The Root Causes
Fresh Produce Program

A Duke School of Medicine Student Initiative

ROOTED TOGETHER:

Creating an Interdisciplinary Student-Led Community-Engaged Program Addressing Nutrition Security

Presenters:
Elaijah Lapay, Duke Undergrad 24'
Scott "Esko" Brummel, MA Duke Science and Society
Willis Wong, Duke MD/MBA 23'

Presented at the 2023 North Carolina Community Food Gathering
Rocky Mount, North Carolina
March 15-16, 2023

SESSION AGENDA

1. The Fresh Produce Program: Who, What, and Why?
2. Current Operations, Patients, and Partners
3. Curricular Partnerships and Student-Driven Research Efforts: CTSI & Bass Connections
4. The Future of the Fresh Produce Program

NUTRITION INSECURITY: A PATIENT'S CLINICAL STORY

Photo of a Fresh Produce Program patient (not actually patient described by the story). Photo used with permission.

54 years old

Single mother with 3 children

Lives in a "**food swamp**"

<$25,000/year of income

2009 diagnosed with **obesity**

- **Hypertension**
  - **Type 2 diabetes**
    - **Atherosclerosis**
      - **Osteoarthritis of the knee**

7 daily medications, including insulin injections

ROOT CAUSES FRESH PRODUCE PROGRAM

ADDRESSING FOOD SECURITY AND NUTRITION SECURITY SIMULTANEOUSLY

Empower community members experiencing nutrition insecurity and diet-related chronic disease to improve their health by providing access to healthy, nutritious fresh produce and evidence-based nutrition education.

Empower clinicians with a reliable, accessible resource to provide healthy food options to their patients struggling with nutrition insecurity and diet-related chronic disease.

2017-2020: CLINIC-BASED DISTRIBUTION

Clinical Needs Assessment

Clinic Distribution Vision

FILLAREE

BULL CITY COOL a local food hub

DUKE CAMPUS FARM

FARMER FOODSHARE

CITY OF DURHAM

DURHAM Parks & Recreation

FOOD BANK OF CENTRAL & EASTERN NORTH CAROLINA

Local Partnership Building

Acquire Funding

FALL 2016 → **SPRING 2017** → **FALL 2017**

PROGRAM STRUCTURE

- Bi-weekly following diabetes group session
- Local Fresh produce bags with 2-3 days of food
- Bilingual nutrition education & cooking class
- 20-40 patients per distribution

PROGRAM OUTCOMES (2019)

- **70%** reported eating more vegetables
- **76%** reported feeling healthier
- **90%** reported cooking more
- **59%** had improvements in food security score

2020 - Present: DOOR-TO-DOOR DELIVERY MODEL

Find People in Need

Clinic and Community Referrals

Build Relationships

Volunteer-driven patient outreach

Source Local Food & Supply

Partnerships with local suppliers

Nutrition Education

Evidence-based nutrition education

No-Cost Delivery

Volunteer-driven Last-mile Delivery

FOOD SUPPLY CHAIN AND PATIENT FOOD BAGS

FARMER FOODSHARE

food bank
OF CENTRAL & EASTERN
NORTH CAROLINA

DUKE CAMPUS FARM

Durham Co-op Market
Grocery & Cafe

WHO DO WE SERVE? FPP PATIENT DEMOGRAPHICS

33%

Experiencing hypertension

33%

Experiencing Type II Diabetes

25%

Experiencing obesity

268 Active participants

73 Pediatrics families

2:1 Female:Male

2.6 Average chronic diseases

45.2%
Latino/a/x

48.2%
Black

OUTCOMES AND ACHIEVEMENTS SINCE 2020

540+
Families enrolled

16,000+
Deliveries completed

$200K+
In funding raised

500+
Volunteers engaged

15
Referring entities added

CURRENT FPP LEADERSHIP TEAM

Willis Wong
MD/MBA
Program Co-Manager

Scott Brummel
MA
Program Co-Manager

Kathrine Weatherbee
MPP/MBA
Growth Team Lead

Emma Breithaupt
MBA
Growth Team Lead

Trevor Sytsma
MD
Volunteer Manager

Elliot Yoon
Undergrad
Distribution Day Lead

Lauren Mitchell
Recent Undergrad
Distribution Day Lead

Ellen Mines
MD
Head of Operations

Eleanor Seo
MD
Physician Liaison

Elaijah Lapay
Undergrad
Research Team Lead

Finances
Vijay Anne
Nicholas Amato

Patient Engagement
Linda Tang
Riley Spingler

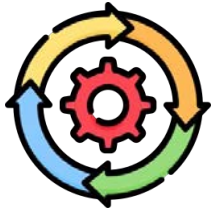
Patient Education
Haley Hutchinson
Ava Durgin

Sustainability
Pooja Lawlani

Community Advocate
Afreen Ashraf

Maternal Health
Amelia Costello
Velda Wang

SUCCESSFUL PROGRAM IMPLEMENTATION THROUGH MISSION-ALIGNED UNIVERSITY PARTNERSHIP BUILDING



Sustain Core Operations

Research & Quality Improvement

Funding & Resources

Student Engagement & Leadership

COMMUNITY PARTNERSHIPS FOR OUR OPERATIONS

Community mentors/relationships: Durham Food Security Task Force, PORCH Durham, End Hunger Durham, CompostNOW, Partnership for a Healthy Durham…

STUDENT ENGAGEMENT GROUPS

Code <+>

ise EDWARD P. FITTS DEPARTMENT OF INDUSTRIAL AND SYSTEMS ENGINEERING

DUKE FUQUA SCHOOL OF BUSINESS

Duke UNIVERSITY | BASS CONNECTIONS

Data +

DIIG

Duke SERVICE-LEARNING

Duke Engage
Challenge yourself.
Change your world.

Duke NICHOLAS SCHOOL of the ENVIRONMENT

Co-Curricular Partnership Examples

Intermediate and Advanced Spanish Service-Learning Courses

- Intermediate Spanish students as part of course communicate with program participants and pack/deliver produce
- Advanced students develop bilingual fliers/communications and enroll/support participants bilingually

Duke Engage Durham: Migrant Youth

- Intensive academic summer-long program focused on service and community engagement
- Hosted one student full-time to engage with operations from all ends through documentary and sustainability work

CODE+ and DATA+

- Summer-long coding intensive program for undergraduates
- Used ArcGIS and web/app development to create tools to analyse and optimize food distributions and operations

NUTRITION EDUCATION HANDOUTS (ENG/SPAN)

FRESH PRODUCE PROGRAM

FOOD DELIVERY | NOVEMBER 26, 2022

INSTAGRAM: @DUKEMED_ROOT_CAUSES / TWITTER: @HEALROOTCAUSES / FACEBOOK: ROOTCAUSES

IF YOU HAVE ANY QUESTIONS OR CONCERNS, CONTACT US AT ROOTCAUSESHEALTH.ORG

HAVE MEDICARE QUESTIONS?

Senior PharmAssist sees anyone - any age or income - to provide Medicare counseling at no charge by appointment only. They also provide financial assistance for meds! Transportation, interpretation, and virtual appointments are available if needed (in person preferred).

Open Enrollment Ends 12/7 ! Call 919-688-4772 for an appointment.

Are your property taxes too HIGH?

The Durham Low Income Homeowners Relief (LIHR) Program will provide property tax help on current taxes for eligible homeowners.

You will need:

- Copy of your Driver's license or other photo ID
- Copy of your Durham County Property Tax Bill
- Statements documenting your household income

Applications open until January 31, 2023
Visit dconc.gov/DSS or call 919-560-8000 to schedule an appointment

Enrolled in Medicare?

Call the Duke Benefits Enrollment Center at (919) 681-7356 to learn services you might be eligible for!

COVID-19 RESOURCES:

Vaccines

The CDC recommends COVID-19 primary series vaccines for everyone ages 6 months and older, and COVID-19 boosters for everyone ages 5 years and older, if eligible.

Visit NC Vaccine Finder to find vaccine sites and for help scheduling an appointment: https://covid19.ncdhhs.gov/vaccines

Free rides to any vaccine clinic: 1-844-771-RIDE (United Way) or 919-560-1551 (GoDurham)

Food Assistance

If you tested positive or were exposed to COVID-19 and need food to safely isolate contact El Centro Hispano at 919-687-4635 ext. 121 (English) or 122 (Spanish) Monday – Thursday 9am to 5pm. On Fridays, email Diana Ramirez at dramirez@elcentronc.org

COVID TESTING:

Free at-home COVID-19 tests are available to order through the US Department of Health and Human Services at https://www.covidtests.gov/

FREE DRIVE THRU TESTING:
Tuesday - Saturday 10am-6pm
Lakewood Shopping Center
(Outside Scrap Exchange)
2000 Chapel Hill Rd, Durham

Testing available regardless of insurance or documentation.To register, call (877) 562-4850 or visit **https://Lhi.care/covidtesting**

Visit **www.endhungerdurham.org/food-resources/** for more information on food pantry distributions and free food available near you.

Hearty, Veggie-Filled Stew for the Winter

This hearty stew of turkey, potatoes, and vegetables will warm up a cold winter night and it is super easy to customize to what you have on hand in your kitchen!

Ingredients

2 teaspoons vegetable oil
1/2 cup onion (chopped)
4 carrots (chopped)
2 celery stalks (chopped)
1 garlic clove (finely chopped, or 1/2 teaspoon garlic powder)
2 potatoes (chopped)
1 can tomatoes, diced
2 cups water
2 cups turkey, chicken or other protein (cooked, chopped)
salt and pepper (optional, to taste)
Italian seasoning or oregano, basil or thyme (optional, to taste)

Steps

1. Heat oil in medium saucepan. Add onion, garlic, carrots and celery and stir for 2 minutes.
2. Add potatoes, tomatoes, and water to pan. Bring to a boil, then lower heat and simmer 30 minutes or until vegetables are tender. Add turkey and cook another five minutes or until heated.
3. Season to taste before serving. Refrigerate leftovers.

Note: Don't worry if you don't have all of the ingredients, you can follow the instructions with any veggies, beans, meats, and seasonings you have!

https://www.myplate.gov/recipes/supplemental-nutrition-assistance-program-snap/turkey-stew

MAINTAINING A HEALTHY RELATIONSHIP WITH FOOD DURING THE HOLIDAYS

With the holidays approaching, there is always plenty of food and sweets. Instead of feeling guilty about sharing a meal with loved ones, use some of these tips for how to stay healthy and fit during this holiday season!

EAT MINDFULLY

Focus on eating slowly, setting your fork down between bites. Check in with yourself to see how hungry you are. Be present with those around you and the food you are eating.

FILL UP ON VEGETABLES AND PROTEINS

Start your meal by eating your veggies and protein. Prioritize eating the healthier foods before the sweats or breads.

DON'T FEEL GUILTY

The holidays are a time to be with loved ones, typically centered around a meal. Don't feel guilty for sharing a meal with those you love. The social aspect of the holidays is just as healthy!! Just focus on doing what makes you feel best!

CONTINUE EXERCISING

Continue to incorporate movement into your daily routine. But, exercise out of love, not shame. Make it social by inviting family or friends. Or walk after you eat to help regulate blood sugar

Haley Hutchinson
Duke Undergrad Alum

Ava Durgin
Duke Undergrad

PARTNERSHIPS IN RESEARCH AND QUALITY IMPROVEMENT

Duke Clinical & Translational Science Institute

+

North Carolina Central University — Truth 1910 Service — Durham, North Carolina — James E. Shepard, Founder

+

Duke University School of Medicine

50 Adult Patients
Hypertension
& Hispanic/Latinx or AA

Weekly Produce Delivery

6 MONTHS

Monthly
Nutrition Education

HYPOTHESIS:
Lower hypertension rates

Currently in study startup phase; RCT guaranteed funding by Duke CTSI June 2022

Enrollment to begin in March 2023

Duke Bass Connections Food Policy Research Project

Dr. Norbert Wilson, PhD
Duke Divinity School

Hannah Grace Lane, PhD
Duke Pop Health Sciences

Gizem Templeton, PhD
World Food Policy Center

Duke UNIVERSITY | BASS CONNECTIONS

2023-4 Research Team of Undergraduate and Graduate Students

Objective

Understand facilitators and barriers to federal food-security program utilization to more effectively coordinate efforts between non-profit, local government, faith-based and medical partners.

Workstream 1

Understanding the perspectives of community members and entities on how food/nutrition policies are implemented

Workstream 2

Understanding policies surrounding food and nutrition security and social support programs in social determinants of health at the federal (US), state (NC), and local (Triangle/Durham County) level.

MOVING FORWARD

Vision for the Future of FPP

1. A vehicle to enhance relationships between academic centers like Duke with its campus and local community on food security through listening, advocacy, & action

2. Deepen our Duke community research partnerships (DCCOR, CTSI, DCRI, DOCR) to contribute to literature on food-based health interventions

3. Provide opportunities that exposes students in the Triangle to existing inequities and inspire the next generation of change-makers

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– Co-Founders of Root Causes FPP, Duke School of Medicine

Lindy Wong – UI/UX Designer, Salesforce for designing our final slides
The artists of Flaticon, where many of our graphics are from

The Entire Root Causes Student Group and Fresh Produce Program Student Leadership Team

QUESTIONS?

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