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 (48% of African Americans, and 57.5% of those over age 65).
Objectives

1. To examine differences in uptake 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).
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>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do Not Use PHR</td>
<td>75.3%</td>
</tr>
<tr>
<td>Use PHR</td>
<td>24.7%</td>
</tr>
</tbody>
</table>

Do Not Use PHR vs. Use PHR
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

% Using PHR

- Commercial: 35.8%
- Medicare: 22.9%
- Medicaid: 19.9%
- Uninsured: 16.4%
PHR Use by Broadband Access

![Bar chart showing PHR use by broadband access.](chart.png)

Census Tract Broadband Coverage

- 0 - 20%: 15.2
- 20 - 40%: 18.6
- 40 - 60%: 25.5
- 60 - 80%: 33
- 80 - 100%: 31.8

% of total population

MetroHealth
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 is lower for patients in neighborhoods with less broadband access.