“PRODUCE”ING POWERFUL PARTNERSHIPS TO OPTIMIZE PATIENT OUTCOMES
Founded in 2005, the RCHN Community Health Foundation (RCHN CHF) is a not-for-profit foundation with a mission to support the work of community health centers across America through advocacy, research and funding.

Addressing Social Determinates of Health (SDOH) to Improve Population Health Initiative funded projects 2015-2020

Goals of Initiative to increase capacity of CHCs to address population health and SDOH

Paul Melinkovich MD FAAP
Clinical Consultant, RCHN CHF
FVRx Pilot Project for Diabetes Patients: Addressing Food Insecurity to Improve Outcomes

RCHN worked with IPCA from November 2017-May 2020

Goals:
- Pilot a FVRx Program for poorly controlled patients with diabetes
- Improve diabetic control for enrolled patients
- Spread project from initial site to other CHCs in Idaho
Why is this work important?

- Food Insecurity is a major SDOH issue for low-income populations.
- Food as Medicine/Fruit and Vegetable Prescription (FVRx) programs promote access to fresh fruits and vegetables and healthy eating for underserved communities.
- FVRx programs allow healthcare providers to prescribe produce as a complementary “treatment” for managing chronic diseases such as diabetes and obesity.
DISCUSSION QUESTIONS

#1 What barriers impact your patient's ability to consume diets rich in fruits and vegetables?

#2 What are some challenges with managing programs and services to support chronic conditions like diabetes?

We will be using the interactive platform www.menti.com as part of the discussion.
FVRx PILOT FOR PATIENTS WITH DIABETES

Addressing Food Insecurity to Improve Outcomes

- Collaborate with ID health center on Food as Medicine FVRx program
- Target patients with diabetes, hypertension, elevated BMI
- Obtain pre and post information regarding food insecurity
- Monitor reporting and ensure project objectives are being met
- Address SDOH needs of Idahoans (health center requirement/focus)

Sarah Ridinger, MHA
IPCA Quality Improvement Program Manager
### Community profile

- Rural community, outskirts of Boise, ID
- Lower socioeconomic population
- 63% food insecure

- Rural community, OR border
- Lower socioeconomic population
- 57% food insecure

### Time period

- Two years, one group per year
  - Aug 2018 – May 31, 2020

- One year, two groups
  - Nov 2019 and Jan 2020

### Eligibility criteria

- Year 1: DM + HTN & A1C > 9.0, BMI ≥ 30
- Year 2: A1C > 8.0

- Both groups: A1C > 8.0

### Recruitment strategy

- Diabetes Registry List
- Provider referrals

- Patient list
- Anticipated high motivation level

### Staffing approach

- RDN was project lead
- Others: CHW, pharmacist

- Social work + RDN management team
- Others: CHW, provider, administrative
HEALTH CENTER PARTNER: FVRx PROGRAM

Rae Krick, MS, RDN, LD
Project Lead
TERRY REILLY PROGRAM OVERVIEW
YEAR ONE

- 174 patients + families
- Cooking Matters
- Nutrition Counseling
- Healthy Diabetes Group Classes
- Produce given (w/o vouchers)

YEAR TWO

- 105 patients + families
- Cooking Matters
- Billing for RDN Services
- Pharmacist Education
- Vouchers
**Target Population (participants):**
- 150 TRHS patients
- HbA1c ≥ 8.0%

**ELIGIBLE PATIENTS**
- Internal referral to RDN
- Clinician “flags” patient to RDN
- Shared visits between provider or clinical pharmacist and RDN

**RE-QUALIFIED PATIENTS**
- Patients who have previously completed program, but whose HbA1c remains ≥ 9.0% (with improvement from baseline) and/or who report a low knowledge score on post-survey

**FRUIT AND VEGETABLE PRESCRIPTION (FVRx) PROGRAM AT TERRY REILLY HEALTH SERVICES (TRHS)**

**PATIENT ENROLLMENT**
Patient and RDN cover orientation packet:
- Consent form
- Program pre-survey
- How to redeem vouchers
- Eligible/NOT eligible items
- Map of participating vendors
- Contact info of TRHS RDN

Voucher distribution per reported family size:
- 1 member: $10 per week
- 2-3 members: $20 per week
- 4-5 members: $30 per week
- 6-7 members: $40 per week
- 8+ members: $50 per week

**APPOINTMENT ATTENDANCE**
Patients required to attend one or more appointments in order to acquire monthly produce vouchers and receive nutrition education in regard to blood sugar control and potential weight loss. Patients have the choice to attend six-week Cooking Matters class or one-on-one appointments with the RDN. Pilot of provider group visits TBD.

**FVRx DOCUMENTATION**
Patients’ pre-program data collected from EMR and pre-survey. The following measurements included and tracked in program documentation:
- Height, weight, BMI
- Most-recent HbA1c
- Food security status (pre-survey)

**VOUCHER REDEMPTION**
Patients are invited to use their vouchers to redeem free produce from one or more of the following suppliers during regular business hours.
- Boise Mobile Farmer’s Market
- Pantera Market (Caldwell & Nampa)
- Cliff’s Country Market (Caldwell)
- Reggie’s Veggies (Boise)
- Primo Market (Garden City)

**APPOINTMENTS**
- One-on-one appointment with RDN
- Attendance at Cooking Matters
- TRHS provider group visit

Patients (regardless of appointment type) are required to meet with RDN once per month to collect vouchers. Four visits total; during final visit, RDN is to collect post-survey and post-program measurements including:
- Weight, BMI
- HbA1c
- Food security (post-survey)
SO MUCH MORE THAN FREE PRODUCE...

Outpatient Care
- Medical Nutrition Therapy
- One-on-one and shared visits
- DM and weight loss group visits

Community Outreach
- Nampa Food Access Committee
- Be Well Nampa
- Cooking Matters

Administrative Duties
- Coding and reimbursement
- TRHS Quality Improvement Committees
VALLEY FAMILY PROGRAM OVERVIEW
**COHORT ONE**

- 31 patients + families
- Healthy Diabetes Group Classes
- Cooking Matters
- Group Medical Visits
- Individual appt with RDN or BHC
- Weekly vouchers

**COHORT TWO**

- 26 patients + families
- Monthly group visits with RDN/BHC
- Cooking Matters
- Individual RDN or BHC appts
- Monthly Vouchers
DIABETESFVRx Project

Target Population (participants):
- 60% VFHC established patients
- HbA1C > 8.0%

VFHC identifies patients who meet the criteria.
Each patient contacted three times.

After 3 attempts:
No answer/phone out of service/ voicemail full or not set up = not enrolled

Patient informed of program purpose, benefits, and requirements.
- Patients must attend four or more groups/classes while enrolled in the program. Patient has the choice to attend Group Medical, Cooking Matters, and/or Healthy Diabetes Plate group series.
- Verbal affirmation of willingness to participate = enrolled.
- Patient added to Diabetes Pathways Registry in EHR.
- Patient scheduled appointment to collect A1C and orientation to program.
  - If A1C collected prior to orientation (within 30 days), no A1C collected at initial appointment.

Initial Appointment/Orientation:
1. Pre-Survey completed and charted in EHR.
2. Education provided on program, vouchers, releases signed. Patient given appropriate amount of vouchers at time of orientation.
   - If patient does not start group following orientation, scheduled for another appointment to get appropriate voucher amount.
3. Patient scheduled in group of choice (entire series).

If patient has met program requirements, patient is offered (at no cost):
- 2 individual appointments with either RDN and/or BHC.

At the end of the cohort series:
1. Patient contact three times.
2. Post-survey completed and charted in EHR.
3. Patient scheduled appointment to collect A1C.

Patient no-shows initial orientation appointment.
1. Patient contacted and rescheduled OR
2. After 3 attempts, if no contact or patient declines further enrollment; Patient removed from DM registry.

During enrollment in program, patient receives WEEKLY voucher amount based on household size (pregnant mom counts as 2 members).
- $10.00 – 1 member
- $20.00 – 2-3 members
- $30.00 – 4-5 members
- $40.00 – 6-7 members
- $50.00 – 8+ members
SO MUCH MORE THAN FREE PRODUCE...

Outpatient Care
- Cooking Matters
- Medical Nutrition Therapy
- One-on-one and group visits
- Inclusion of provider, BH and CHWs

Community Outreach
- Mass emergency food distributions
- ID and OR Food Bank Collaboration
- Oregon EOCCO FVRx Program

Administrative Duties
- Coding & reimbursement for Medical/RDN
- VFHC Quality Improvement Committees
PROGRAM EVALUATION

Barbara Gordon, MS, RDN, LD, FAND
Assistant Professor

Andrea Jeffery, RDN, LD
Graduate Assistant
EFFECTIVENESS OF PROGRAMS

Did participation promote favorable changes in A1C (better diabetes control) and reduce body mass index (improved overall health)?

PROCESS
determines whether program activities have been implemented as intended and results in certain outputs

OUTCOME
measures program effects in the target population by assessing the progress in the outcomes that the program is to address
### EVIDENCE SUPPORTING INTERVENTIONS

<table>
<thead>
<tr>
<th>Strategic Intervention</th>
<th>Terry Reilly SU18-SP20</th>
<th>Valley Family SU18-SP20</th>
<th>Supporting Research</th>
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</thead>
<tbody>
<tr>
<td>Dietary education provided by an RDN</td>
<td>Years 1 &amp; 2</td>
<td>Cohorts 1 &amp; 2</td>
<td>Bowen, 2016; Franz, 2017</td>
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<tr>
<td>Cooking Matters class</td>
<td>Years 1 &amp; 2</td>
<td>Cohort 1*</td>
<td>Archuleta, 2012; Pooler, 2017</td>
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<tr>
<td>Distribution FV via community partners</td>
<td>Years 1 &amp; 2</td>
<td>Cohorts 1 &amp; 2</td>
<td>Howard, 2006; Bryce, 2017</td>
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<tr>
<td>Individual appointment with pharmacist</td>
<td>Year 2</td>
<td>---</td>
<td>Meade, 2018</td>
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<tr>
<td>Group visits with behavioral health</td>
<td>---</td>
<td>Cohorts 1 &amp; 2</td>
<td>Ayalon et al., 2008</td>
</tr>
</tbody>
</table>

*COVID prevented offering for Cohort 2
## Sociodemographics of Participants

### Breakdown of Race/Ethnicity for TRHS and VFHC FVRx Program Participants

<table>
<thead>
<tr>
<th></th>
<th>TRHS Year One</th>
<th>TRHS Year Two</th>
<th>VFHC Cohort One</th>
<th>VFHC Cohort Two</th>
<th>Combined Count</th>
<th>Combined Percentage</th>
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</thead>
<tbody>
<tr>
<td>African American/Black</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>2</td>
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<tr>
<td>Asian</td>
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<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0.3%</td>
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<tr>
<td>Caucasian/White, Not Latino/Hispanic</td>
<td>86</td>
<td>44</td>
<td>13</td>
<td>11</td>
<td>154</td>
<td>46.2%</td>
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<tr>
<td>Latino/Hispanic or Spanish Origin</td>
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<td>54</td>
<td>6</td>
<td>14</td>
<td>150</td>
<td>45.0%</td>
</tr>
<tr>
<td>Native American/American Indian</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>0.6%</td>
</tr>
<tr>
<td>Other (Native Hawaiian/Pacific Islander)</td>
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<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0.3%</td>
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<td>Two or more races/ethnicities</td>
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<td>2</td>
<td>3</td>
<td>0</td>
<td>10</td>
<td>3.0%</td>
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<td>Preferred not to answer</td>
<td>0</td>
<td>2</td>
<td>4</td>
<td>1</td>
<td>7</td>
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<tr>
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<td>2</td>
<td>4</td>
<td>0</td>
<td>6</td>
<td>1.8%</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>171</strong></td>
<td><strong>105</strong></td>
<td><strong>31</strong></td>
<td><strong>26</strong></td>
<td><strong>333</strong></td>
<td></td>
</tr>
</tbody>
</table>

*COVID impacted recruitment for Cohort 2
Participants from both CHCs

- Statistically significant changes in A1C for participants who completed the program
- Terry Reilly average reduction of A1C was 1.7%, Valley Family .03%

Vouchers alone

- Not significant predictor of change in A1C or BMI
- Percent redeemed not significant predictor of change in metrics
Cooking classes vs. behavioral health appointments

- Cooking Matters => statistically significant for predicting change in A1C
- BH appointments + voucher redemption => significant reductions in BMI

Food insecurity and program participation

- Participation yielded significant change in A1C among food insecure
- Terry Reilly Year 2 and Valley Family Cohort 1
Allocate sufficient resources
   Keep cohorts small
   Provide opportunities for socialization
   Utilize validated educational and evaluation tools
   Collect parallel metrics

RDN position established
   Continuation funds from local CCO
   Virtual Cooking Matters Pilot
   Participation in statewide ID/OR FVRx guiding groups
   Formation of IPCA Dietitian Peer Group
What barriers impact your patients from having diets rich in fruits and vegetables?

DISCUSSION QUESTION #1

Please go to www.menti.com enter code 1990 7729
DISCUSSION QUESTION #2

What are some challenges with managing programs and services to support chronic conditions like diabetes?

Please go to www.menti.com
enter code 19907729
REFERENCES


REFERENCES, CONTINUED


The Idaho Primary Care Association and its health center partners thank the RCHN Foundation for their generous funding opportunity and continued support of the vital work of the Federally Qualified Health Centers.
THANK YOU!

FOR MORE INFORMATION

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