

PIIM CASE STUDY

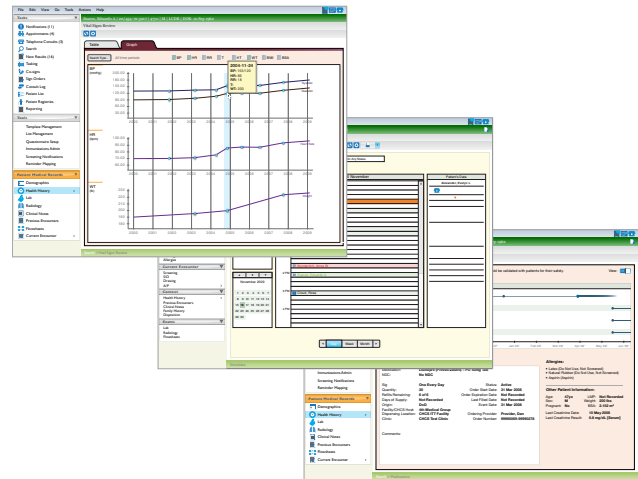
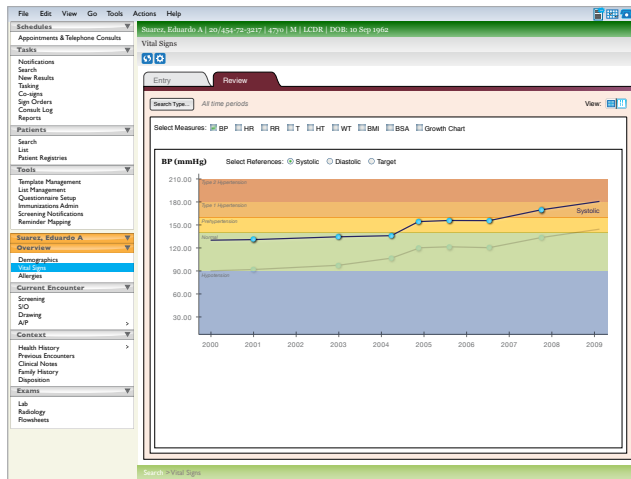
AHLTA ELECTRONIC HEALTH RECORD REDESIGN
ADVANCED CLINICAL INFORMATICS RESEARCH
AND IMPLEMENTATION

THE NEW SCHOOL

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The Military Health System maintains the largest Electronic Health Record (EMR) in the world and PIIM is helping prototype redesigns of its Graphic User Interface while simultaneously research novel clinical informatics and patient health visualization methods.

The Armed Forces Health Longitudinal Technology Application (AHLTA) supports over 9.2 million beneficiaries in thousands of treatment facilities across the globe. It is the world's largest EMR and is deployed into traditional facilities, in the battlefield, and on mobile devices to support real-time/instantaneous medical record keeping.

PIIM is developing a GUI redesign for the AHLTA system while retaining or enhancing all of its currently-deployed features and functionalities. In addition to delivering novel GUI concepts and enhanced user experiences, PIIM is also prototyping technologies to deploy AHLTA into a full, web-enabled environment extending its existing desktop and other services managed by the Military Health System and Department of Defense (DoD).

Our technology prototypes leverage advanced JavaScript and GUI programming languages with a mixture of open-source and proprietary technologies. We have developed several iterations of a PIIM Visualization Toolkit (PVT) that streamlines engineering of prototypes while retaining a deployment-ready technology stack. Our work leverages the Patient

Ancillary Web Services (PAWS) platform maintained by the DoD for network-enabled, patient data retrieval and we are complimenting these technologies with PIIM-developed write-back functionalities.

In addition to the multi-year GUI redesign and technology prototyping efforts, PIIM is completing several research efforts into innovative ways to visualize patient health information and patient health histories. One key research topic we are exploring is the ability to create "Intelligent Iconography" from existing health information to provide snapshot visualizations of patient health and histories. This unique work defines a method to compress complex and historical patient and public health data into single, comprehensive, and portable visualizations.

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The Parsons Institute for Information Mapping (PIIM) is a Research, Development, and Professional Services facility within The New School and located in New York City. PIIM's mission is to advance the field of Knowledge Visualization through academic and commercial pursuits.