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 then 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

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.

Patient Outcomes

➢ 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 25-40 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 395 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

Results

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.