Influence of e-Health Technology Text Messages Linked to Health Portal on College Students’ Influenza Vaccine Rate

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Clinical Problem
- College Students’ annual influenza vaccine rates are not meeting the target recommendations from CDC Healthy People 2020 (70%) or American College Association Healthy Campus 2020 (50%)
- 40% estimated national influenza vaccination rate for college students
- 15% sub-optimal influenza vaccination rate on Haverford’s campus
- Barriers, such as: fear of shots, think harmful to immunity, doubt effective, cause side effects and illness, family advice against vaccine, lack of perceived risk of influenza & cost prohibitive

Purpose
- Increase acceptance of influenza vaccine among students to align with ACHA Healthy Campus 2020 goal in support of scientifically proven safe and effective vaccines to protect students & campus communities from vaccine preventable diseases
- Educate students on the benefits of influenza vaccine by prompting interest through weekly influenza tip e-Health text message that links to their secure health portal

Objectives:
- Develop and design e-health technology educational HaverFlu Portal
- Create influenza prompt text messages with educational link to HaverFlu Health Portal
- Implement influenza education program with use of e-health technology at the student health services
- Evaluate the effect of e-Health technology for students on a college campus

Literature Review
- Agarwal, V. (2014) A/H1N1 vaccine intentions in college students: application of the theory of planned behavior
- Northwestern University, School of Communication, Center on Media and Human Development. (2015) Teens, health, and technology: A national survey
- Ramey, et al. (2011) College students’ perceptions of H1N1 flu risk and attitudes toward vaccination
- Stockwell, et al. (2012) Effect of a text messaging intervention on influenza vaccination in an urban low-income pediatrics & adolescent population

Theory
- Integrated Theory of Health Behavior Change
  - Based on the premise that behavior change is dynamic with multiple factors related to initiation adherence to change, such as an annual influenza vaccine

Measures
- Increase in acceptance rate of influenza vaccine among students
- Survey to understand perceptions surrounding influenza vaccines
- Demographic data including: gender, race, class year & first timers

Procedure
- Quality Improvement Project
- Email invitation to college students to participate in the e-Health technology influenza project
- Sent one brief weekly text message for eight weeks with link to health portal that provided influenza facts and education
- At the completion of the eight week cycle: assessed and calculated number of influenza vaccines given and results of a brief questionnaire
- Compared previous school year influenza vaccine rate to current year and analyzed the data
- Project ran from August 31 to October 31, 2015

Findings
- 129 participants in project
- 99 survey questionnaires completed
- 84% vaccinated on campus
- Top influences to vaccinate include:
  - to stay healthy (51%)
  - family recommendation (36%)
  - health provider recommendation (34%)
  - cost covered by insurance (24%)
  - information on health portal (14%)

Discussion
- e-Health technology is an effective method to increase influenza vaccination rate among college students
- Health providers should recommend vaccines using e-Health technology
- Use text messages linked to health portal for other health initiatives

Significance to Nursing Practice
- Public health officials and college health providers are looking for proven evidence based practices for healthy behavioral change of student influenza vaccine acceptance
- e-Health technology with use of text messages linked to student health portal are a proven method to inform students on healthcare provider’s vaccine recommendation, the benefits & safety of vaccine, peers’ shared story on influenza experience, cost, campus availability of vaccine & an annual reminder
- Easy way to provide up to date scientific information on effectiveness of vaccine & risks of circulating influenza

Conclusion
- Using e-Health technology with text messages linked to health portal increased students’ adherence rate of influenza vaccine on campus
- Effective method to communicate with students on health promotion of CDC & ACHAs’ public health vaccination recommendations and availability of influenza vaccine at Health Center
- Evidence based method to inform students on benefits and effectiveness of safe influenza vaccine

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