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Homeless Outpatient Mental Health
Expansion Services



Pilot Implementation of a Nutrition-Focused Community Health Worker Intervention among Formerly Chronically Homeless Adults in Permanent Supportive Housing

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We teach people how to *grow, prepare, and share* food that encourages lifelong health and well-being through hands-on evidenced-based classes taught across our garden, kitchen, clinic, and community.

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Diana Guevara, MPH, RD, LD
Community Health Education Specialist



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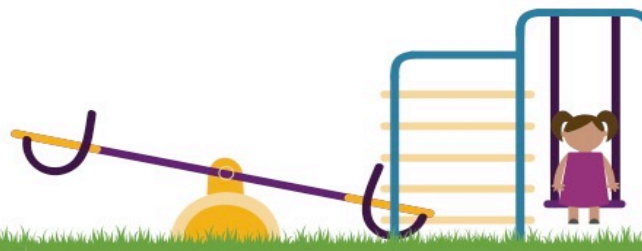
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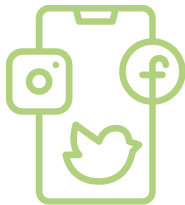
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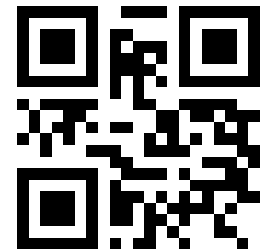
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Tucker's Law & Best Practices in Youth Substance Misuse Prevention

Tuesday, April 2, 2024, 1-2 PM (CDT)

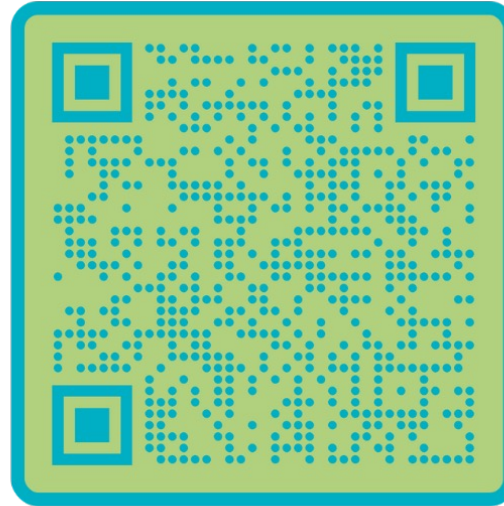
Best Practices in Youth Nutrition Education

Tuesday, April 16, 2024, 12-1 PM (CDT)

Thank you!



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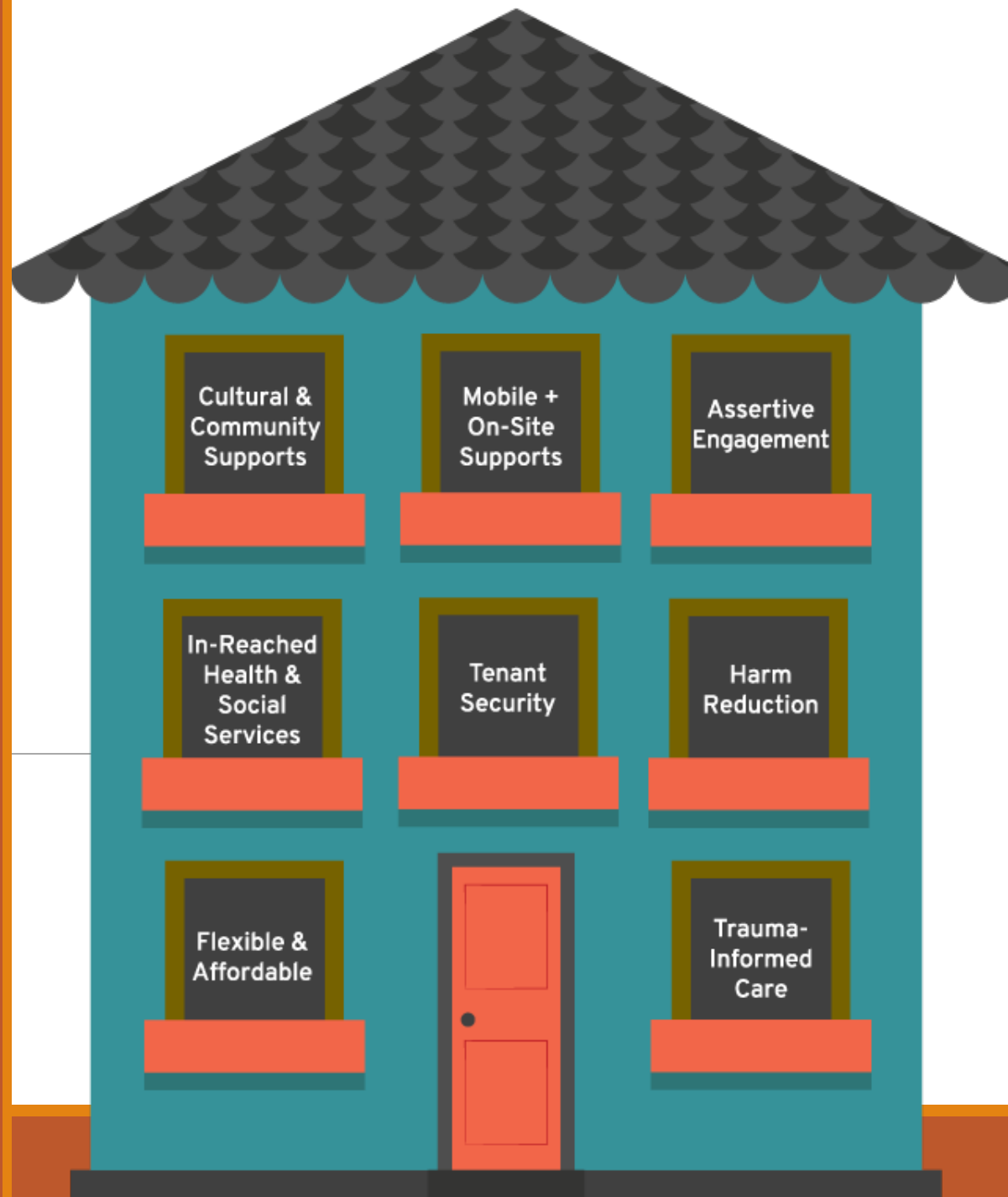
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Learning Objectives

- 1. Demonstrate increased knowledge of the barriers to food security in permanent supportive housing (PSH).**
- 2. Describe training for community health workers (CHWs) to deliver a nutrition-focused intervention in PSH.**
- 3. Identify best practice strategies to improve food security, social connectedness and health outcomes for persons placed in PSH with a history of chronic homelessness.**
- 4. Recognize how a human centered design methodology improves resident engagement.**

Permanent Supportive Housing (PSH)

Combines subsidized housing and flexible supportive services



Permanent Supportive Housing (PSH) for people with histories of chronic homelessness

- Leading housing solution among people experiencing homelessness with diagnosed physical, mental, emotional, or developmental disabilities who require on-going services.
- Low barriers to entry – – no programmatic preconditions such as demonstration of sobriety, completion of alcohol or drug treatment, or agreeing to comply with a treatment regimen upon entry into the program.
- Effectively reduces homelessness and promotes housing stability – especially among people who encounter multiple barriers to stable housing.
- Associated with lower healthcare utilization and incarceration rates.

Food Insecurity among Permanent Supportive Housing (PSH) Residents

Food Security:

- defined as a household having access to adequate nutritious and safe foods.
 - lack of is a health equity threat for formerly chronically homeless people even after they transition into PSH.
-
- Prior research found 67% of PSH residents (45+ years) have low or very low food security -- far exceeding the general population prevalence of 22% for low-income adults aged 40 years and older.
 - Despite subsidized rent, PSH residents often struggle to meet other expenses, including obtaining food.

The Relationship between Homelessness, Housing and Health Outcomes

- ❖ Adults entering PSH are likely to have a high disease burden and poor health outcomes.
- ❖ Homelessness has been shown to be a key driver of poor health outcomes including:
 - A shorter life expectancy
 - Higher incidence of acute and chronic health problems
 - Higher inpatient acute care utilization
 - Higher inpatient psychiatric hospital utilization
 - Higher number of emergency department visits
 - Longer inpatient lengths of stay
 - Higher healthcare costs



Food Insecurity and Health Outcomes in PSH

A nutrient-poor diet among people experiencing food insecurity impedes the self-management of chronic illnesses including heart disease, hypertension, diabetes, chronic kidney disease, and depression

High levels of food insecurity and poor diet quality among PSH residents are posited to partially explain the lack of definitive health gains for this population (Bowen et al., 2019).

The National Academies of
SCIENCES • ENGINEERING • MEDICINE

CONSENSUS STUDY REPORT

PERMANENT SUPPORTIVE HOUSING

Evaluating the Evidence for
Improving Health Outcomes Among
People Experiencing Chronic Homelessness



“It may be common, and even the norm, for people in supported housing to live with food insecurity.”

Parpouchi and Somers, 2019

National Academies of Sciences, Engineering, and Medicine. 2018. *Permanent Supportive Housing: Evaluating the Evidence for Improving Health Outcomes Among People Experiencing Chronic Homelessness*. Washington, DC: The National Academies Press. <https://doi.org/10.17226/25133>.



TEMENOS PLAGE II

Pilot Implementation of a Nutrition-Focused
Community Health Worker (CHW)
Intervention



International Journal of
*Environmental Research
and Public Health*



an Open Access Journal by MDPI

Pilot Implementation of a Nutrition-Focused Community-Health-Worker Intervention among Formerly Chronically Homeless Adults in Permanent Supportive Housing

Jane E. Hamilton; Diana C. Guevara; Sara F. Steinfeld; Raina Jose; Farrah Hmaidan; Sarah Simmons; Calvin W. Wong; Clara Smith; Eva Thibaudeau-Graczyk; Shreela V. Sharma

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Achieving Health Equity: Implementation of a Community Health Worker Nutrition-Focused Intervention

2022-2023 Pilot Program 3 trained community health workers (CHWs) delivered a nutrition-focused, educational empowerment intervention to 140 PSH residents in Midtown Houston.

Baseline Screening with the USDA Food Security Survey identified *low or very low food security* among **64%** of PSH residents screened (n=83) at intake. All 83 residents lacked necessary kitchenware items in their single room occupancies (SROs) for safe cooking and eating.

Overarching Goal-Reduce Food Insecurity/Nutritional Deficiency by:

- increasing access to healthy foods
- improving nutritional literacy
- improving safe and healthy cooking and eating practices
- building community/social connectedness through group activities.

Human-Centered Design

Community Health Worker Training and Development

Q1: University-Based Training

- Public Health Nutrition Modules
- SNAP-Ed Training

Q2:

- Hiring Public Health Dietitian
- Weekly staff development meetings
- Site visit: university-based teaching garden

Q3:

- Interprofessional social-determinants of health course

Individual-Level Intervention

Q1:

- Food security screening and needs assessment
- Apartment inspections and 1:1 health education
- Healthy food linkage

Q2:

- 'Ask a Dietitian' sessions
- Kitchenware linkage
- Community resources linkage

Group-Level Intervention

Q2:

- Pop-up grocery store
- Cooking classes

Q3:

- Nutrition education sessions
- Grocery store field trips

Q4:

- Community garden
- Resident cookbook
- Graduation luncheon

Logic Model: Nutrition-Focused Community Health Worker (CHW) Intervention

<u>Resources</u>	<u>Activities</u>	<u>Outputs</u>	<u>Outcomes</u>
<p><u>Houston Methodist</u></p> <ul style="list-style-type: none"> Community Benefits Grant <p><u>St. Johns Bread of Life</u></p> <ul style="list-style-type: none"> CHW Training Program Bi-Weekly Food Distribution <p><u>Temenos CDC</u> Permanent Supportive Housing</p> <p><u>UTHealth Houston</u></p> <ul style="list-style-type: none"> Medical School UTHealth HOMES Program School of Public Health Nourish Program <p><u>University of Minnesota Cooperative Extension</u></p> <ul style="list-style-type: none"> SNAP-ED Training <p><u>H-E-B Public Relations</u></p> <ul style="list-style-type: none"> Grocery Store Gift Cards 	<p><u>Community Health Worker Training and Development</u></p> <ul style="list-style-type: none"> University-based training in best practices Weekly staff development meetings <p><u>Individual-Level Interventions</u></p> <ul style="list-style-type: none"> Food insecurity survey and needs assessment Pantry and cooking safety inspections and nutrition education in resident apartments Healthy food, kitchen items and nutrition benefits linkage <p><u>Group-Level Interventions</u></p> <ul style="list-style-type: none"> Group Cooking Classes Nutrition Education Sessions Community Meals Grocery Store Pop-Ups/Field Trips Resident Cookbook Community Gardening Graduation Ceremony 	<p># CHWs recruited and trained</p> <p># PSH Residents screened and assessed at baseline/Follow-Up</p> <p># Pantry/safe cooking inspections and nutrition education in PSH Resident Apartments</p> <p># Ask-a-Dietitian Sessions</p> <p># PSH Residents linked to SNAP/WIC/Amazon Fresh/food distributions</p> <p># PSH Residents provided with kitchen items</p> <p># Group Cooking Classes and PSH Residents Participating</p> <p># Nutrition Education Sessions and PSH Residents Participating</p> <p># Grocery Store Pop-Ups</p> <p># Grocery store field trips and PSH Residents Participating</p> <p># PSH Residents participating in community gardening events</p> <p># Resident Cookbooks designed/printed/distributed</p>	<ul style="list-style-type: none"> CHWs trained in evidence-based nutrition practices Reduced food insecurity Improved access to healthy food PSH residents have all needed kitchen items to cook/eat in their apartments. Improved cooking skills and meal planning in PSH apartments Improved the nutrition knowledge, attitudes and dietary practices Improved ability to grocery shop and purchase nutritious foods on a budget Improved Social connectedness

Community Health Worker (CHW) Training

- Evidence-based SNAP-Ed curriculum training
- Public health nutrition training modules
- University-based teaching garden site visit
- On-site supervision by a public health dietitian
- Weekly project meetings

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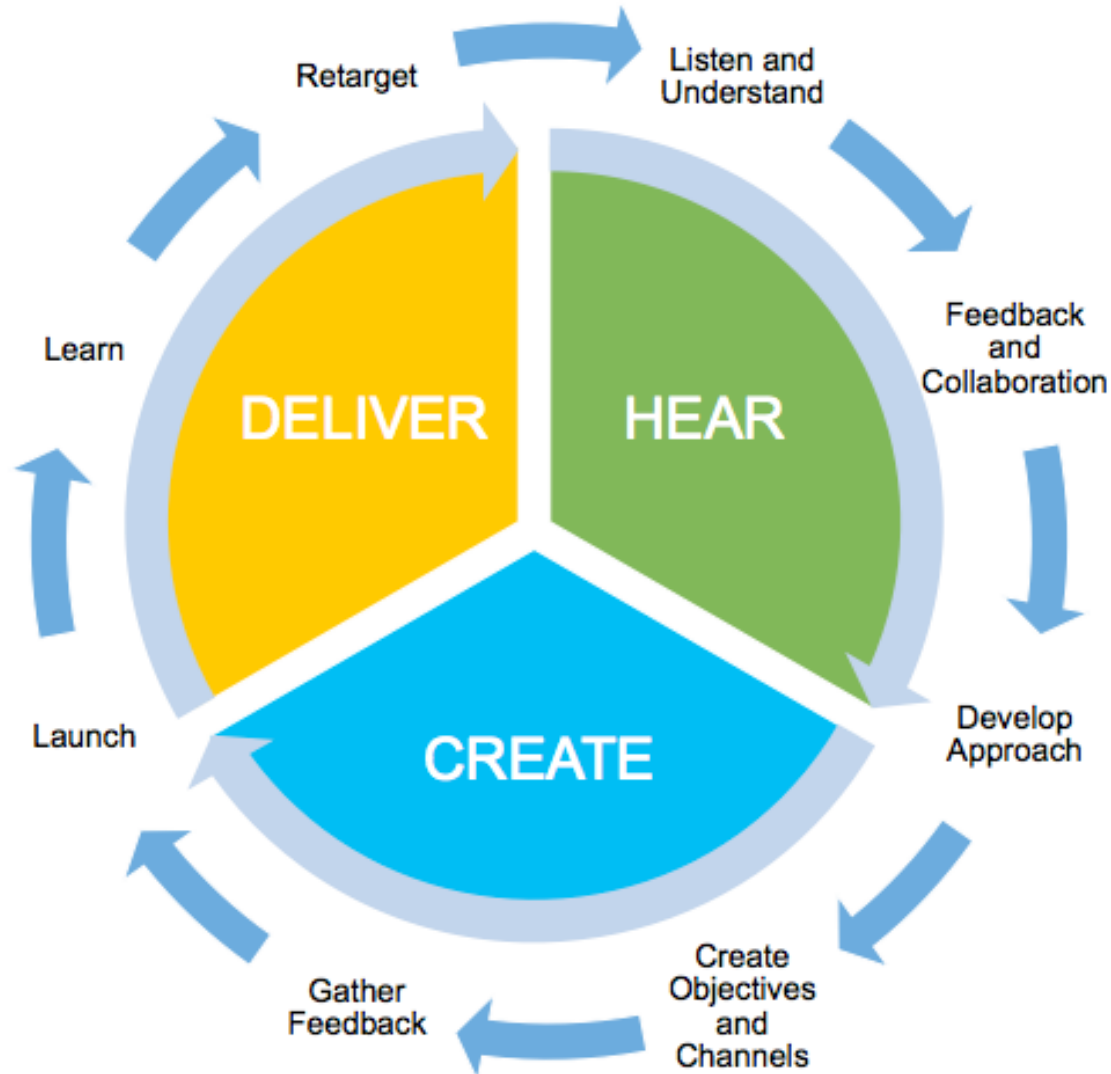


Obtaining Resident Feedback to Tailor Nutrition Activities

As part of the human-centered design process, systematic feedback was obtained from PSH residents to tailor nutrition education.

- ❖ PSH residents were asked to submit nutrition-based questions on comment cards they wanted the public health dietitian to answer.
- ❖ Following each healthy cooking class, participants were asked by CHWs to provide written feedback on comment cards for the following questions:
 - ❖ My Nutrition Goal(s) for Safe and Healthy Cooking/Eating:
 - ❖ What did you like the most?
 - ❖ What are some new things you learned from this group activity?
 - ❖ Suggestions: How can we improve for our next class?
 - ❖ What dish would you like to learn to cook next time?

Human-Centered Design: An Approach to Problem Solving that Develops Solutions to Problems by Involving the Human Perspective in all Steps of the Problem-Solving Process



Individual Level CHW Intervention

- ❖ Validated screening (USDA Food Security Survey)
- ❖ 228 pantry inspections for food insecurity and nutritional deficiency were conducted in resident single room occupancy apartments (SROs).
- ❖ Providing 83 residents with needed pots, pans, cooking utensils, cups, dishes, flatware, and small appliances through "Amazon Wish List."
- ❖ Coordinating the delivery of boxed items from a bi-weekly food distribution events to 72 PSH residents with mobility impairments.
- ❖ Linkage to food pantries (both through the distribution of flyers with directions and/or accompanying residents to pick up food).
- ❖ Assisting residents with SNAP benefits in signing up for Amazon Fresh deliveries since there was not a close-by grocery store.

Nutrition Education

- ❖ 10 nutrition education sessions were implemented by the public health dietitian.
- ❖ The dietitian met with the CHWs weekly to plan nutrition education sessions that addressed the nutrition-based questions from the PSH residents.
- ❖ Residents reported learning how to purchase and prepare healthier food.
- ❖ The CHWs and dietitian engaged the residents in playing weekly nutrition games developed for this project including: The Price is Right; MyPlate Nutrition Bingo; Nutrition Crossword Puzzles; Nutrition Pictionary; and Nutrition Jeopardy.
- ❖ One resident commented “I enjoyed the nutrition sessions the most... I was homeless for two years and needed to be reminded of the basics again like how to slice avocados and tomatoes... practicing during the nutrition classes was helpful”.



Public Health Dietitian

Prior to implementing nutrition education sessions, PSH residents were asked to submit nutrition-based questions on comment cards that they wanted the public health dietitian to answer.



PSH Resident Feedback

One resident described the nutrition games as having “a lot of enthusiasm around it—I learned how to spell squash, turnips, collard greens—different vegetables... fruit juices... was a lot of fun as well... loved the program... loved the games—the program was very good”.



Nutrition Games

MyPlate Bingo

Nutrition Jeopardy

Food Safety Jeopardy

The Price is Right

Pictionary

Nutrition Crossword Puzzles

Group Cooking Classes

(20 Classes with 138 Participants)

Teach residents to cook healthy meals with foods accessed through the food bank.

Kitchen equipment utilized in the cooking class was modeled after the kitchens in SROs (two burner stoves and a microwave oven)

“All of it [cooking classes]... especially the black bean soup... I like to cook—to learn... I had forgotten a little... and I learned a whole lot... I really did need it... I am now cooking Spanish rice and beans and making salads”.







Resident Feedback

One resident reported that “learning about spices in the classes brought it back to me... how to cook... once you get it... taste buds help to create your own spice mix”.

Another resident reported “I did everything [in the cooking class]... cut the onions... used cold water... I prepped and cooked chili.. I learned to cook chili a different way... I put chopped onions in the air fryer I got from the program.”



Basic Stir Fried Vegetables

Yield: 4 servings
Serving size: ~1 cup

Ingredients

- 1 Tbsp canola or olive oil
- 1 Tbsp minced garlic
- 1-2 lb vegetables of choice

Equipment

- Cutting board
- Chef knife
- Saute pan
- Wooden spoon

Method

- Heat oil in a large saute pan on medium heat until shimmery. Add onion and saute, stirring frequently, until translucent ~2-3 minutes. Add minced garlic and saute, stirring frequently, until fragrant ~30 seconds.
- Add vegetables such as carrots, broccoli, potatoes, etc and saute for 5-6 minutes or until they have reached your desired texture.
- Serve over rice, noodles, and/or with a protein food!





Cauliflower Mac and Cheese

Yield: 4 servings

Serving size: ~1 cup

Ingredients

- 8 oz macaroni
- 1/2 head cauliflower, rough chopped
- 3 cups milk
- 1 tsp dried thyme
- 1/2 tsp salt
- 1/2 tsp pepper
- 1 cup pecorino romano
- 3 cups sharp cheddar

Method

- Add cauliflower and milk into a medium sauce pot and cook over medium heat until cauliflower is soft (~15 minutes).
- While cauliflower is cooking, bring water to a boil in a large pot and cook pasta according to package instructions. Drain and set aside once cooked.
- Transfer cauliflower and milk mixture into a blender and add spices. Blend until smooth.
- Return mixture to pot and combine with cheeses. Stir until melted.
- Add the cooked pasta and stir to combine.

Equipment

- Cutting board
- Chef knife
- Medium sauce pot
- Large pot
- Blender
- Wooden spoon
- Colander or slotted spoon



Grocery Store Pop-Ups and Field Trips



Major Theme: Community Integration

“The best part of being here is being with my friends”.

“I hadn’t ridden in a car in a long time... being able to go to the grocery store with others was helpful because this is not something I would do by myself.”



Temenos Community Garden



“When you see it green and growing it makes me feel good.”

A major theme that emerged was resident ownership of maintenance of the community garden.

One resident referred to the plants in her garden grow bag as “her babies” and formed a watering group with another resident to ensure the plants in the grow bags received enough water.

A woman with long dark hair, wearing a dark grey long-sleeved top, is presenting a white certificate or document to a man. The man, who is older with grey hair, is wearing a white polo shirt and a blue lanyard with a red ID badge. He is smiling and looking at the document. In the background, another woman is clapping. The setting appears to be a meeting room or office with a whiteboard on the left and a window with blinds in the center. The whiteboard has some handwritten text, including "23", "USE", "ON", and "MONTH".

Graduation



U.S. Household Food Security Survey Temenos PSH Screening Results

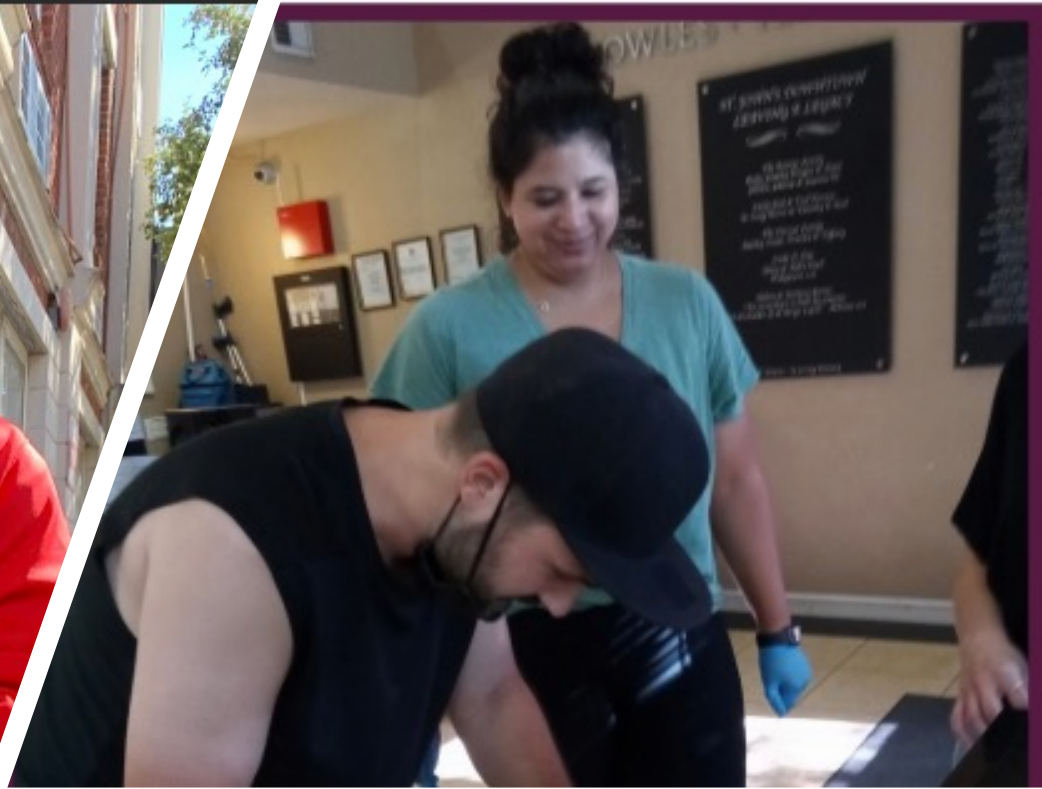
Raw Score	Status	Baseline Numbers/ Percentages (N = 83 Residents Screened)	Follow-Up Numbers/ Percentages (N = 60 Residents Screened)
Zero	High Food Security	20 (24%)	16 (27%)
1–2	Marginal Food Security	10 (12%)	14 (23%)
3–5	Low Food Security	24 (29%)	13 (22%)
6–10	Very Low Food Security	29 (35%)	17 (28%)
3–10	Low/Very Low Food Security	53 (64%)	30 (50%)

Major Themes from Residents Across Project Activities

Data Source	Project Activities	Major Theme(s)
Needs Assessment	Baseline Screening	Lack of necessary kitchenware items in resident SROs for safe cooking and eating
Nutrition-based questions requested from residents	Nutrition Education Sessions	Knowledge gaps on how to purchase and prepare healthier food
Comment Cards	Nutrition Education Sessions	Positive perceptions of healthy food options
Comment Cards	Group Cooking Classes	Expanded preferences for healthy, easy-to-prepare foods
Comment Cards	Grocery Store Field Trips	Community Integration
Comment Cards	Community Garden	Resident ownership
Brief Feedback	Cookbook Distribution	<ul style="list-style-type: none">• Regaining cooking skills after homelessness• Positive experiences with other residents

Program Findings

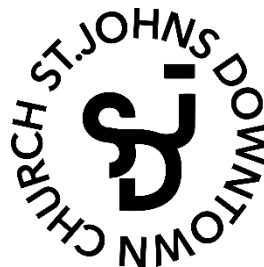
Preliminary findings suggest the use of a human-centered design methodology for planning and implementing this multi-level CHW intervention helped reduce food insecurity, engaged participants in learning and adopting healthy and safe cooking and eating practices, and fostered social connectedness and feelings of community among formerly chronically homeless PSH residents.



Leveraging Partnerships



SAMHSA
Substance Abuse and Mental Health
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Thank you!

Sara Steinfeld

Raina Jose

Farrah Hmaidan

Dr. Sarah Simmons

Calvin Wong

Clara Smith

Eva Thibaudeau-Graczyk

Dr. Shreela Sharma

Raena Williams

JC Leal

Questions



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