A Nurse Practitioner-Directed Interprofessional Intervention for Underserved Populations

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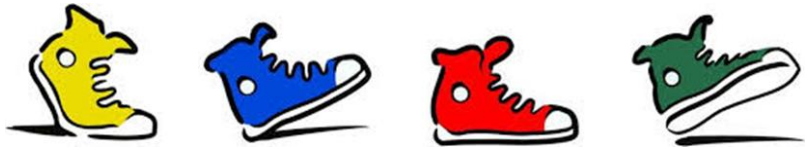
UNIVERSITY OF DETROIT MERCY
Build A Boundless Future

StFrances Cabrini Clinic
Most Holy Trinity Catholic Church

Cabrini Clinic

- Oldest free Primary Clinic in the United States
- Primary Care Services and Community Outreach
- Academic training for health professions students

Population Characteristics of Patients

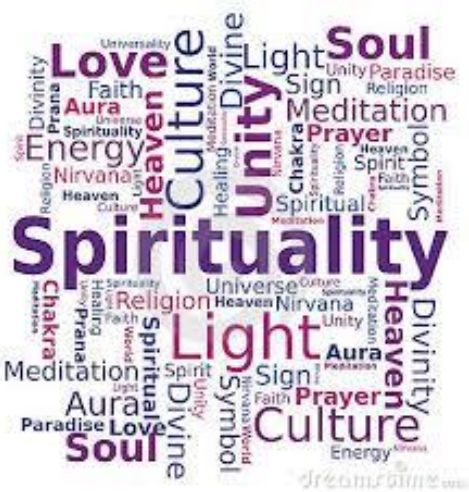


- 5000 visits per year
- Middle-aged, 55% male 45% female; African American, Hispanic & Caucasian
- Top 5 Dx: CVD, HTN, DM2, Obesity, Hyperlipidemia
- Access to safe exercise areas limited; Food desert: 8% of food retailers are mainstream grocery stores[1]
- Multidisciplinary volunteer staff

Background for Project

- Cardiovascular disease (CVD) leading cause of death in the United States[2] and in both men and women[3]
- Rising mortality rates among women ages 35-54 years of age[4]
- CVD rates in MI women and men are among the highest in the nation[5]

Supporting Evidence for Project



- ❖ **CVD prevention and management: behavioral[6]**
- ❖ **Successful lifestyle interventions: relevant, tailored to daily life[7]**
- ❖ **African Americans and Hispanics**
  - **Communal activities[10,19]**
  - **Enjoyable, practical[8, 19]**
  - **Spirituality[9]**

Social Media & Health Intervention

- Text messaging[11-12]
- Applications for Smart Phones[12]
- Face Time/Skype[13-14]
- Email, social networking sites
- CDC social media tool kit: best practices, policies http://www.cdc.gov/socialmedia/tools/guidelines/

Interprofessional Collaboration

coordinated care™

- Patient-Centered Care
- Coordinated Care
- Shared Goals
- Improved Outcomes

Improving Outcomes

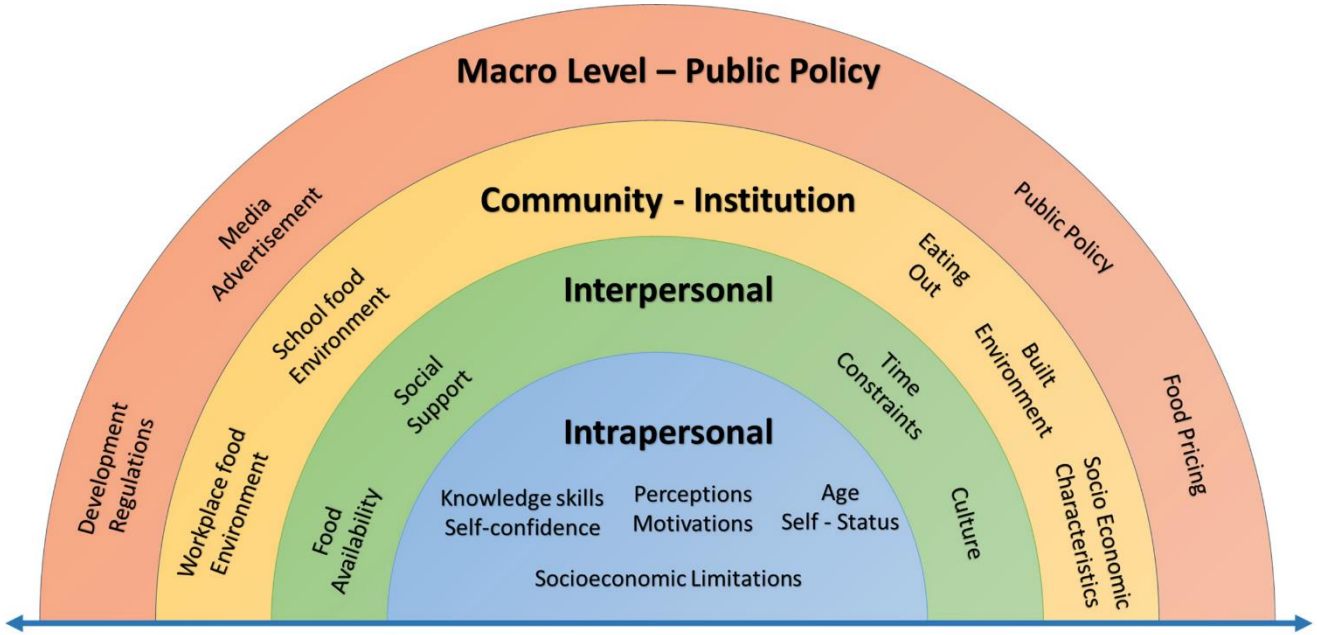
Other Driving Forces

- Build Capacity for Patient Centered Accountable Care
- Patient Participation in their Care
- Cabrini as Health Home
- New Models for Care Delivery

Aims

- 1. Initiatives to support clinic perception as a Health Home
- 2. Initiatives to support patient engagement in health promoting behaviors

Conceptual Model



- **Social Ecological Model for Health Promotion was used to guide the project and explicate our aims**

Health Promotion Initiatives

- Implement group interventions with weekly social media messaging to address nutrition and physical activity outcomes
  - Reduce CVD risk in low income urban populations
- Implement ID cards for all patients receiving care at Cabrini Clinic
  - Support a sense of belonging and Patient Engagement
  - Ensure continuity of care

Interprofessional Team

- Nurse Practitioners
- Registered Dietitian
- Certified Yoga Teacher, MSW experience
- Professional Chef

Step into Wellness: Methods

- Community based intervention design
- Three cohorts of 18 participants each
- Funded by DMC Foundation ($25, 272)
- Project approval: University of Detroit Mercy IRB

Methods

- Ages 19-64 years
- Receiving primary care from Cabrini Clinic in last 12 months
- Medical clearance for physical activity portion
- Working phone or email address
- Confirmed commitment to participate

Intervention: 13 Weeks

Gentle Yoga Classes

- Guided by the AHA Simple 7 materials
- Get Active Component
  - 6 weeks: gentle yoga
  - Self-directed walking program with pedometers
- Eat Better Component
  - 6 week healthy cooking class
  - 1 week with RD on Recipe Rehab

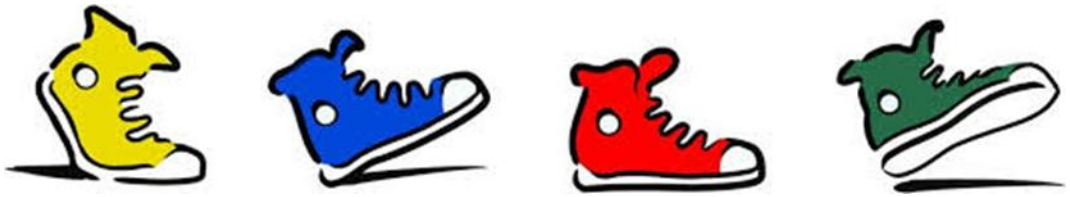
Cooking Matters: 6 Weeks

- Standardized National Curriculum
- 5 weeks cooking classes with demonstrations
- 1 week “shopping matters”

Recipe Makeovers

- ❖ Different Registered Dietitian
  - Cultural relevance
- ❖ Emphasis on modifying favorite recipes to healthier versions
- ❖ Recipe use during the remaining program weeks

Get Active: Walking

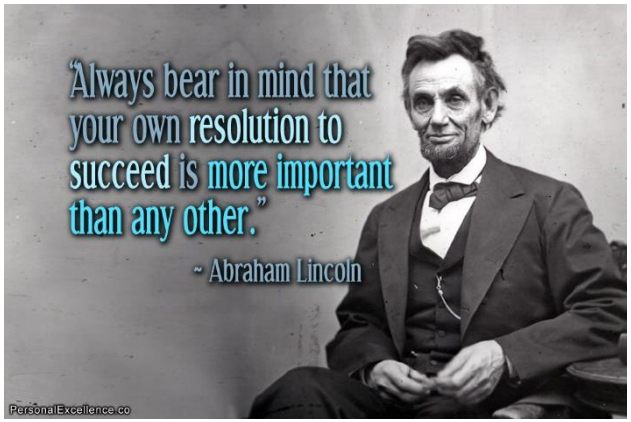


- 6 weeks: Self directed walking program using Pedometer/Fit bit
- Emphasized getting active within context of daily life

Get Active: Yoga

- Six weeks
- Certified Yoga Teacher
  - Background in healing yoga
- Class targeted to beginners
- Healthy snacks each week after yoga

Weekly Text Messages

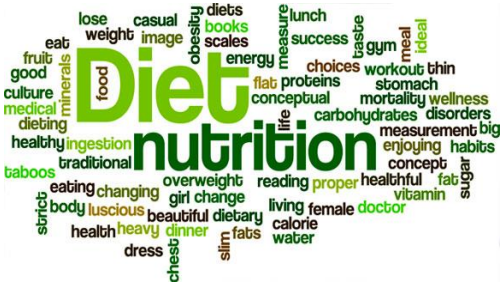


- Dedicated cell phone
- Matthew 17:20 "If you have faith as a grain of mustard seed, nothing shall be impossible for you" We learned about the goodness of grains this past week…enjoy those grains!
- Nelson Mandela: It always seems impossible until its done

Transportation Support

- Bus passes provided to support attendance

Outcome Measures



- **Attendance**
- **Baseline and Post Intervention Measures:**
- **Nutrition Knowledge:** 7 item tool AHA Simple Seven: Eating Better
- **Perceived Stress (Cohen, 1980)**
- **Steps Walked**
- **Ht, Wt, BMI, systolic and diastolic BP**
- **Program evaluation**

Sample

- **Cohort 1: 14 enrolled**
  - 12 (86%) completed nutrition component; 2 dropped for health reasons
  - 9 completed yoga
- **Cohort 2: 12 enrolled**
  - 11 (92%) completed nutrition; 1 dropped for health reasons
  - 2 completed yoga; 2 had surgeries; 2 got insurance; 2 got jobs; 3 not cleared
- **Cohort 3: 16 enrolled**
  - 14 (87.5%) completed nutrition; 2 never showed
  - 7 continued to yoga; all completed

Participants (N=42)

- 81% Female (n = 34)
- Primarily African American (76%; n = 32)
- Age 49.9 $\pm$ 13.5 years (range 22-64 yrs)
- Controlled HTN: BP 138/74 mmHG
- Obese BMI: 31.6 $\pm$ 6.7 kg/m^2

Aggregate Outcomes

- **Attendance:**
  - **Nutrition: 75-100%; Yoga: 50-100%.**
  - **As expected, attrition occurred with 69% completing the program and was close to the expected 70% common in health promotion programs**

Clinical Measures

Outcome	Pre program	Post Program	*p* value
Nutrition Knowledge	59.4 ± 14.8	83.4 ± 14.0	**<0.001**
Perceived Stress	20.7 ± 4.8	20.0 ± 4.5	0.09
Steps walked: Week 1 vs. Week 6	4448.6 ± 2716	7564.6 ± 4151	**0.003**
BMI	31.6 ± 6.7	29.7 ± 3.9	0.062
Weight	190.4 ± 46.5	185.3 ± 46.4	**0.049**
Systolic BP	137.8 ± 23.3	126.2 ± 20.9	0.07
Diastolic BP	74.0 ± 10.6	73.3 ± `20.9	0.64

Paired t test. $p<0.05$ indicated significance

BMI, Body Mass Index; BP, Blood Pressure.

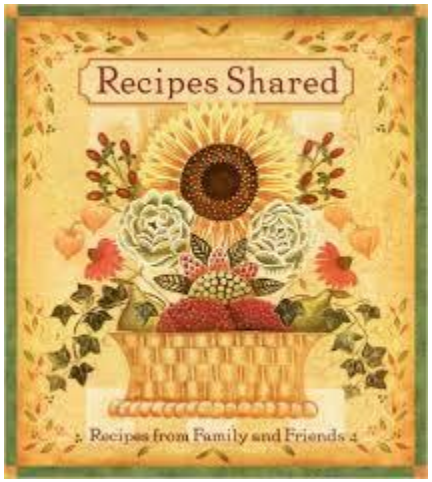
Program Evaluation

Health Behavior	Not Likely To Continue	Likely to Continue	Very Likely to Continue
Continue to track steps		30.8%	69.2%
Participate in another yoga class		38.5	61.5%
Stock their kitchen for success		23.1%	76.9%
Eat more fruits and vegetables		7.7%	92.3%
Eat more whole grains		7.7%	92.3%
Decrease intake of high fat foods		15.4%	84.6%
Decrease intake of high salt foods	7.7%	15.4%	76.9%

Program Evaluation

- Felt cared for; empowered to take charge of their health
- Saved the text messages on their phones
- Loved the Yoga: Felt better-'back did not hurt as much'
- Enjoyed group food preparation; reading labels was very helpful
- Benefits for their families
- Still responding to messages post intervention

Other Observations



- Shared recipes
- Advertised to others
- Traded contact information; Developed friendships
- Appreciated various professionals in the program
- Continued to respond to the texts

Capacity for Accountable Care

- Implemented ID cards: legitimacy as a known patient
  - Supports continuity of care; contributes to a sense of belonging
- Enabled patients to get resources from the clothing closet and food pantries in the local community
- Revision to clinic's patient satisfaction survey

Sustainability

- Secured partnership agreements with Gleaners Food Bank, a volunteer dietitian and a yoga instructor for ongoing health promotion at the clinic
- Transfer this work to the primary care environment: Creative Redesign
- Requires new models for practice that are nurse amenable

Challenges

- Attendance: Flux related to changing environment
- Health disabilities
- Fit Bit data: Phone and Computer Issues

Conclusions

- Group intervention with social media messaging is a promising strategy in facilitating engagement in health behaviors
- Benefits of interprofessional team approach
- Sense of belonging and respect

Acknowledgements

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Thank You

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