



**The Effect of Education on Portal Personal Health Record Use**

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## The Effect of Education on PHR Use

### Objectives

- Research Problem
- Methods
- Results
- Implications
- Next step

## The Effect of Education on PHR Use

### Research Problem

- Access to Health Information
- Improved Provider-Patient Communication
- Shared Decision-making
- Self-management Tool for the Chronically Ill
- Meaningful Use Requirement
- < 10 % Use PHR a (Markle Foundation, 2011)

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### Purpose of the Study

- Aim I: Assess Computer-use Attitude
- Aim II: Examine the Rate of PHR Use
- Aim III: Evaluate Effectiveness of Educational Implementation
- Aim IV: Identify Participants' Thoughts about PHR

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### Theoretical Framework



Figure 1 – Personal Health Record Adoption Model (PHRAM). Adapted from “Modeling Factors that Influence Personal Health Records Adoption” by M. D. Logue and J. A. Effken, 2012. *Computers, Informatics, Nursing*, (30)7, p. 359. Copyright 2012 by Wolters Kluwer Health. Reprinted with permission.

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### Methods

- Quasi-Experimental Design
- Pre-test/Post-test with pair matched control group
- Convenience sample
- Power Analysis:  
Cohen’s d 0.8; Power Level 0.8; Probability level 0.05
- Sample Size (min. requirement: 42)

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### Methods

#### Inclusion Criteria:

- Age 40 to 85
- Primary Care Patient
- Chronic Condition
- Speak English fluently

#### Exclusion Criteria:

- Cognitive/Mental Health Condition
- > 28 score on Center for Epidemiologic Studies Depression Scale (CES-D)

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### Methods

#### Protocol:

- Background and Computer Questionnaire (Pre-test)
- Educational Intervention
- Four-week phone survey follow-up
- Pair-matched treatment group
- EHR audit to determine the rate of PHR Use

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### Results – Study Aim I

#### a) Pre-Test Assessment:

- 60% - ↓anxiety, ↑confidence, efficacy, utility, interest
- 40% - mod. anxiety, confidence, efficacy, utility, interest
- No difference among gender and age groups

#### b) Pre/Post Test Comparison (Participant Group)

- Statistically significant ↑Computer Use Comfort Level
- $Z = -1.668, p < .005$  (one-tailed)

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### Results – Study Aim II

Table 1.

Number of messages	Participants (n)	Percentage (%)	Cumulative (%)
>5	2	04	04
2-5	7	14	18
1	15	30	48
0	26	52	100

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### Results – Study Aim III

Table 2.

Group	Total Number of Messages sent Frequency (f)	Mean (M); Standard Deviation (SD)	Total Number of Individuals who sent Messages (n)
Participants	54	1.08; 1.95	24
Non- Participant Control Group	12	0.16; 0.71	4

- Statistically significant ↑PHR Use (Intervention Group)
- $U = 735.5, p = .001$

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### Results – Study Aim IV

#### Thoughts About the PHR:

- Information Availability
- Training
- Usability
- Privacy and Security

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### Implications

- Hands-on PHR Training: ↑PHR Use, ↑Comfort Level
- PHR of no use if Health Information is Not Current
- No Age Related Differences
- Interesting: CES-D negative correlation

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### Limitations

- Small sample size
- Setting-single geographic region
- Homogenous sample – lack of diversity

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### Next Step

- Promote PHR Use
- Integrate Findings into Higher Ed. Curriculum
  - Student practice Experience
  - Assist Primary Care Practices to establish PHR Kiosks
- Continue Translational Research
  - Diverse Demographic

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**Conflict of Interest Statement**

Imke Casey, DNP, CRNA, RHIT

Has no real or apparent conflicts of interest to report.