Significance of the Problem

- Cardiovascular disease (CVD) is the leading cause of morbidity and mortality in the U.S., with annual costs exceeding $312.6 billion.
- Half of all American adults have at least 1 of 3 major risk factors for CVD, which are largely preventable through lifestyle and dietary modifications.
- Knowledge of CVD mortality is linked with individual action to reduce individual CVD risk factors, however underserved populations have the least CVD knowledge.
- It is a Healthy People 2020 goal to increase the number of adults who are aware of the signs and symptoms of heart attack and stroke.
- AHA 2013 health guidelines calls for improving knowledge of CVD particularly among low socioeconomic status populations.

PICOT

- In adult patients with one or more risk factors for CVD (P), does the addition of video plus written CVD educational material (I) as compared to standard of practice of abbreviated verbal education (C), provide a mean score increase in patients’ knowledge of CVD (O) seen within a 10-week time frame (T)?

Review of Literature

Terms

- Knowledge, pamphlet*, brochure*, handout*, written material*, video*, movie*, visual*

Search Engines / Search Hits / Selected

- JBI ConNect: 13hits, 0 relevant sources; CINAHL: 50 hits, 4 relevant sources; COCHRANE: 18 hits, 1 relevant source; MEDLINE: 123 hits, 4 relevant sources; ProQuest: 20 hits, 1 relevant source; PsychINFO: 34 hits, 0 relevant sources; National Guideline Clearinghouse: 0 hits, 0 relevant sources

Inclusion Criteria

- Peer-reviewed, research, English language, 2003-2013, focus on adults in outpatient healthcare settings, video and written education

Exclusion Criteria

- Focus on children, hospital settings, non-English speaking populations, intensive education sessions, knowledge not used as an outcome

Synthesis of Evidence

- Relevant sources = 10
- Level I: 1; Level II: 4; Level III: 3; Level VI: 1; Level VII: 1 (Melnyk & Fineout-Overholt, 2005)
- Study Designs: 1 systematic review; 4 RCTs; 3 control trials without randomization; 1 descriptive study; 1 practice guideline recommendation

Decision to Change Practice

- The critically analyzed evidence supported the use of video plus written education material on CVD to increase knowledge scores of adult patients in the outpatient healthcare setting.

Implementation

- Over an 8-week period, adult patients with one or more self-reported CVD risk factors were asked to complete a demographics survey and pre-test knowledge questionnaire. Willing patients were then shown a 3-minute NHLBI video and provided a CDC written handout on CVD risk factors before their regularly scheduled healthcare appointments. Post-test knowledge assessments were collected at the conclusion of their appointment.

Setting

- A rural, midwest, outpatient federally qualified health center

Sample

- N = 100 total patients who initially participated in project
- n = 57 patients who completed participation in the project
- Age: Ranged from 18 to over 65, majority (n = 34) age 41 and older
- Gender: n = 42 Females, n = 58 Males
- Insurance type: n = 17 No insurance, n = 15 Medicare or Medicaid, n = 22 Private insurance, n = 3 Other or missing response

Data Collection

- IRB approval was obtained prior to implementation of this EBP project.
- Kotter’s eight stages of change and the Stetler model were used as frameworks to guide the EBP project development and implementation.
- A 10-question CVD knowledge questionnaire was devised using a previously established 30-item test (Bergman et al., 2011).
- Patient satisfaction was measured using a project-specific Likert scale tool.
- Demographics collected included age, race, education level, insurance type, reason for healthcare visit, and CVD risk factors.

Evaluation

- Higher mean pre-test scores were found for females (6.166) than males (4.966), but the differences in change in knowledge between these groups was not statistically significant (t(55) = .579, p = .565).
- Paired samples t-test revealed a statistically significant change in mean knowledge scores (M pre = 5.850, M post = 7.554; t(56) = 5.887, p < .001).
- Chi-square test for independence revealed no relationship between change in knowledge scores and patient demographics.
- The majority of patients reported they would discuss the CVD education provided with their healthcare provider (50.8%, n = 29).
- 68.4% (n = 39) of patients reported they would make lifestyle changes as a result of this education.

Conclusions / Recommendations

- This EBP project demonstrated the efficacy of using a combination education program consisting of video plus written materials to improve CVD knowledge within a high-risk patient population.
- The success of the time-effective and efficient project supports continued use of this combination education program for CVD education and suggests generalizability to other preventable health conditions.
- Future research examining immediate and long-term implications on knowledge and behavior patterns as a result of such education programs is warranted.

Acknowledgements

- Faculty Advisor: Dr. Julie A. Kosh, DNP, RN, FNP-BC
- EBP Project Site Facilitator: Elizabeth Marcotte, MSN, FNP-BC