



**HAHN SCHOOL OF NURSING AND HEALTH SCIENCE**  
*Betty and Bob Beyster Institute for  
Nursing Research, Advanced Practice, and Simulation*

# Examining Patient Engagement With Clinical Technology: Demographic Patterns of Pediatric Patient Portal Activation

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# Disclosure

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- I have no relevant financial relationships with commercial interests to disclose.

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# Learning Objectives

- Review attributes of the patient portal
- Examine whether adult barriers to portal use are similar in pediatric samples
- Understand why there are different activation offers and activation patterns among pediatric urology patients at two geographically diverse tertiary pediatric hospitals
- Discuss reasons for moderate rate of portal adoption
- Identify opportunities to transform a meaningful use requirement into a truly meaningful experience for the patient and healthcare team

# Background

Patient portal is a secure online website providing patients 24-hour access to the electronic health record (EHR)

Allow individuals to send secure messages to clinical staff, view their health records (e.g., diagnoses, laboratory results, and medications list), schedule appointments, request prescription refills, and manage bills

1. Facilitate patient engagement
2. Promote self-management
3. Improve patient and provider communication
4. Increase patient satisfaction from care received
5. Improve clinical outcomes



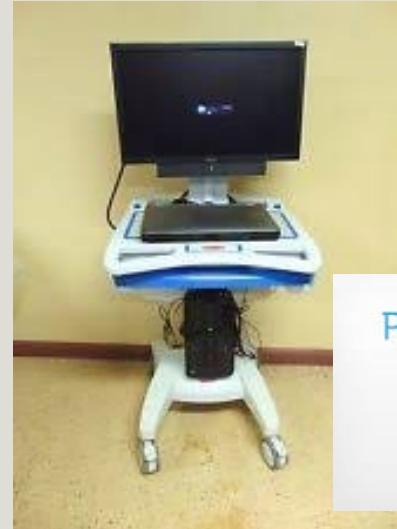
# Description of the Problem

- Race, ethnicity, and language are known barriers to adult portals use
- Limited data on pediatric patient portal adoption and information about barriers
- Study designed to explore enrollment patterns in two large pediatric academic health systems



# Methods

- Two tertiary academic pediatric urology departments
- Patients inclusion
  - At least one outpatient urology visit from 2011 through 2016
  - Parent/Caretaker - Aged 2-11
  - Patients  $\geq 12$





# Methods

- Offered: having been offered a code
- Active: having activated or deactivated account at time of data extraction
- Not active: refused or had not activated code
- Demographic variables extracted included patient gender, age group, preferred language, race, and ethnicity
- Binary logistic regression to assess demographic variables associated with offered and active
- SPSS Version 25

# Results

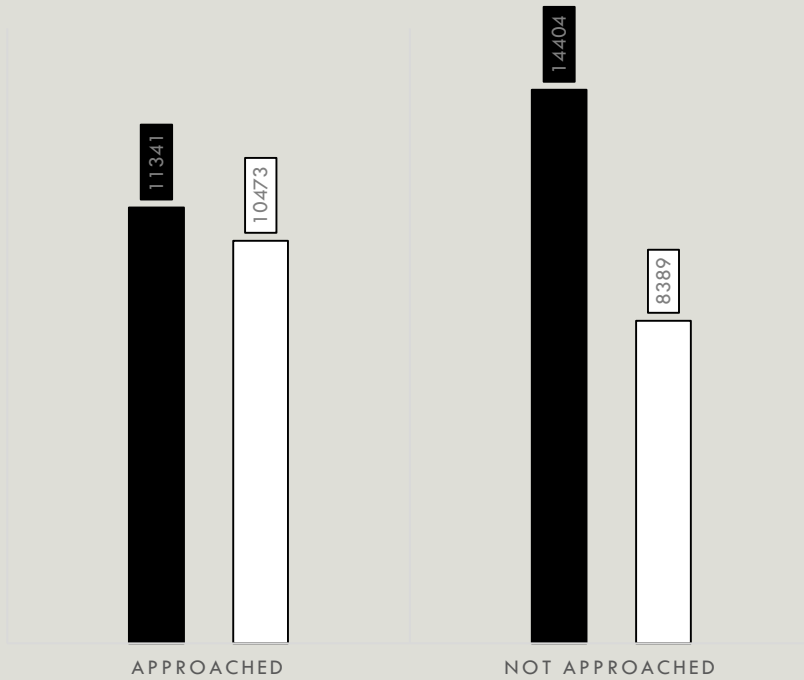
- 44607 individuals were seen during study period
- 21814 (48.9%) offered code activation
- 11338 (25.4% total eligible individuals) activated portal



# Offered

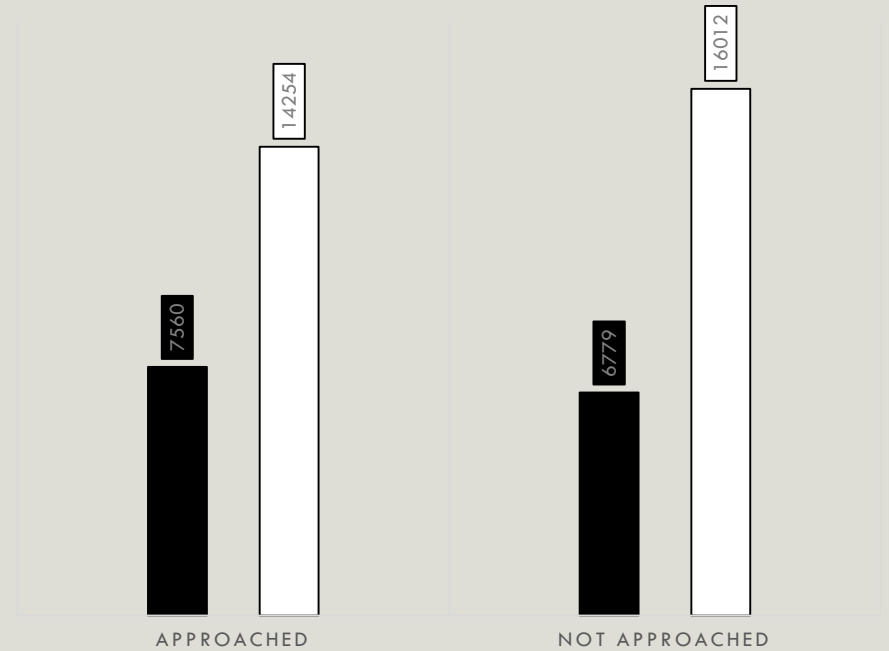
## SITE

■ Site A □ Site B



## GENDER

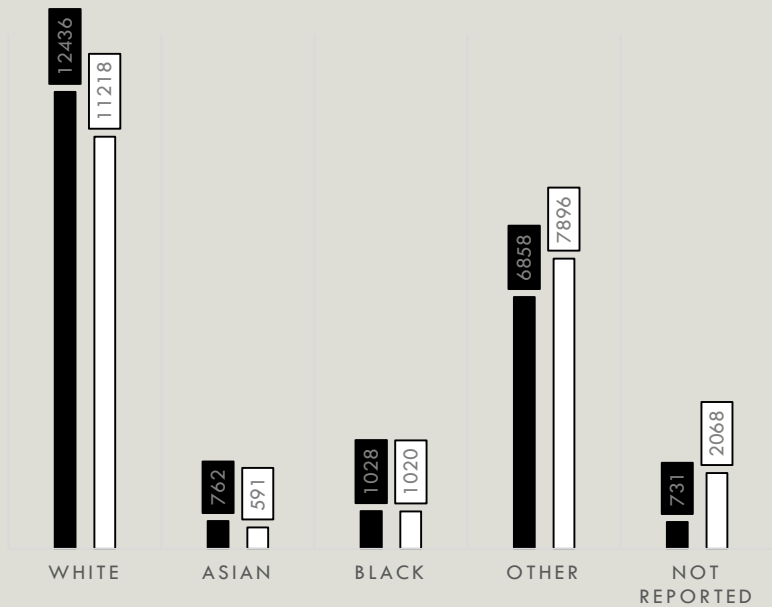
■ Female □ Male



# Offered II

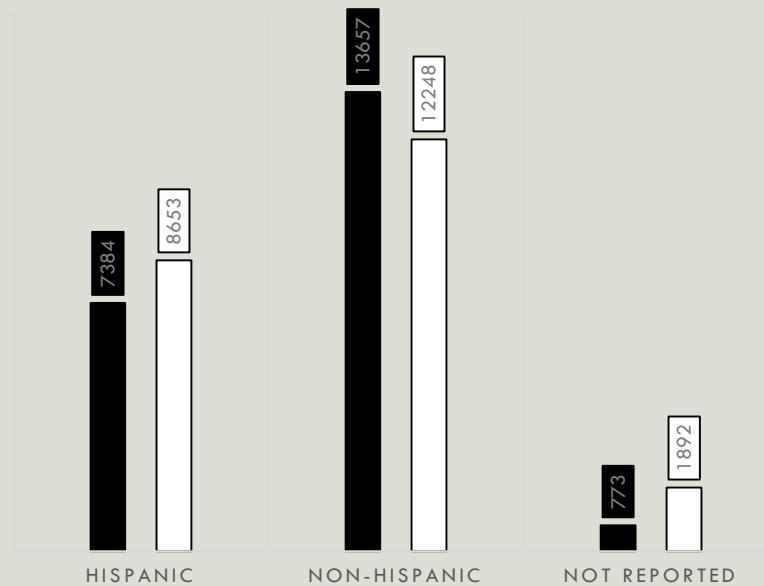
## RACE

■ Approached □ Not Approached



## ETHNICITY

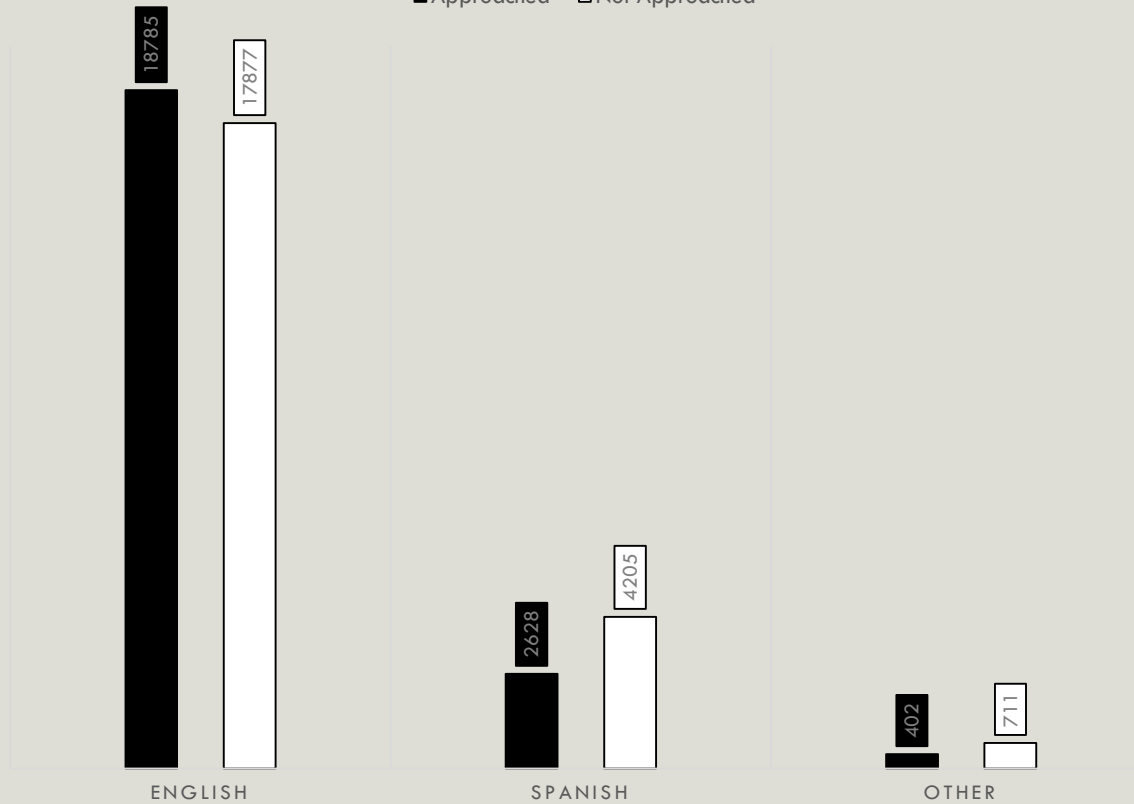
■ Approached □ Not Approached



# Offered III

## PREFERRED LANGUAGE

■ Approached □ Not Approached



# Results

- Being offered
  - Site ( $p < 0.001$ )
  - Being female ( $p < 0.001$ )
  - Being Asian or White ( $p < 0.05$ )
  - Being non-Hispanic ( $p < 0.001$ )
  - Reporting preferred language as English ( $p < 0.001$ )

# Results

- Activating patient portal access was associated with:
  - Site ( $p < 0.001$ )
  - Being Asian or White ( $p < 0.001$ )
  - Reporting preferred language as English ( $p < 0.001$ ).
  - Gender was not associated with activation.



# Discussion

- Pediatric patients of minority race/ethnicity and those reporting preferred language other than English less likely to be offered code
- Majority of those offered an access code did not activate their account
- Site was strongly associated with both offer and activation
- Many individuals chose not to report a race or ethnicity or reported being other or multi-racial, indicating current measurement tools do not meet patient definitions



# Limitations



- Limited age data
- Temporal analysis
  - Multi-center data sharing agreements
- Different portal recruitment approaches by site
- Assessment of patient portal activation in a non-primary care setting

# Implications

- Meaningful use metrics such as electronic access to patient records have led to increased expectations for patients and caregivers to utilize health technology
  - make appointments
  - track laboratory results
  - communicate with providers
- Impact of patient portal on patient care may be limited by lack of patient adoption
- Additional efforts need to address language limitations, health literacy, and technologic access

# Summary

- Moderate portal adoption rate suggests patient interest and value perception is not uniform among potential users
- Differences in activation rates raise concerns about potential barriers that may disproportionately affect racial and ethnic minorities
- Low activation and use rates present an opportunity to transform a meaningful use requirement into a truly meaningful experience for patient and healthcare team

**Thank you!**  
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