Welcome to the COPE Webinar Series for Health Professionals!

May 20 2015 webinar

CARE Connect: Multidisciplinary Preventive Health Care Outcomes in an Urban at-risk Population

Time: 12 noon – 1 PM EST
Moderator: Rebecca Shnekman, MPH, RDN, LDN
Interim Director
MacDonald Center for Obesity Prevention & Education

Handouts of the slides are posted at: www.villanova.edu/COPE

MacDonald Center for Obesity Prevention and Education (COPE) Goals

- Provide Continuing Education
- Participate in Research
- Enhance Education
- Partner with agencies and organizations

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Enhance Education
Participate in Research
Partner with agencies and organizations
Provide Continuing Education

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CARE Connect: Multidisciplinary Preventive Health Care Outcomes in an Urban at-risk Population

Colleen K. Spees, PhD, MEd, RDN, LD, FAND
Assistant Professor of Medical Dietetics and Health Sciences
The Ohio State University College of Medicine

Objectives: The learner will be able to:
1. Cite levels of food security and common characteristics of food insecure individuals
2. Describe health issues related to food insecurity and barriers to self-management
3. Describe the basic design and outcomes of the CARE Connect research project

Credits: This webinar awards 1 contact hour for nurses, 1 CPEU for dietitians. Suggested CDR Learning Need Codes: 4010, 4000, 4070; Level 2.

Notice: Villanova University College of Nursing is accredited as a provider of continuing nursing education by the American Nurses Credentialing Center Commission on Accreditation. Villanova University College of Nursing Continuing Education/COPE is a Continuing Professional Education (CPE) Accredited Provider with the Commission on Dietetic Registration.

Neither the planners nor the faculty have any conflicts of interest to disclose.

CARE CONNECT
Community Assessment, Referral, Education, and Connections Project

PIs: Colleen Spees & Amy Darragh
Interdisciplinary Research Team:
Crystal Dunlevy, Deborah Kagolmeyer, Anne Klaas, Jimmy Onate, Stephen Page, Melinda Rybski, Laura Schmitt, Susan White

Food Insecurity in America
Prevalence of food insecurity, average 2011-13

Background: 2012-2013

- "Food Choices and Health Status of Food Insecure Families in Central Ohio Grant"
- 15 students trained and conducted >250 interviews at 5 food pantries

<table>
<thead>
<tr>
<th>Conditions</th>
<th>Food Pantry (%)</th>
<th>Franklin County (%)</th>
<th>Ohio (%)</th>
<th>U.S. (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diabetes</td>
<td>15.1</td>
<td>9.8</td>
<td>10.1</td>
<td>8.7</td>
</tr>
<tr>
<td>Heart Disease</td>
<td>8.4</td>
<td>No data</td>
<td>3.9</td>
<td>4.9</td>
</tr>
<tr>
<td>Hypertension</td>
<td>41.4</td>
<td>28.5</td>
<td>31.7</td>
<td>28.7</td>
</tr>
<tr>
<td>High Cholesterol</td>
<td>26.3</td>
<td>38.6</td>
<td>39.6</td>
<td>37.5</td>
</tr>
<tr>
<td>Obesity</td>
<td>36.2</td>
<td>31.4</td>
<td>30.1</td>
<td>35.7</td>
</tr>
<tr>
<td>Disability</td>
<td>40.9</td>
<td>11.0</td>
<td>13.4</td>
<td>12.0</td>
</tr>
</tbody>
</table>

Table 3. Disparities in the Prevalence of Health Conditions by Food Pantry Clients versus Regional, State, and National Percentages, 2012-2013

a Pantry clients age ≥ 18 years, 2012.
b County HealthMap.27
c Centers for Disease Control – Behavioral Risk Factor Surveillance System.11,29

• "Food Choices and Health Status of Food Insecure Families in Central Ohio Grant"

- ‘Pantry Grant’ Results (cont)

  • 21% identified themselves as ‘caregivers’
    - Poor physical and mental health
    - Poor health behaviors
    - Musculoskeletal disorders
    - Depression

  • Of those (41%) food pantry patrons who reported a disability:
    - 63% reported musculoskeletal disorders (pain and arthritis)
    - 21% reported mental illness (depression and anxiety)
    - 11% reported respiratory disorders (asthma and COPD)

  • Together, these data indicate FI is associated with obesity and obesity-related diseases, poor physical and mental health, and adverse health outcomes well above national averages.

SPECIFIC AIM: To determine the 1) feasibility and 2) preliminary effects of Care Connect in a Southside food pantry.

1) Community-based services
2) Assessment and screening for key risk factors and health conditions including cardiovascular, musculoskeletal, mental illness, respiratory disorders and caregiver status;
3) Recommendations and Referrals for services & supports
4) Educate participants by providing targeted strategies to manage identified risk factors or conditions;
5) Connect with the services

CARE Connect 2014
Community Assessment, Referral, Education, and Connections Project

Cardiovascular Health

- BMI (Ht/Wt)
- Waist Circumference
- Blood Pressure
- Heart Rate
- Lipid Panel
- BG/HbA1c
- Dietary Intake
- Physical Activity Assessment

Student Sensitivity & Empathy Training

- 30 students
- Onsite – 6 hours
- Community – 3 hours

Instruments: CAREcards

<table>
<thead>
<tr>
<th>Risk Factors/Assessment</th>
<th>Healthy or Minimal Risk</th>
<th>High or Moderate Risk</th>
<th>Condition Specific Education &amp; Referral</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blood Pressure</td>
<td>&lt; 120/80</td>
<td>&gt; 129/80</td>
<td>Cardiovascular Health</td>
</tr>
<tr>
<td>Hemoglobin</td>
<td>&lt; 13.5</td>
<td>&gt; 13.5</td>
<td>Hemoglobin</td>
</tr>
<tr>
<td>Lipid Panel</td>
<td>&lt; 40 mg/dl</td>
<td>&gt; 40 mg/dl</td>
<td>Lipid Panel</td>
</tr>
<tr>
<td>Triglycerides</td>
<td>&lt; 150 mg/dl</td>
<td>&gt; 150 mg/dl</td>
<td>Triglycerides</td>
</tr>
<tr>
<td>BMI</td>
<td>18.5 – 24.9</td>
<td>&gt; 25</td>
<td>BMI</td>
</tr>
<tr>
<td>HDL</td>
<td>&gt; 40 mg/dl</td>
<td>&lt; 40 mg/dl</td>
<td>HDL</td>
</tr>
<tr>
<td>LDL</td>
<td>&gt; 100 mg/dl</td>
<td>&lt; 100 mg/dl</td>
<td>LDL</td>
</tr>
<tr>
<td>Physical Activity</td>
<td>Treadmill Walking</td>
<td>Treadmill Running</td>
<td>Physical Activity Assessment</td>
</tr>
<tr>
<td>Dietary Intake</td>
<td>Mediterranean</td>
<td>Vegetarian</td>
<td>Dietary Intake</td>
</tr>
<tr>
<td>Cardiovascular Health</td>
<td>Recommendations</td>
<td>Recommendations</td>
<td>Cardiovascular Health</td>
</tr>
<tr>
<td>Recommendations</td>
<td>Mediterranean</td>
<td>Vegetarian</td>
<td>Recommendations</td>
</tr>
<tr>
<td>Physical Activity Assessment</td>
<td>Recommendations</td>
<td>Recommendations</td>
<td>Physical Activity Assessment</td>
</tr>
<tr>
<td>Dietary Intake</td>
<td>Mediterranean</td>
<td>Vegetarian</td>
<td>Dietary Intake</td>
</tr>
<tr>
<td>Cardiovascular Health</td>
<td>Recommendations</td>
<td>Recommendations</td>
<td>Cardiovascular Health</td>
</tr>
</tbody>
</table>

CAREcards

End of Slide
Mental Health
• Depression Symptoms
• Caregiver Strain
• Musculoskeletal Discomfort (0-10)
• Caregiving Activities

Respiratory Health
• Asthma Screener
• COPD Assessment
• Tobacco Usage
• \( \text{FeV1/PEFR} \)
• RR

Musculoskeletal Health
• Musculoskeletal Discomfort
• Health Assessment Questionnaire
• Functional Movement Screen

Procedures
I. Participants completed the Personal Health Assessment and Triage (PHAT)
• Included a subset of standardized questions and surveys:
  • CDC Behavioral Risk Factor Surveillance System (BRFSS)
  • International Physical Activity Questionnaire (IPAQ)
  • NIH Diet History Questionnaire (DHQ)
  • USDA household food security survey module (HFFSM)
• Participants answered triage questions:
  • Presence of musculoskeletal pain (multiple measures)
  • Respiratory symptoms
  • Smoking history
• Depending on their responses, they were referred for musculoskeletal and/or respiratory health assessments

Procedures
II. All participants received a cardiovascular health screen and a depressive symptom health screen
• CVD
  • Height, weight, body mass index (BMI), waist circumference (WC)
  • Blood pressure (BP), blood glucose (BG), glycated hemoglobin (A1c), total cholesterol (TC)
• MH
  • CES-D
• Pain (one of multiple measures)
  • 0-10 severity scale

Procedures
III. Intervention

Education & Referrals
1. No or minimal risk
  • Diet and physical activity education (CVD)
  • Maintaining general mental health and well-being (MH)
  • Joint protection, arthritis, exercise (pain)
2. Risk factors and/or symptoms present
  • Education about specific conditions such as HTN, DM, dyslipidemia, obesity
  • Education included depression description, risk factors, resources, and treatment options
  • Follow up with PCP recommended (and referrals provided upon request)
3. Disease or Condition Present
  • Education as above AND referral to appropriate services were provided
Intervention

IV. PEST

• Participant Exit Station Table
  • Required referral to community resources - scheduled appointments with trained staff.
  • Follow up contact information - call, text, or email to confirm that participants went to their appointments.
  • Program evaluation on perceptions of the process and satisfaction.

Results: Participant Characteristics

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>47.7</td>
</tr>
<tr>
<td>Sex</td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>41.3 % (43)</td>
</tr>
<tr>
<td>Female</td>
<td>60.5 % (78)</td>
</tr>
<tr>
<td>Race/Ethnicity</td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>31.0 % (40)</td>
</tr>
<tr>
<td>Black/African American</td>
<td>69.8 % (90)</td>
</tr>
<tr>
<td>Education</td>
<td></td>
</tr>
<tr>
<td>&lt; 12</td>
<td>23.3 % (30)</td>
</tr>
<tr>
<td>HS/GED</td>
<td>44.2 % (57)</td>
</tr>
<tr>
<td>College (at least 1 year)</td>
<td>33.4 % (42)</td>
</tr>
<tr>
<td>Employment</td>
<td></td>
</tr>
<tr>
<td>Employed</td>
<td>24.8 % (32)</td>
</tr>
<tr>
<td>Unemployed</td>
<td>34.9 % (45)</td>
</tr>
<tr>
<td>Retired</td>
<td>12.4 % (16)</td>
</tr>
<tr>
<td>Disabled</td>
<td>17.8 % (23)</td>
</tr>
<tr>
<td>Annual Income</td>
<td></td>
</tr>
<tr>
<td>&lt;$10,000</td>
<td>44.2 % (57)</td>
</tr>
<tr>
<td>$10,000–$24,999</td>
<td>41.8 % (54)</td>
</tr>
<tr>
<td>&gt;$25,000</td>
<td>5.4 % (7)</td>
</tr>
</tbody>
</table>

Participant Health and Healthcare Access Characteristics

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>% (N)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health Insurance, None</td>
<td>48.8 % (63)</td>
</tr>
<tr>
<td>Health Insurance, last 12 months</td>
<td>51.2 % (63)</td>
</tr>
<tr>
<td>Health Insurance, last 12 months, no coverage</td>
<td>27.1 % (35)</td>
</tr>
<tr>
<td>Primary Care Physician, Yes</td>
<td>61.3 % (79)</td>
</tr>
<tr>
<td>Primary Site for Health Care, PCP/Office</td>
<td>58.1 % (75)</td>
</tr>
<tr>
<td>Primary Site for Health Care, ED/Urgent Care</td>
<td>14.7 % (19)</td>
</tr>
<tr>
<td>Primary Site for Health Care, Other</td>
<td>24.2 % (31)</td>
</tr>
<tr>
<td>Health: Excellent/Very good</td>
<td>33.1 % (43)</td>
</tr>
<tr>
<td>Health: Good</td>
<td>36.6 % (45)</td>
</tr>
<tr>
<td>Health: Fair/Poor</td>
<td>26.3 % (31)</td>
</tr>
<tr>
<td>Diagnoses, DM</td>
<td>32.4 % (24)</td>
</tr>
<tr>
<td>Diagnoses, HTN</td>
<td>31.6 % (38)</td>
</tr>
<tr>
<td>Diagnoses, Respiratory Disease</td>
<td>18.9 % (14)</td>
</tr>
<tr>
<td>Other (Asthma, OB, etc)</td>
<td>50.0 % (37)</td>
</tr>
</tbody>
</table>

Self Reported Health Conditions and A1c

| Condition     | High Blood Pressure | A1c | | | |
|---------------|---------------------|-----| | | |
| Normal        | 0.0%                | 5.6%| | | |
| 0%            | 0.0%                | 5.8%| | | |
| <140          | 0%                  | 5.8%| | | |
| 140–159       | 0%                  | 5.6%| | | |
| 160–179       | 2%                  | 5.8%| | | |
| 180–199       | 0%                  | 5.8%| | | |
| 200–299       | 0%                  | 5.8%| | | |
| 300+          | 0%                  | 5.8%| | | |

Effect of CARE Connect on access to and utilization of health and community services among study participants

• 15% received health and wellness education (minimal risk; no referral)
• 85% received recommendations for referral to community providers (60% with 2+ reasons)
• Referral Connections (70% accepted, 15% declined)
Depressive Symptoms and Food Security

<table>
<thead>
<tr>
<th>Food Security Status</th>
<th>% Total per SS</th>
<th>CES-D Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full &amp; Moderate FS</td>
<td>38%</td>
<td>15.6</td>
</tr>
<tr>
<td>Low FS</td>
<td>32%</td>
<td>16.3</td>
</tr>
<tr>
<td>Very Low FS</td>
<td>30%</td>
<td>24.9</td>
</tr>
</tbody>
</table>

Pain Severity and Food Security

Median Pain Severity = 8/10

Barriers to Healthy Eating

Characteristics of Health by A1C

Participant Satisfaction & Perceptions

<table>
<thead>
<tr>
<th>Strongly Agree/Agree</th>
<th>Neutral</th>
<th>Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>The services I received were valuable.</td>
<td>97</td>
<td>2</td>
</tr>
<tr>
<td>The information I received was valuable.</td>
<td>98</td>
<td>3</td>
</tr>
<tr>
<td>The information I received today will be helpful in my daily life.</td>
<td>97</td>
<td>4</td>
</tr>
<tr>
<td>The amount of time I spent today was reasonable.</td>
<td>97</td>
<td>0</td>
</tr>
<tr>
<td>The referrals I received were valuable.</td>
<td>92</td>
<td>8</td>
</tr>
<tr>
<td>The staff was helpful.</td>
<td>97</td>
<td>2</td>
</tr>
<tr>
<td>The staff was knowledgeable.</td>
<td>98</td>
<td>2</td>
</tr>
<tr>
<td>Providing services in a food pantry is a good idea.</td>
<td>96</td>
<td>0</td>
</tr>
<tr>
<td>The program ran smoothly.</td>
<td>97</td>
<td>1</td>
</tr>
</tbody>
</table>

CARE Connect: Innovation

Advance the field:
This project placed an integrated, multidisciplinary team in food pantries to provide comprehensive assessments, education, and referrals to an underserved and vulnerable population.

Impact of the approach:
This project appears to be the first to present a model for implementing community-based multidisciplinary care aimed toward a cohesive goal of reducing the risk and increasing control of health factors associated poor health outcomes.

Data Collection

- 10 weeks
- 60 hours on site
- 8-15 HRS faculty, staff, and students per day
- 774 person hours of onsite research, community service & outreach
Student Data

• Increased empathy (Toronto Empathy Questionnaire)
• Qualitative data
  • "What words or phrases come to mind when you think of the low SES population?"
  • Pre-study - 100% negative / derogatory terms
  • Post-study – > 80% less negative / derogatory terms
  • stressed, complicated, nice, thankful, kind, friendly, grateful, interesting, funny
• "What things/resources do you think would improve the circumstances of this population?"
  • Pre-study – finance-driven
  • Post-study – resource-driven
  • provide more access, more resources, counseling, mental health services, health screenings, food

Lessons Learned

• Data is ONLY as good as those collecting it!
  • Pay hourly
• This work is not for everyone
  • But can include everyone
  • Be a 'boots on the ground' investigator
    • Observe and intercede prior to problems
    • Engage community partners
    • Reflect frequently (students & partners)
      • At 'home' space
      • Share results (students & partners)
      • Show appreciation

Next Steps

• Dissemination of Results
  • STEP Poster Award
  • 2 Denman Posters
  • National Abstract (in review)
  • 2 International Workshops (student training modules)
  • Outreach & Engagement Service-Learning Award
  • Service-Learning Course Grant
  • 3 Manuscripts in preparation
• Submit external grants and proposals

"ALWAYS COMFORT PEOPLE... BUT NEVER LET THEM GET TOO COMFORTABLE."

Austin Hill, Stowe Mission 2014

Acknowledgements

CARE Connect

School of Health and Rehabilitation Sciences

The Ohio State University

Funding – SHRS
Stowe Mission
Salvation Army Food Pantry
HEAL Fresh Market
ALL of our wonderful students!

Evaluations and CE Certificates

• Everyone who has completed the webinar will be emailed a link to the evaluation.
  • The email will be sent to the email address that you used to register for the webinar.
  • Please complete the evaluation soon after you receive the email. The evaluation does expire after 3 weeks. Once expired, you cannot obtain a certificate.
  • Once the evaluation is completed, the CE certificate will be emailed separately within 2 business days.
COPE's June Professional Webinar

Susan Silberstein, PhD
Founder and Educational Director of BeatCancer.org

Fight Cancer with Your Fork!
Date: Thursday June 11 2015
Time: 12:00PM - 1:00PM EST
CE Credit: 1.0 contact hour, 1.0 CPEU, 1 CEC

Questions and Answers!

Moderator: Rebecca Shenkman, MPH, RDN, LDN
Email: cope@villanova.edu
Web site: www.villanova.edu/COPE

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