Bridging the CHASM

Executive Summary

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Background

Bridging the CHASM is a new initiative founded by Dr. Edwin Q. Ravano, affiliated with Street Medicine at the University of Pittsburgh. The organization seeks to improve healthcare coordination for the homeless population in Pittsburgh by streamlining communication among hospitals, shelters, street medicine outreach teams, and government agencies. Despite the wide range of medical providers offering care, a lack of collaboration and data-sharing results in fragmented treatment plans, duplicated efforts, and missed follow-up care. Bridging the CHASM's mission is to address these pain points through a unified, secure, and mobile-friendly data system, ensuring that care is consistent, follow-ups are conducted, and resources are effectively allocated.

Project Description

Project Opportunity

The primary opportunity was to replace the organization's fragmented, manual recordkeeping process with a centralized and secure data management system. Without an integrated solution, medical outreach workers struggled to share information efficiently, leading to duplicated care, missed follow-ups, and reduced healthcare effectiveness for vulnerable populations.

Project Vision

Our team envisioned and developed a secure, centralized web-mobile application using the Wix platform. The application was designed to allow outreach providers to document and retrieve patient encounter information from the field in real time. Key capabilities include role-based access, structured data entry, keyword and geolocation-enabled search, and a clean, mobile-friendly user interface.

Project Outcomes

Outreach volunteers and doctors can now quickly store and retrieve patient records in one place. Instead of hunting through scattered notes or group chats, teams share the same up-to-date information, so they coordinate care more smoothly and focus on helping patients rather than paperwork.

A simple, standardized intake form and centralized data-entry workflow have replaced fragmented, manual note-taking. Every new encounter is logged the same way, reducing mistakes, preventing duplicate records, and automatically flagging patients who need follow-up appointments.

A secure, mobile-friendly platform was developed on Wix to capture key patient details directly in the field. Doctors and outreach workers can then search or filter by name, date, or distance; view results instantly in a paginated list; and rely on role-based controls to ensure that sensitive information remains visible only to authorized users.

Project Deliverables

Deliverables include a fully functional web-mobile application deployed via Wix, training documentation for administrators and users, and onboarding resources to support ongoing use. A custom role-based system was implemented to control access, and comprehensive encounter submission and lookup features were delivered.

Recommendations

We recommend collecting feedback from both volunteers and doctors actively using the web app in the field. This input should guide the next phase of development, ensuring the platform evolves to meet user needs. Prioritizing the implementation of secure messaging between health entities, as originally proposed, will be essential. Additionally, features such as record editing and deletion, as well as custom result sorting, should be incorporated to enhance usability and functionality.

Student Consulting Team

Best Pantusen led the development of the geolocation features and the database. He is a junior studying Information Systems with an additional major in Statistics. He is interested in data science and database management.

Eichel Choi led stakeholder engagement and quality assurance. He is a senior studying Information Systems with an additional major in Human-Computer Interaction. He is pursuing a career in management consulting.

Jacky Gao led the development of the web application and documentation. He is a senior studying Information Systems with an additional major in Computer Science. He is pursuing a career in software engineering.