EMERGING INEQUALITY IN ADOPTION AND USE OF THE PERSONAL HEALTH RECORD AT A LARGE URBAN SAFETY NET CARE SYSTEM

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Background

• Personal Health Records (PHRs) may increase the quality and efficiency of health care.
  • More patient portal users with diabetes achieved $A_1C < 7$ than non portal users with diabetes (Lau et al 2013).

• Federal financial incentives have led to increased adoption and use of PHRs.

• Little is known about PHR use in vulnerable and disadvantaged populations.

• Differences in the uptake and use of PHRs could increase or exacerbate health disparities.
Personal Health Record Example

You Might Want To...

- Schedule your Cholesterol test.
- Send a message to your doctor’s office.
- Schedule a follow-up visit.
- Request an appointment.
- View your health summary.

If visiting the Main Medical Campus for Endoscopy or Outpatient Surgical Procedures, please click here for parking instructions.

MyChart Features

- Schedule an appointment online
  - Select the reason for your visit
  - Complete the pre-visit questionnaire
Broadband Inequality

• Access to broadband internet is a potential social determinant of health.

• According to the 2013 American Community Survey, individuals with lower incomes are less likely to have access to broadband internet in their homes.

• 39% of Cleveland residents have no computer and no internet.
Objectives

1. To examine differences in uptake and use of PHRs according to sex, race/ethnicity, age, insurance status, and disability.

2. To examine whether uptake of PHRs differs by neighborhood broadband internet access.
Methods

• All patients seen for one or more office visits in a MHMC outpatient clinic from Jan 2012 to May 2015.
• Demographics abstracted from the EHR.
• Census tract of residence obtained by geocoding each address
• Broadband availability (>=3 Mbps) at the census tract level determined using data from FCC form 477.
• Uptake of PHR defined as first logon to MyChart (the Epic PHR).
Methods

• PHR logs queried to determine the percentage within each social and demographic category who used PHR functions including:
  – Appointment Requests
  – Viewing lab results
  – Requesting advice
  – Reading messages
  – Checking allergies

• Percentages were compared across demographic groups to determine the extent of differences in use.
Results

• 304,142 patients with at least one outpatient office visit during 2012 – 2015.
• Median age: 36.3; 56% women
• Race/Ethnicity: 48.3% white, 38.5% black, 6.4% Hispanic, and 6.8% other / unknown
• Insurance status: 47.4% Medicaid, 11.9% Medicare, 30.3% commercial, and 10.5% uninsured.
Results

Overall PHR Use

<table>
<thead>
<tr>
<th>Number of Patients</th>
<th>Do Not Use PHR</th>
<th>Use PHR</th>
</tr>
</thead>
<tbody>
<tr>
<td>75.3%</td>
<td></td>
<td>24.7%</td>
</tr>
</tbody>
</table>

Overall PHR Use
PHR Use by Age

- 18-64 years: 30.1%
- 65-79 years: 25%
- 80+ years: 16.5%
PHR Use by Gender

- Female: 29.1%
- Male: 19.1%
PHR Use by Ethnicity

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>% Using PHR</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>30.7</td>
</tr>
<tr>
<td>Black</td>
<td>19</td>
</tr>
<tr>
<td>Hispanic</td>
<td>18.7</td>
</tr>
<tr>
<td>Other</td>
<td>23.6</td>
</tr>
</tbody>
</table>
PHR Use by Insurance

- Commercial: 35.8%
- Medicare: 22.9%
- Medicaid: 19.9%
- Uninsured: 16.4%
Common PHR Uses

Usage the period Jan. 2012 to May 2015
PHR Use by Demographic Group

Among PHR Users:

- Males, racial and ethnic minorities, patients age 80+, and Medicaid and uninsured patients had lower levels of use across all categories.

- Disabled patients had higher levels of use across all categories than non-disabled patients.
PHR Use by Broadband Access
Summary

• Only one-quarter of patients have used the PHR.

• Enrollment and use are systematically lower for minorities, older adults and persons of low socioeconomic status.

• Enrollment and use are higher for disabled persons.

• Enrollment is lower for patients in neighborhoods with less broadband access.