Reimagining User Authentication for Digital Health Services: A User-Centered Approach

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DigITS
_raise your hand if you have an experience using a patient portal or have helped someone use a patient portal?
Consumer Health is Getting Digital

95% of all hospitals use some form of electronic health record (EHR) system.

The dependencies on digital healthcare solutions will only continue to expand.

So how can we successfully make this transition?
Health Insurance Portability and Accountability Act (HIPAA)

To safeguard protected health information (PHI) from being used without the patient’s consent or knowledge.
21st Century Cures Act

To support the access, exchange, and use of electronic health information.

Users must have access to their health information "without special effort" and at "no cost."
EHR has the potential to ease access to health information.

So, where are we today?
Responses from user feedback survey
Help desk tickets
Field study and semi-structured interviews
Consumers point to **difficult authentication** as one of the biggest pain points in accessing EHR, citing complex and outdated privacy solution.
User Friction

The majority of healthcare organizations use a traditional textual password solution, which frustrates users and poses security risks.

User Frailty

Frailty affects the user’s cognitive abilities, motor skills, and lifestyle, thereby influencing their authentication preferences.

Illustration by Eduardo Crespo
Digital Readiness

If the authentication scheme requires a certain level of digital readiness, users who are not equipped will face barriers to access.

National Urban League. 2021. The Lewis Latimer Plan For Digital Equity and Inclusion
Disjointed Digital Identities

Due to a lack of interoperable digital identity and an unstandardized patient identity management system, users must manage multiple credentials to access their health information.

<table>
<thead>
<tr>
<th>Medical Record Number (MRN)</th>
<th>Social Security Number (SSN)</th>
<th>Username</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medical Record Number (MRN)</td>
<td>Username</td>
<td>Email</td>
</tr>
<tr>
<td>Enrollment ID</td>
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</tbody>
</table>
We want to be compliant and provide quality care

HIPAA

Electronic Health Record

Cures Act

I want seamless access to my health information
Towards a User-Centered Approach

Evangelize a Business case for a User-friendly Authentication

Barriers to use do not equate to greater privacy and security. Convince stakeholders to deprecate outdated standards and invest in privacy-enhancing technologies.
Towards a User-Centered Approach

Apply a Universal Precaution Approach

Assume that all patients may have difficulty comprehending health information and accessing health services.

Diversify the authentication options to accommodate varying needs.

User’s preference and task performance varies depending on the user (e.g. age, abilities) and the context of use (e.g. interaction device, screen size), suggesting that any specific solution will not please everyone.

Towards a User-Centered Approach

Policies Should Provide Guidance on the Usability, Privacy, and Security of EHR Systems

To effectively prevent "information blocking," provisions should be made for measuring the usability health of EHRs and ensuring adequate support for onboarding new users.
Towards a User-Centered Approach

- Evangelize a Business case for a User-friendly Authentication
- Apply a Universal Precaution Approach
- Policies Should Provide Guidance on the Usability, Privacy, and Security of EHR Systems
Thank you!

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