Provider Communication Intervention at a Federally Qualified Health Center-based Farmers' Market: Implications for Implementation Science

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Presentation Objectives

1. Describe a communication intervention implemented at a federally qualified health center (FQHC)-based farmers’ market.

2. Identify the benefit of health care provider communication and role modeling on FQHC patients’ dietary behaviors.
Background: Farmers’ Markets

- Farmers’ markets (FM) have the potential to:
  - improve the diet and health of low-income, medically underserved communities (Freedman, Whiteside, Brandt, Young, Friedman, & Hebert, 2012)
  - shape local perceptions, values, and behaviors about healthy eating (Feagan & Morris, 2009)
  - serve as a space for social interaction (Payet, Gilles, & Howat, 2005).

- First study examining the implementation and evaluation of a FM designed in partnership with an FQHC serving individuals with health disparities and low SES.
Purpose

• To examine the influence of health care provider communication and providers’ role modeling of healthy behavior for patients within the context of a FM intervention, a unique approach for addressing both prevention and treatment of disease among a medically underserved population.
Setting / Intervention

- Multi-phase process used to identify an FQHC site for a FM intervention (Freedman et al., 2012)
- Using a CBPR approach, a FM was established at Family Health Centers, Inc. (FHC) from June-October 2011 for a total of 22 Friday markets.
- A patient-provider communication intervention, implemented with the market, consisted of three communication strategies:
  1. providing patients with prescriptions and vouchers for the market,
  2. talking one-on-one about diet during patient appointments,
  3. modeling healthy purchases/eating at the market.
Patient Sample

• FHC patients and diagnosed with type II diabetes as of March 1, 2011 (n=2,306 patients).
• FHC staff randomly selected 345 diabetic patients by selecting every 5\textsuperscript{th} diabetic patient in their database.
• Each patient received a mailing that described the study purpose.
• Interested potential participants were required to contact the research staff to express interest and determine eligibility.
• 63 patients expressed interest in the study.
• Final sample included 45 diabetic patients.
  – 44 completed surveys at all 3 data collection time points
Provider Sample

- 13 providers received training on the FM prescription program and a set of pre-printed prescription pads
- Providers were encouraged to shop at the market and share the prescriptions with patients.
- Providers were instructed to disburse one prescription per patient visit.
- One provider organized the FHC voucher program for participants attending diabetes education classes.
Data Collection – Patients

• Data collected by telephone 3 times:
  – T1: Before FM intervention (May/June 2011)
  – T2: Midway through intervention (August 2011)
  – T3: Right after intervention (November 2011).

• At both T1 and T2, participants received $20 incentive; after T3 $40 provided.

• $25 financial voucher for FM provided after T1 and T2

• Social aspects of food shopping questions adapted. Close-ended statements (Likert-type options) included:
  – *You have a chance to interact with health providers when shopping there* (strongly agree to strongly disagree);
  – *How often has your health care provider talked to you about the importance of eating the daily recommended number of fruit and vegetables per day?* (never to always).

• Open-ended questions included:
  – *Has your health care provider ever talked to you about the farmers’ market? If yes, what did they say?*
Data Collection – Providers

• Near the end of the FM season, all 13 providers were invited to complete a 19-item Web-based survey about their experiences with the prescription program.
• Upon completion providers received a $5 FM coupon.
• Survey questions included:
  – How did your patients respond to the prescription program? (very positively to not very positively);
  – How important is it that there is a farmer’s market at FHC in the future? (very important to not at all important);
  – How much do you agree with the following statement – The farmer’s market provided important health benefits to PATIENTS at FHC;
  – How much do you agree with the following statement – The farmer’s market provided important health benefits to STAFF at FHC (strongly agree to strongly disagree);
  – How often did you shop at the farmers’ market? (never to every week).
Analysis

• Repeated measures ANOVA to assess patients’ perceptions of social aspects of food shopping and communication and interaction with health care providers at the FM over time (i.e., T1 – prior to shopping at the market; T2 – during use of the market; T3 – following use of the market).

• Open-ended interview questions collected from patients at T3 analyzed inductively to identify emergent themes.

• Nonparametric frequencies and percentages used to analyze provider survey results and patient demographic characteristics.
Results: Patient Perspectives (n=44)

1. Providers role modeling use of the market influenced patients’ food choices and perceptions of the market:
   - “It boosted them [providers] up. Most of the employees came over and bought things in great amounts.”
   - “It’s good for them because the doctors and nurses are out there buying fruits and veggies.”

2. Market provided opportunity for providers and patients to discuss healthy eating:
   - “[Shopping at the market] enabled me to follow more of my doctors’ orders. It reinforced what my doctors were teaching.”

3. Market provided opportunity for informal social interactions between patients and providers:
   - “I see a lot of personnel at the market; there is more interaction with them.”
Social Interactions and Patient-Provider Communication about the FQHC Farmers' Market (n=44 patients)

<table>
<thead>
<tr>
<th>Time point</th>
<th>Mean</th>
<th>SE</th>
<th>(Min-Max)</th>
<th>t</th>
<th>DF</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Social aspects of food shopping at your grocery store (T1) and farmers’ market (T2)</strong></td>
<td></td>
<td></td>
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<tr>
<td>You enjoy the social outing of shopping there.</td>
<td>T1</td>
<td>4.27</td>
<td>0.10</td>
<td>(2-5)</td>
<td>41.45</td>
<td>86</td>
</tr>
<tr>
<td></td>
<td>T2</td>
<td>4.61</td>
<td>0.10</td>
<td>(2-5)</td>
<td>44.75</td>
<td></td>
</tr>
<tr>
<td>You interact with people when shopping there.</td>
<td>T1</td>
<td>4.16</td>
<td>0.13</td>
<td>(1-5)</td>
<td>33.24</td>
<td>86</td>
</tr>
<tr>
<td></td>
<td>T2</td>
<td>4.57</td>
<td>0.13</td>
<td>(2-5)</td>
<td>36.51</td>
<td></td>
</tr>
<tr>
<td>You have a chance to interact with health care providers when shopping there.</td>
<td>T1</td>
<td>2.86</td>
<td>0.15</td>
<td>(1-5)</td>
<td>19.75</td>
<td>86</td>
</tr>
<tr>
<td></td>
<td>T2</td>
<td>4.23</td>
<td>0.15</td>
<td>(2-5)</td>
<td>29.15</td>
<td></td>
</tr>
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</table>

| **Communication with health care providers about/at farmers’ market** |      |     |           |      |     |         |
| Since your last interview, how often has your health care provider at the FQHC talked to you about your diet? | T1  | 4.05| 0.22 | (1-5) | 18.09 | 66 | 0.10    |
|                                                  | T2  | 3.47| 0.27 | (1-5) | 12.94 |     |         |
| Since your last interview, how often has your health care provider at Family Health Centers, Inc. talked to you about the importance of eating the daily recommended number of fruit and vegetables per day? | T1  | 4.02| 0.21 | (1-5) | 19.34 | 66 | 0.71    |
|                                                  | T2  | 3.90| 0.25 | (1-5) | 15.66 |     |         |

1) 1 = strongly disagree, 2 = disagree, 3 = neutral neither agree nor disagree, 4 = agree, and 5 = strongly agree
2) 1 = never, 2 = rarely, 3 = sometimes, 4 = usually, and 5 = always (excludes people who did not go to the FQHC in past 6 months at T1 and people who did not receive health care services from the FQHC since last interview at T2 and at T3).
Results: Provider Perceptions (n=9)

- 5 reported distributing 25+ prescriptions
- Providers gave patients information about:
  - market hours and location
  - importance of eating fruits and vegetables.
- Most (66.7%) thought patients responded ‘positively’ or ‘very positively’.
- Perceived barriers to the prescription program:
  - limited market hours for patients to use prescriptions
  - limited time with patients to discuss the market
  - forgetting to have prescription pads during appointments.
- Many ‘strongly agreed’ (33.3%) or ‘agreed’ (55.6%) that the FM provided health benefits to FHC patients
- ‘Strongly agreed’ (33.3%) or ‘agreed’ (44.4%) that the market benefitted FHC staff (two were ‘neutral’).
- Most (88.9%) thought it was ‘important’ or ‘very important’ that the FM remain at FHC.
Summary

• Patient-provider communication is an effective strategy for disease prevention and treatment.

• Multiple forms of provider communication were implemented and evaluated (i.e., coupon distribution, education, modeling behavior).

• Qualitative patient data stressed that seeing providers at the market influenced their purchasing decisions.

• While providers’ actual communication about diet during medical appointments decreased over time, patients still had the opportunity to see their providers “in action” at the market.
Research Implications

• Implementation and evaluation of a structured skills-based training for providers is needed.
  – Physician training programs can influence providers’ counseling practices and their attitudes about the usefulness of training.
  – Combination of verbal communication and role modeling may influence patients’ health behaviors more than provider communication alone.

• Important to share detail & publish on communication /intervention design for dissemination and replication.
Next Steps

• Disseminate “Building Farmacies” manual
  – Sign up today if you are interested!
Next Steps

• Scale up farmacies approach to other community health centers in SC and nationally.
  – BlueCross BlueShield of South Carolina Foundation
  – National Institutes of Health, Dissemination and Implementation Science grant
  – Other suggestions?
Acknowledgments

• Funded by the Centers for Disease Control and Prevention Prevention Research Centers and National Cancer Institute-funded Cancer Prevention and Control Research Network U48/DP001936 (Pilot Project Leader: DA Freedman; PI: JR Hébert; Co-PI: DB Friedman).
• We are grateful to the South Carolina Primary Health Care Association, Family Health Centers, Inc., and all participants.

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