



Web-based Education for Infection Control: A Innovative Quality Improvement Project for Clinic Volunteers

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Problem and Purpose

The problem was the lack of an easily accessible, consistent, educational program for orienting new clinical volunteers on basic hand hygiene and infection control principles which are recognized as being fundamental for patient safety.

The purpose of this project was to identify, implement, and evaluate a web-based educational program that focused on instruction for volunteers about basic hand hygiene and infection control principles.

Background

- The delivery of healthcare is shifting to community clinic settings (CDC, 2015b)
 - Similar to patients in the hospitals, clinic patients are vulnerable to healthcare associated infections (HAI) (CDC, 2015a, 2015b)
 - HAI outbreaks in community clinics have been linked to deficiencies in basic infection control and prevention measures by clinic staff (CDC, 2015b)
- ### Background of Community Clinic
- Serves an uninsured, low income population in a mid-Atlantic county
 - In 2012, the clinic served 1,600 clients
 - Very dependent on professional and community (lay) adult volunteers
 - Inconsistent education of hand hygiene and infection control principles

Methods

Two educational learning modules:

- “Hand Hygiene Program: Basic Principles” (Medline University 2017b)
- “Bloodborne Pathogens” (Medline University, 2017c)

Design

A pre-test/post-test design was used to assess for knowledge acquisition of basic hand hygiene and infection control principles. The assessment tool consisted of ten identical questions administered before and after the subjects (clinic volunteers) participated and completed the two web-based learning modules. Additionally, a five point Likert scale post intervention survey was used to assess for volunteer satisfaction with the two web-based learning modules

Sample and Setting

Professional and lay volunteers at a community based clinic were recruited for this study. Participants were recruited during clinic hours, meetings and via email from November 23, 2015 to January 31, 2016.



Results

28 volunteers recruited: however, only 16 completed the pre/post test along with the two learning modules

Gender: 73% female, 27% male

Age (years): $M = (52.0, SD = 18.21)$

Level of Education (years): $M = (15.77, SD = 4.58)$

English as a Second Language: No = 65%,
Yes = 35%

Volunteer Experience (years): $M = (2.56, SD 2.0)$

Pre-test/post-test (Mann-Whitney U tests)

(pre test) $U = 25.0, p = 0.438$

(post test) $U = 25.5, p = 0.473$

Paired Wilcoxon Signed Ranks test

$Z = -0.857, p = 0.063$

Volunteer Post Satisfaction Survey

1. How satisfied or dissatisfied were you with completing this learning activity on the computer: $M = (4.13, SD 0.96)$
2. How satisfied or dissatisfied were you with the content or the information presented in “ Hand Hygiene Program: Basic Principles”:
 $M = (4.38, SD 0.50)$
3. How satisfied or dissatisfied were you with the content of the information presented in “Bloodborne Pathogens”? $M = (4.19, SD 1.00)$
4. How satisfied or dissatisfied were you with the ability to finish the learning activity in a reasonable amount of time? $M = (3.87, SD 1.10)$
5. How satisfied or dissatisfied were you at being able to complete this learning course that was convenient for you? $M = (4.31, SD 1.00)$

Conclusion

The data demonstrated that the intervention of the two learning modules had no significant impact on the participant’s knowledge acquisition.

Additional study with a larger sample size of volunteers is needed to examine the use of the two web-based learning modules for knowledge acquisition.

Provided a consistent and sustainable method of infection control education.

The post satisfaction survey, the majority of the participants reported being either satisfied or very satisfied with the content, time and convenience of the web-based learning activity.

References

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