

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

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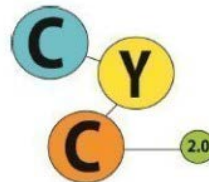
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# Background

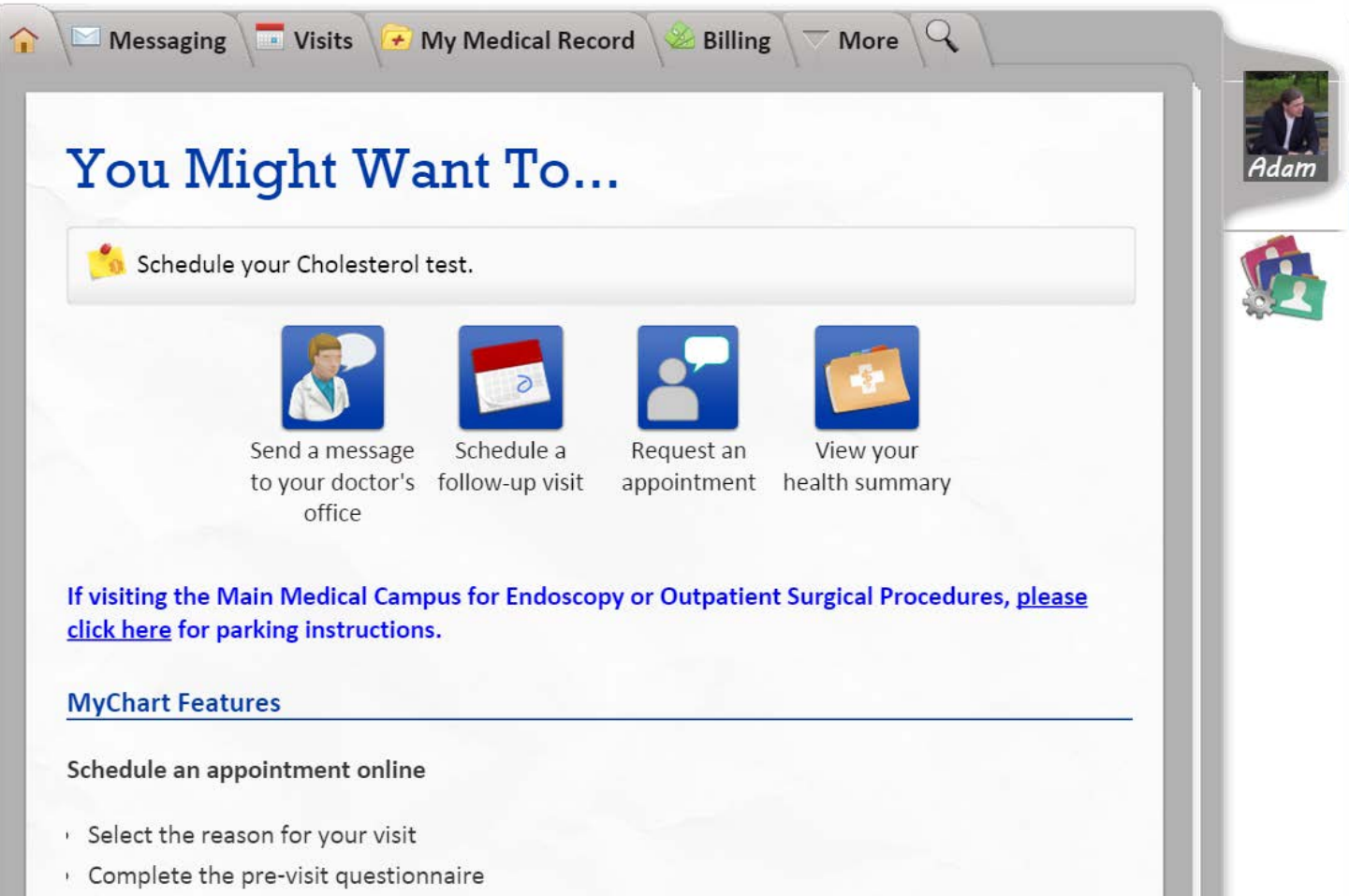
- **Personal Health Records (PHRs) may increase the quality and efficiency of health care.**
- More patient portal users with diabetes achieved  $A_1C < 7$  than non portal users with diabetes (Lau et al 2013).
- **Federal financial incentives have led to increased adoption and use of PHRs.**
- **Little 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



Welcome,  
Adam Perzynski

Log Out



The screenshot shows a web interface for a personal health record. At the top, there is a navigation bar with icons for Messaging, Visits, My Medical Record, Billing, and More. Below this is a main content area with the heading 'You Might Want To...'. A notification box says 'Schedule your Cholesterol test.'. Below this are four icons with corresponding text: 'Send a message to your doctor's office', 'Schedule a follow-up visit', 'Request an appointment', and 'View your health summary'. A blue link provides parking instructions for endoscopy or surgical procedures. A section titled 'MyChart Features' lists 'Schedule an appointment online' with two sub-points: 'Select the reason for your visit' and 'Complete the pre-visit questionnaire'. On the right side, there is a user profile for Adam Perzynski and a gear icon for settings.

**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 ( $\geq 3$  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.**



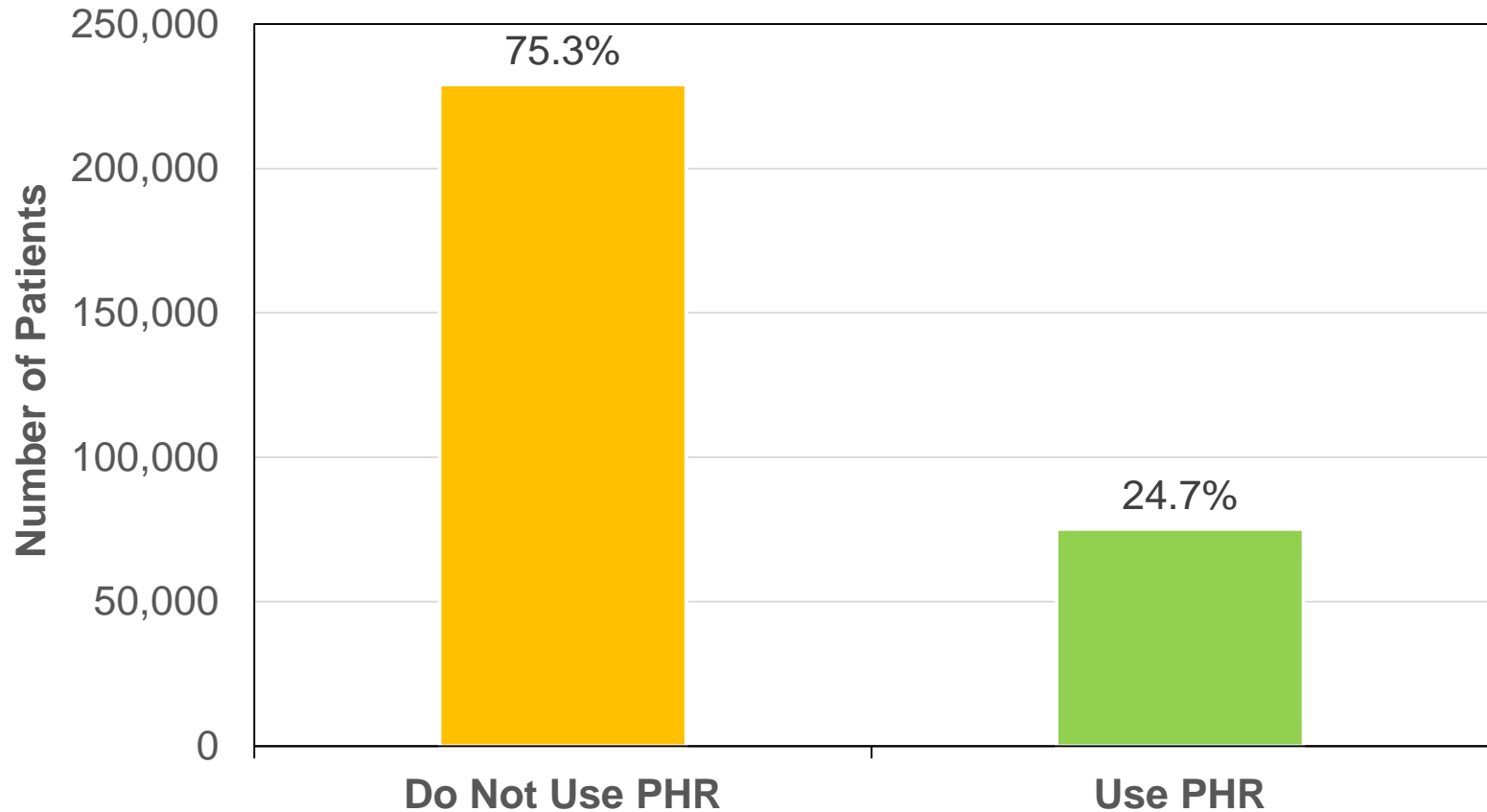
# Results

- **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.**

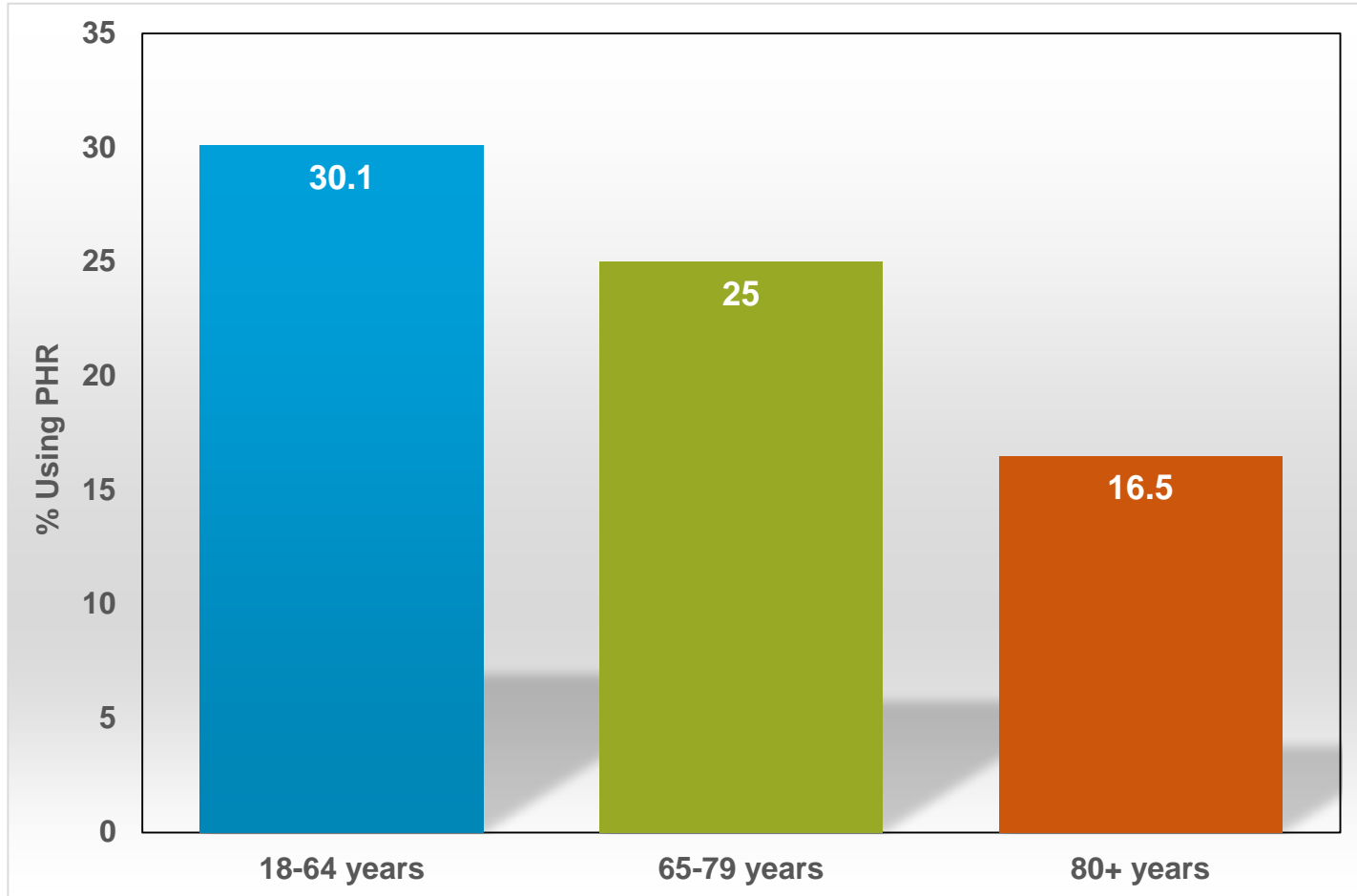


# Results

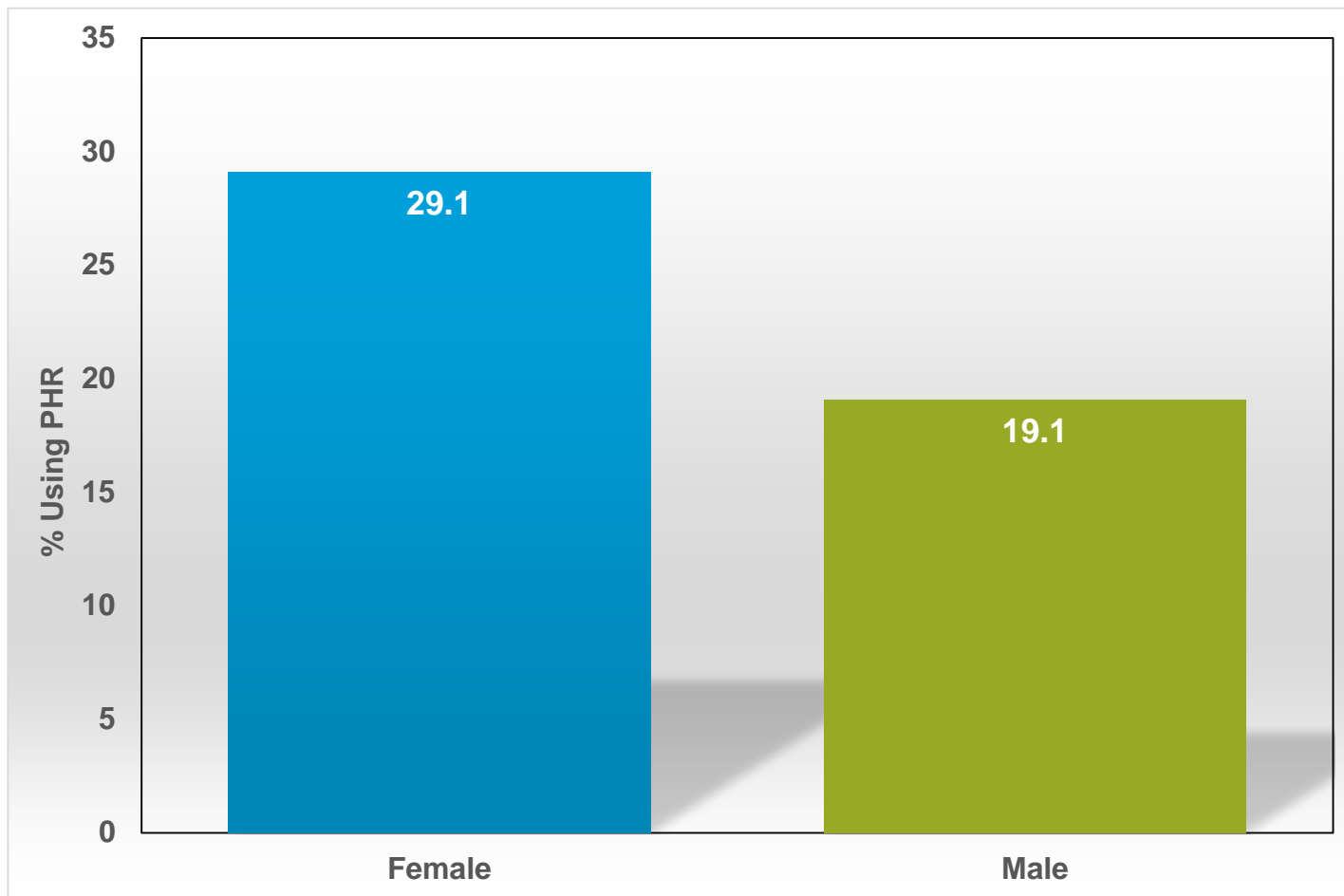
## Overall PHR Use



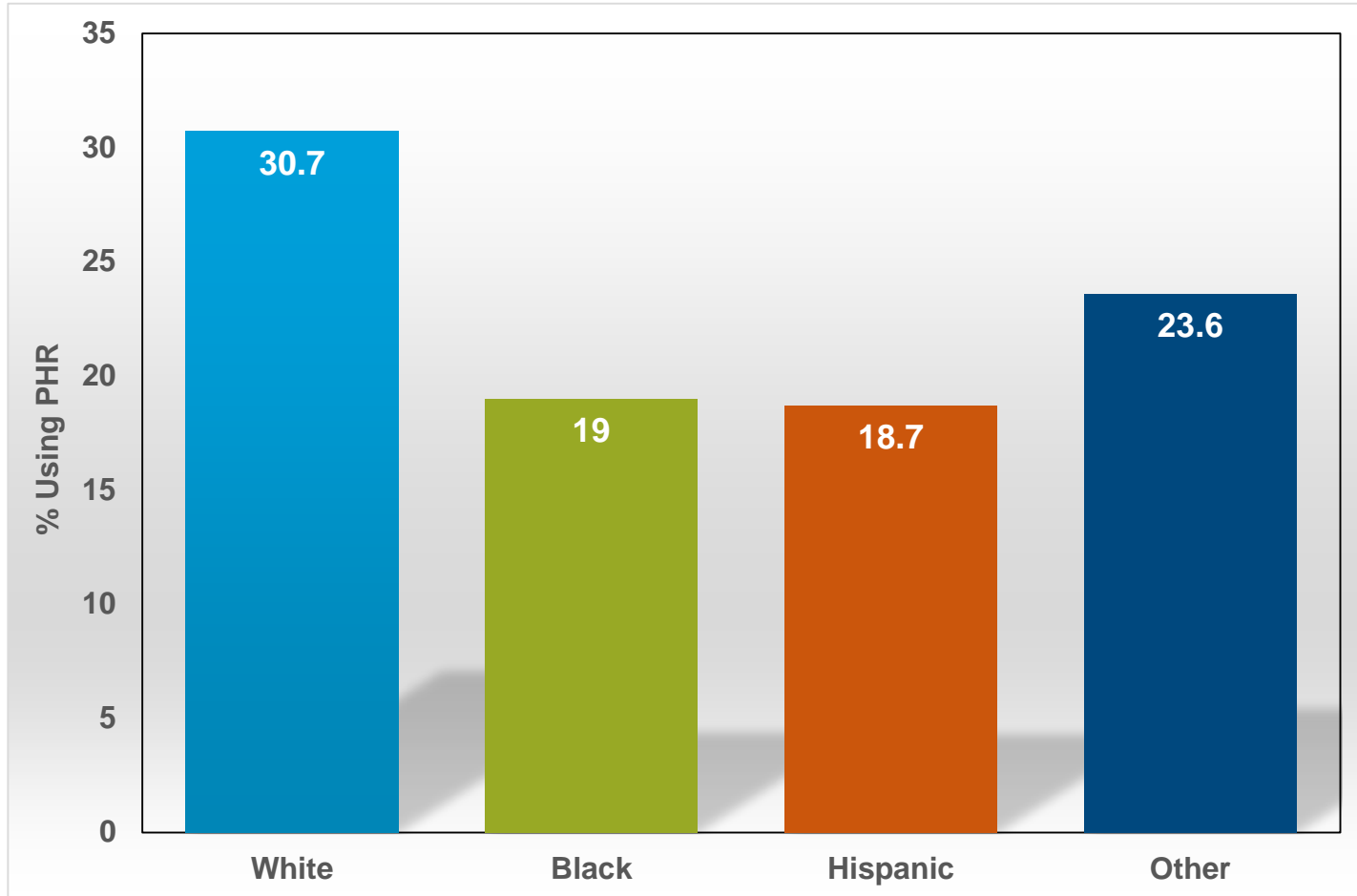
# PHR Use by Age



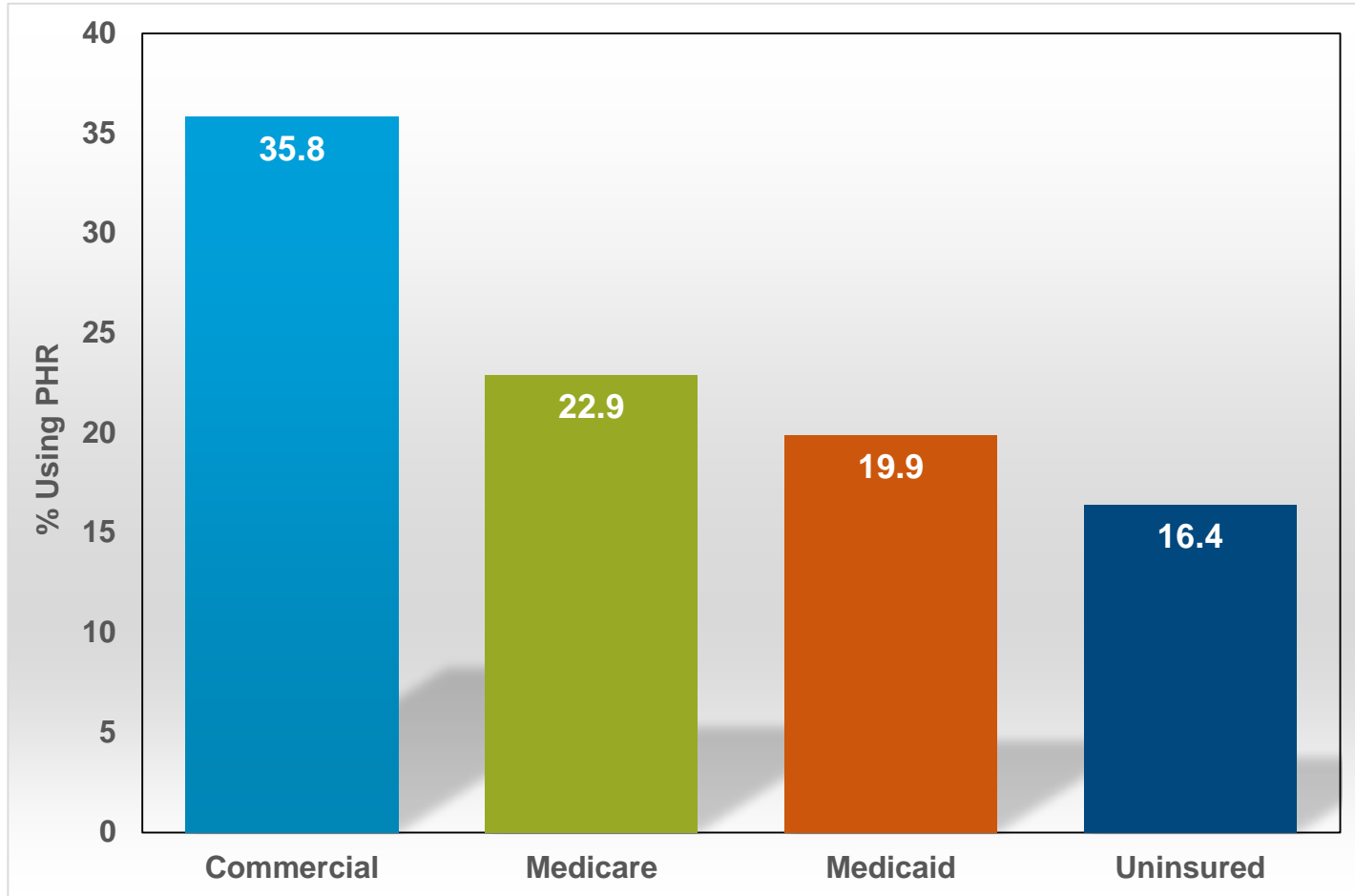
# PHR Use by Gender



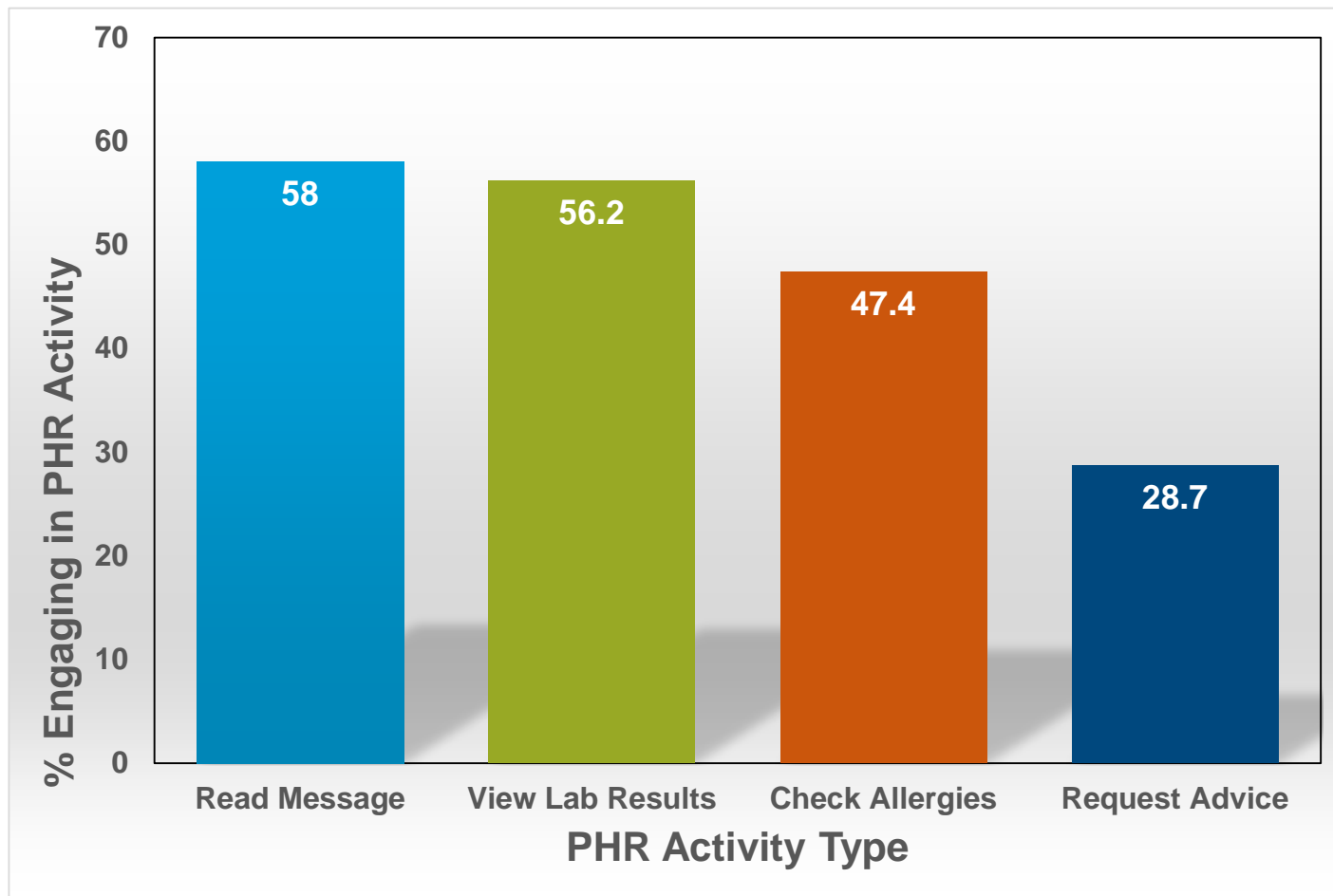
# PHR Use by Ethnicity



# PHR Use by Insurance



# Common PHR Uses



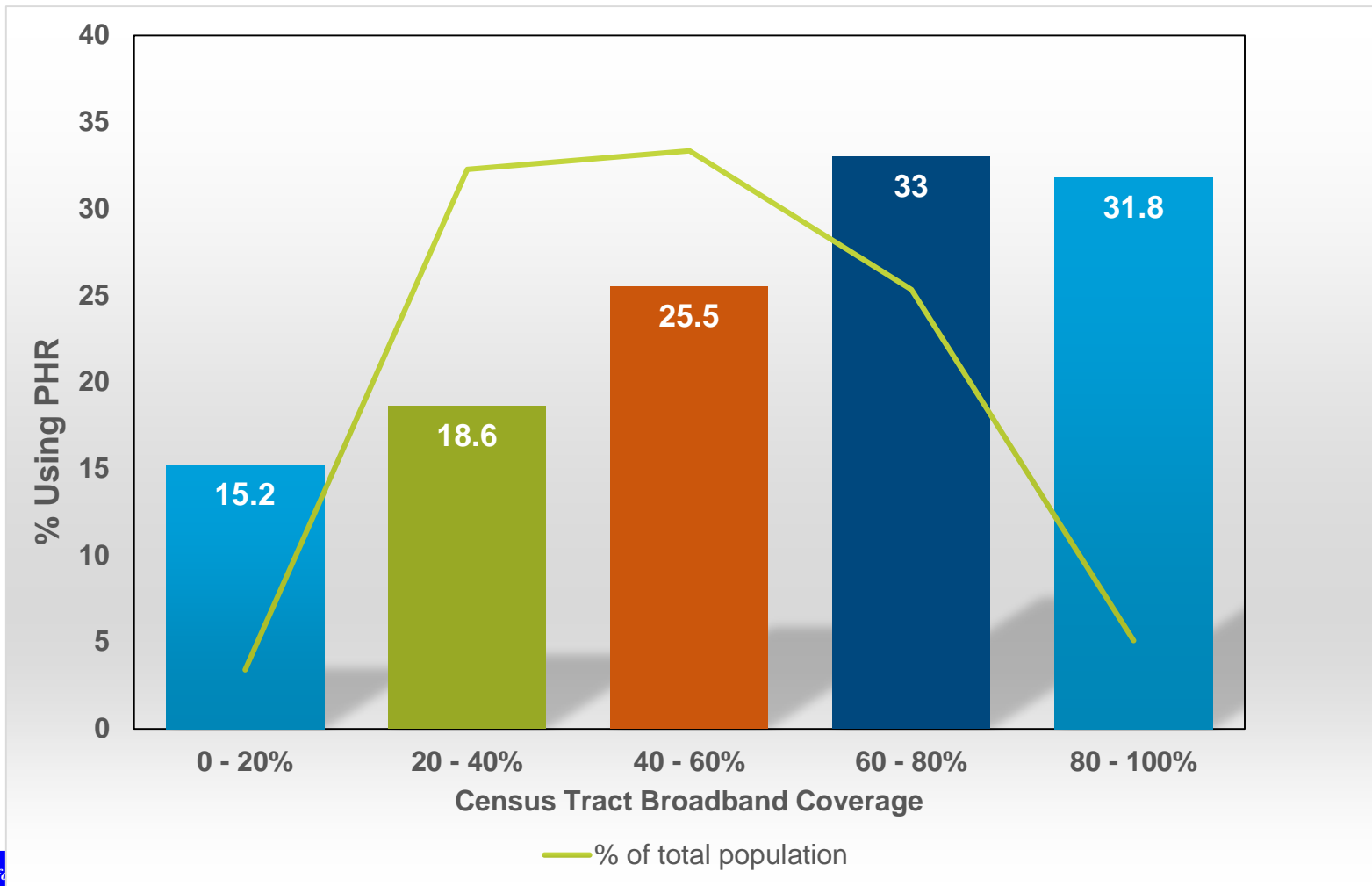


# PHR Use by Demographic Group

## 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.**



**MetroHealth**