Nutritional Strategies. Lancet. 2014 June 7; 383(9933): 1999–2007.

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## SPECIAL DIETS: CONTENTS OF A DIABETIC BAG

### Entrees

- 1 Eggplant and Spinach Lasagna, side of green beans and peas
- 2 Paprika-roasted Cornish Hen with mashed cauliflower, side of herbed carrots
- 3 Fajita Short Ribs with three bean barley pilaf, side of asparagus
- 4 Chicken sausage, Swiss Chard and Sauerkraut with vegetable quinoa primavera, side of broccoli
- 5 Asian Style Halibut with bok choy, red pepper and brown rice, side of cauliflower

### 3 Pieces of Fruit



### Salads

- 1 Three bean salad
- 2 Chicken salad
- 3 Mixed green salad
- 4 Beet salad

### Desserts

- 1 Fresh strawberries
- 2 Pound cake
- 3 Chocolate pudding
- 4 Shortbread cookies
- 5 Cut up watermelon

### 2 Greek Yogurts



### Cereal

- 1 Bag of Bran flakes
- 2 Bag of Wheat Chex

### Soups

- 1 Split Pea
- 2 Chicken Mulligatawny
- 3 Beef Barley
- 4 Butternut Squash



1 Quart of Milk

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## SPECIAL DIETS: DIABETIC MEAL EXAMPLES



"I receive a **diabetic diet**. I used to cook all the time, but now I have a hard time standing for long periods of time.

The meals help me to **manage my nutrition needs** and focus on **taking care of myself.**"

- Grady, Client

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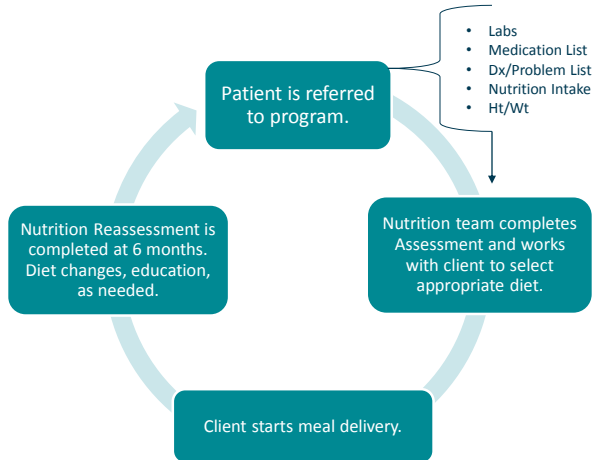
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## CLIENT ONBOARDING

### Eligibility for Meals Program:

- Critical stage of life-threatening illness
- Limited Mobility *and/or*
- Nutrition Risk

\*Insurance clients may have different requirements.



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## NUTRITION ASSESSMENT AND COUNSELING

- **Assess** clients' nutrition status and work with them to establish the best diet to manage their illness(es)
- **Reassess** clients on a regular basis to ensure that diet is meeting their needs: monitor weight loss, nutrition risk-factors (n/v/d/appetite), labs, etc.
- **Counsel and Educate:** provide ongoing / as-needed nutrition counseling and education to clients
- **Chart:** keep accurate records of all nutrition activities and client contacts in client database

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## NUTRITION ASSESSMENT

- Consider medical diagnoses, medications, recent labs, BMI, food allergies, etc.
- **Nutrition screening covers:**
  - Recent weight loss or gain
  - GI issues (nausea / vomiting / diarrhea / constipation)
  - Difficulty swallowing or chewing
  - Taste changes
  - Appetite changes
  - Mobility
- Clients express meal *preference*, but appropriate diet plan is determined by nutrition team.

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## NUTRITION COUNSELING

### **Common counseling issues:**

- Managing medication side effects (GI distress, blood sugar control, changes in appetite)
- Managing a renal diet for kidney disease
- Weight gain / Weight loss
- New/additional diagnosis (heart disease, diabetes, etc.)

**Additional education:** free nutrition and cooking classes (more than 90 classes offered each year), monthly newsletters, mailed follow-up

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## LET'S SEE SOME EXAMPLES...

- **Case Study 1:** JD – new client with recent diagnosis of lung cancer, history of type 2 diabetes, COPD, coronary artery disease
- **Case Study 2:** AP – new client who started dialysis 1 month ago, history of ESRD, heart failure, and GERD.



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## CLIENT JD: LUNG CANCER

- **PMH:** 70 y/o African American M w/ Lung Cancer (Stage IIA). hx COPD, CAD, DM2.
- **Anthropometrics:** 5'10" / 155lbs; UBW: 170lbs. BMI 22.2
- **Nutrition:** Client is fatigued w/ SOB; has poor access to food. Limited mobility d/t p. neuropathy. Will start first round of concurrent chemo/rad next week. Has lost 15lbs x 6 mo (9%). NKFA.
- **RX:** Metformin, Paxil, Pravastatin, ProAir, Plavix
- **Labs:** Hemoglobin A1C: 7.5%, Vit D 16 (L)



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## CLIENT JD: INTERVENTION

- **Diet:** Start **Diabetic Diet** w/ 2% milk and 1 case **Glucerna** (1 can qd).
- **Counseling:** Encourage food intake and counsel on importance of maintaining weight during cancer treatment. Recommend that client speak to MD about adding Vit D.
- **Education:** Provide written education on food safety, coping with side-effects of chemo/rad.
- **F/U in 3 wks.**

Poor nutritional status, weight loss, and malnutrition are common in patients with cancer. These nutritional challenges significantly increase morbidity and mortality in these patients.

Capra S, Ferguson M, & Ried K. (2001). Cancer: impact of nutrition intervention outcome-nutrition issues for patients. *Nutrition*, 17,769-772.

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## CLIENT JD: 3 WK F/U

- **Anthropometrics:** 5'10" / 147 lbs – BMI 21.1 – 5% wt loss x 3 wks.
- **Nutrition:** JD now c/o mouth sores, nausea, pain w/ swallowing. Has aversion to strong smells/spices. Has lost an additional 6lbs.
- **RX:** added zofran



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## CLIENT JD: INTERVENTION

- **Diet:** Change diet to **Soft + Bland + No Citrus/Tomato**. Increase to **2 cases of Glucerna** (1 can bid). Add **Care Package** to assist with nausea.
- **Counseling:** Counsel client to try puddings, gelatin, applesauce, yogurt, soups, oatmeal, from meal bag and to further modify texture of entrees as needed.
- **Education:** Provide written education on high-cal/protein snacks.
- F/U at 6 mo. Encouraged to call if new s/sx develop.

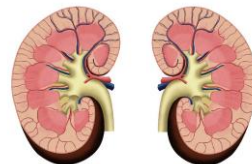


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## CLIENT AP: END STAGE RENAL DISEASE

- **PMH:** 75 y/o Caucasian F w/ ESRD on dialysis 3x per week. hx HF, GERD.
- **Anthropometrics:** 5'4" / 165lbs; UBW: 170lbs. BMI 28.3
- **Nutrition:** Client has limited mobility, uses a walker; cannot cook for herself. She has difficulty obtaining food compliant with the Renal Diet. Also c/o poor appetite and 5 lb weight loss. NKFA.
- **RX:** Renal MVI, Calcium reducer, Phosphate binder, Carvedilol, Lisinopril, Statin
- **Labs:** Phos 9.0, K 5.0



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## CLIENT AP: INTERVENTION

- **Diet:** Start Renal + Bland + No Citrus/Tomato Diet without milk
- **Counseling:** Encourage food intake and taking phosphate binder with meals.
- **Education:** Provide verbal and written education on renal diet emphasizing low phosphorus food options.
- **F/U in 8 wks.**

Nutrition is a critical issue in the management of patients with stage 5 chronic kidney disease. Malnutrition is common among these patients and affects their survival and quality of life.

Pasticci F, Fantuzzi AL, Pegoraro M, McCann M, & Bedogni G. (2012). Nutritional management of stage 5 chronic kidney disease. *Journal of Renal Care*, 38 (1), 50-58.

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## CLIENT AP: 8 WK F/U

- **Anthropometrics:** 5'4" / 165lbs – BMI 28.3 – stable weight.
- **Nutrition:** JP reports improved food intake and has more understanding of the renal diet. She asks if she can drink milk now.
- **Labs:** Phos 5.8, K 4.5

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## CLIENT AP: INTERVENTION

- **Diet:** Continue Renal + Bland + No Citrus/Tomato meals. Add quart of 1% milk.
- **Counseling:** Counsel diet to only drink 4 oz (1/2 cup) of milk per day and to continue taking phosphate binders with meals.
- **Education:** Reinforce renal diet education.
- **Follow-up:** F/U at 6 mo. Encouraged to call if renal lab values become elevated or any new s/sx develop.

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## RESEARCH: OUR FIRST WHITE PAPER



- **96%** of healthcare professionals reported that our meals program **improved their clients' health**
- **65%** believed the program resulted in **decreased hospitalizations**
- **94%** believed the program significantly improved patients' **access to healthy food**

Cohn D and Waters D, *Food as Medicine: Medically Tailored Home-Delivered Meals Can Improve Health Outcomes for People with Critical and Chronic Disease* (2013).



### RECURRING THEMES



Improves psychosocial well being



Promotes healthy weight



Improves medication adherence



Reduces hospitalizations

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## RESEARCH: PILOT STUDY WITH MASS GENERAL HOSPITAL

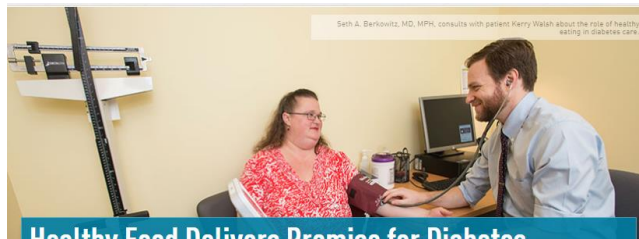
- 50 Type 2 diabetes patients
  - Report food insecurity
  - Poorly controlled blood sugar (HbA1c > 8%)
- 24 week randomized controlled trial
- Currently enrolling patients



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## RESEARCH: PROMISING PRELIMINARY RESULTS



### Healthy Food Delivers Promise for Diabetes

During Kerry's 12 weeks on the study, her blood sugar levels improved substantially, and she lost some weight.

Now that meals are no longer being delivered, she continues to watch her portion size and add good sources of protein and vegetables to her meals when she can.

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## REVIEW: ELEMENTS OF OUR NUTRITION PROGRAM

- **Meals Program:** medically-tailored, home-delivered meals; close collaboration between nutrition and kitchen teams
- **Nutrition Services:** comprehensive nutrition assessment and ongoing counseling, community nutrition education program with >90 classes/yr
- **Client Services:** supports client onboarding and provides ongoing support
- **Research and Policy** work validates efficacy of nutrition program and advocates for increased reimbursement in the future

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## QUESTIONS?

**Alison Gerber, MS, RD, LDN**

Registered Dietitian

[agerber@servings.org](mailto:agerber@servings.org) | 617-522-7777 x211

**Lindsay Keach Bronstein, MS, RD, LDN**

Manager of Nutrition Services

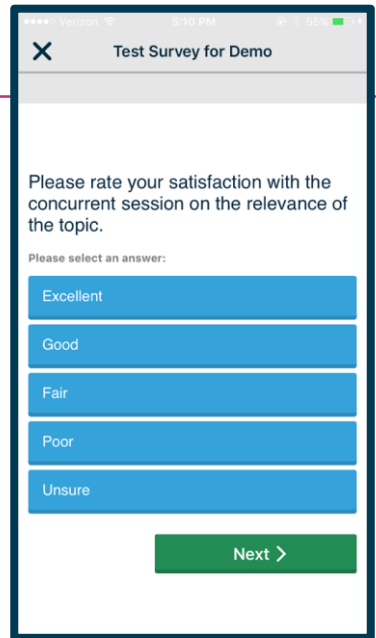
[lbronstein@servings.org](mailto:lbronstein@servings.org) | 617-522-7777 x221

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## REMINDER:

- Please remember to fill out the course evaluation on our App!
- You can access the survey by going to the course your Conference App and selecting “Survey”
- Fill out your responses and then hit “Finish”
- Thank you!



The screenshot shows a mobile application interface for a survey. At the top, there is a status bar with the carrier name 'verizon', the time '3:10 PM', and the battery level '50%'. Below the status bar is a header with a close button (X) and the title 'Test Survey for Demo'. The main content area contains the text: 'Please rate your satisfaction with the concurrent session on the relevance of the topic.' followed by 'Please select an answer:'. There are five blue buttons stacked vertically, labeled 'Excellent', 'Good', 'Fair', 'Poor', and 'Unsure'. At the bottom right, there is a green button labeled 'Next >'.