The Effect of Education on Portal Personal Health Record Use

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IMKE CASEY, DNP, CRNA, RHIT

Allied Health Department Chair
Health Information Technology Instructor
Lake-Sumter State College
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Objectives

• Explore efforts to promote portal personal health record use among chronically ill adult primary care patients

• Describe factors that enhance portal personal health record adoption

• Discuss the effect of education on portal personal health record use

• Evaluate the need for portal personal health record education kiosks at clinical practice sites
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Objectives

• Research Problem
• Methods
• Results
• Implications
• Next step
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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 (Markle Foundation, 2011)
- ~28 % Use PHR (Peacock et al. 2016)
- > 75% by 2020 (Ford, Hesse, Huerta, 2016)
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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

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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.

<table>
<thead>
<tr>
<th>Number of messages</th>
<th>Participants (n)</th>
<th>Percentage (%)</th>
<th>Cumulative (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;5</td>
<td>2</td>
<td>04</td>
<td>04</td>
</tr>
<tr>
<td>2-5</td>
<td>7</td>
<td>14</td>
<td>18</td>
</tr>
<tr>
<td>1</td>
<td>15</td>
<td>30</td>
<td>48</td>
</tr>
<tr>
<td>0</td>
<td>26</td>
<td>52</td>
<td>100</td>
</tr>
</tbody>
</table>
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### Results – Study Aim III

Table 2.

<table>
<thead>
<tr>
<th>Group</th>
<th>Total Number of Messages sent</th>
<th>Mean (M); Standard Deviation (SD)</th>
<th>Total Number of Individuals who sent Messages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participants</td>
<td>54</td>
<td>1.08; 1.95</td>
<td>24</td>
</tr>
<tr>
<td>Non- Participant Control Group</td>
<td>12</td>
<td>0.16; 0.71</td>
<td>4</td>
</tr>
</tbody>
</table>

- 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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References

