

Telephonic Health Coaching by an Advanced Practice Nurse in a Factory



Workplace: A Clinical Case Study

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Purpose

- To implement a 1:1 telephonic health coaching intervention
- To promote improvement in smoking cessation, blood pressure and body mass index (BMI)

Problem

- It has been found that treating those 30 to 69 years to reach a goal of less than 140/90mmHg reduces cerebrovascular events, heart failure, and overall mortality (American Medical Association, 2013).
- Hypertension is one of the most important contributors to preventable disease and death (American Medical Association, 2013).
- More than one-third (78.6 million) people are obese in this country (CDC, 2015). The largest age group impacted by obesity is the 40 to 59 year olds (CDC, 2015).
- Almost one third of deaths related to coronary heart disease can be attributed to smoking cigarettes, and exposure to secondhand smoke (American Heart Association, 2015).
- After one year of not smoking the risk of a heart attack drops drastically, after 10 years the risk of lung cancer drops by half, risk for cancers of the mouth, throat, esophagus, and bladder drop by half within 5 years, and within 2 to 5 years the risk of stroke could fall almost to the same risk as a nonsmoker (CDC, 2015).

Objectives

- Identify the impact of a telephone health coaching intervention on health risk factors as reported by a factory worker
- Identify how behavioral change techniques based on the Transtheoretical Model of Change are useful in motivating behavioral change
- Identify ways this approach may be useful to implement on a factory-wide scale

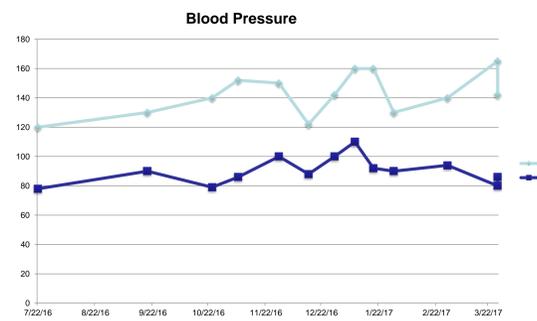
Behavioral Change Model

- Transtheoretical Model of Change views change in behavior as a gradual process that moves through certain stages (Zimmerman, et al., 2000).
- Although a person may move in and out of these stages of change the general order progresses as: precontemplation, contemplation, preparation, action, maintenance, and relapse (Zimmerman, et al., 2000).
- Precontemplation: unwilling to change or unaware that a change is needed, Contemplation: considering making a change, Preparation: experimenting with small change, Action: taking definitive action to change, Maintenance: maintain new behavior over time, and Relapse: reverting to the old behavior, either temporarily or more permanently (Zimmerman, et al., 2000).

Methods

- **Population**
 - Over 18 years of age
 - African American Male
 - Works in the factory setting
 - Has high blood pressure, smokes cigarettes, and has an obese BMI (>=30 kg/m²)
- **Research Design**
 - Qualitative
 - Clinical Case Study
- **Process**
 - Initiated phone calls at baseline and then every 2 weeks
 - Calls lasted approximately 20-30 minutes
 - Lasted a period of six months
 - Blood pressure, smoking status, and weight recorded each month
 - Subject also received standard of care from primary care provider
 - Incorporated evidence-based guidelines and principles of the Transtheoretical Model of Change Framework
 - Techniques utilized:
 - Coaching/encouragement
 - Motivational/goal-setting
 - Educational/resources

Patient Outcomes



	SMOKING STATUS	
	YES	NO
7/22/16	Yes	
10/12/16	Yes	
10/27/16	Yes	
11/7/16		No
11/23/16		No
12/8/16	Yes	
12/15/16	Yes	
12/22/16		No
1/5/17		No
1/19/17		No
2/2/17	Yes	
2/27/17		No
3/3/17		No
3/16/17		No
3/27/17		No

Implications for Practice

- Based on the subject's feedback, a face to face meeting may be a preferred method for delivering a health coaching intervention, which may result in increased participation.
- Either telephonic or face to face health coaching interventions, by a health care team member in a factory clinic, are realistic and efficient methods to potentially reach a large number of people in an occupational health setting

Results

- **Weight**
 - The subject was able to increase physical activity implemented during the workday by using daily mandatory breaks and lunchtime to walk in safe areas around the plant.
 - After 13 weeks, and clearance from a back operation, the subject had progressed to going to a gym three times a week for 35-40 minutes.
 - At 15 weeks, he was going every other day for 40-45 minutes of treadmill and stationary bike activities.
 - Week 22 he has continued to walk at work on lunch and breaks, gym approximately two times a week.
 - Weight ranged from 295 to 317 pounds
 - Weight had frequent variations, possibly related to activity level, as the subject had to have a surgical procedure mid-way through the project.
- **Smoking**
 - Smoking cessation was reported to be more difficult, with weeks of cessation as well as relapse, related to stress per self-report.
 - As of week 24, subject is not smoking
- **Blood Pressure:**
 - Blood pressure readings varied greatly based on compliance of taking medications as prescribed
 - Week 9 blood pressure was controlled based on guidelines; week 14, subject reports compliance with taking blood pressure medication. Week 16, blood pressure demonstrated improvement, week 20 not as well controlled, and week 24 some improvement

Conclusions

- ✓ This intervention provided accountability, support, and resources to promote healthy activity levels and body weight, smoking cessation, and blood pressure control.
- ✓ The subject stated he valued interventions, and found it helpful, inspiring, and motivating.
- ✓ Bi-weekly telephone calls allowed for consistent follow up and self-driven goal setting.
- ✓ Moving through process as an onsite group rather than an individual may provide more adequate support for goal-setting and achievement, especially during times of stress and life events or changes.