INDIAN HEALTH SERVICE
HUMAN-CENTERED DESIGN

INTRODUCTION [SECTION 1 OF 11]

CTO Office of the CHIEF TECHNOLOGY OFFICER

&partners

HHS / IHS Health IT Modernization

AUGUST 31, 2019

THE CALL FOR HUMAN CENTERED DESIGN

Introduction

The HHS / IHS Health Information Technology Modernization team is an effort sponsored by the US Department of Health and Human Services (HHS) that looks into providing a recommendation to the Indian Health Service (IHS) how to modernize systems in health care facilities in American Indian and Alaska Native communities, with the goal to provide better healthcare for patients.

The goal of this report is to identify the core concepts and functional needs of a modern Health IT (HIT) system and develop use cases that can be tested in the field and used to evaluate possible solutions.

The Human-Centered Design Workstream (HCD) team conducted interviews and workshops in the field to get a deeper, more comprehensive understanding of the IHS facility staff and patients' needs for HIT from end to end. Based on their findings and team engagement, they outlined requirements for the next generation of Health IT at IHS.

Working collaboratively with other Health IT Modernization workstreams, this report was created to provide a clear and validated vision for HIT modernization. The HCD team hopes it will enable the department goal of setting up a bidding competition with a series of problems that describe the general and prioritized needs of I/T/U facilities by identifying specific user journeys that test key functional needs, thus creating a rubric by which to evaluate bidders.

Background: RPMS and IHS

The IHS's current Health IT system, RPMS (Resource and Patient Management System) was created with population and community health in mind, and contains vast historical information about its patients. RPMS is maintained by IHS and has been historically significantly subsidized by other resources including the Veteran Affairs (VA).

RPMS is chronically underfunded and it has proven unable to maintain a modern code base leading to issues in staffing, maintenance, security, interoperability, and extensibility. Centers for Medicare & Medicaid Services (CMS) Electronic Health Record (EHR) meaningful use and other HIT-related requirements are considered unfunded mandates which have to be funded from Services dollars. It has only in recent years that IHS has requested and received a small budget line identified for Information Technology. The VA announced its switch to a commercial out-of-the-shelf system in 2018, therefore discontinuing its ability to continue to support RPMS in future years.

Output

This report includes the following:

Service Blueprints, or Journey Maps

Exemplifying maps of what critical engagements could look like with a properly implemented modern system. They account for many different common situations grounded in the patient experience, providers' experience, and organizational goals for Health IT Modernization.

Personas/Archetypes

High-level descriptions based on the different roles in the organization. Includes Health IT challenges and needs.

Use Cases

List of high-level features written from the user's standpoint ("As a [user] I want to [do something] so that I can [accomplish something]"), extracted from Journey Maps. Focuses on cases unique to I/T/U facilities, and does not include detailed and edge cases.

Executive Summary

The themes below emerged as essential aspects to consider for Health IT Modernization. These are consistent with findings from other Health IT Modernization workstreams.

Interoperability

The ability for different facilities, providers, and healthcare systems to exchange information with each other is key to resolve many of the challenges in I/T/U facilities—the focus of IHS on Primary Care, the rurality of most IHS and Tribal locations, the dependency on external providers for a lot of the care, the promise of telehealth as a tool to compensate for some staffing challenges.

EHR

The source of all patient health information should aid to clinical and support staff's workflows, and not be a nuisance. It should adapt to various workflows (facilities distribute tasks differently based on staff capabilities). At the same time, it should provide some consistency necessary for reporting and public health efforts. The rurality of many of these locations should be considered—many providers and care support team members will need asynchronous access to EHR.

Telehealth

It doesn't replace in-person encounters, but it can compensate for many of the staffing issues, particularly in rural facilities. A modern Health IT system needs to support this tool through seamless EHR access to Care Teams, the ability to transmit data to medical devices, and high-resolution video.

Patient Registration

The eligibility requirements based on tribal membership, descendancy, and others are unique in and across I/T/U facilities. Flexible rules, a comprehensive, unique set of demographic data points that help set eligibility levels is an essential requirement.

Patient Portal

Patients and caregivers want easy access to a central repository of all their Patient Health Records. It should be easy to understand and actionable. Tools like scheduling and reminders can help Care Support teams and Administration staff with struggles around no-shows and contacting patients. Communication tools can help them reach their providers, get screenings as needed without seeing a provider, and even enroll in healthcare insurance and programs. Local community resource references can be available, so patients are aware of what's available to them.

Billing

Correctly billing a wide variety of payers can help ensure claims are paid on time, and the patient is never charged. Facilities also need accounting tools that estimate Accounts Receivable even if they haven't billed yet. The fact that external facilities are often meant to charge the I/T/U facility for care is unique and should be addressed.

Referrals

The focus on Primary Care forces I/T/U facilities to refer out to external providers frequently. If there are no alternate payers, IHS-run and Tribal facilities use the Purchased Referred Care process. Urban facilities handle payments for external care in various ways. A streamlined, efficient, fast system needs to be in place to resolve these challenges. Health IT modernization may also be an opportunity to redesign the entire workflow around Purchased Referred Care and identify improvement possibilities in the overall process.

Cradle-to-Grave Records Legacy

RPMS has a large amount of medical records from patients who spent their whole lives going to the same facility; it is essential that the records integrity is maintained during the Health IT Modernization effort.

Methodology

1:1 Interviews and Workshops

Remote and in-person, semi-structured 45 to 60-minute interviews were conducted. Some workshops were conducted with multiple staff members to explore their involvement in each part of the process.

A total of 123 I/T/U staff members from 37 I/T/U facilities and 2 Area offices across all 12 IHS Areas were interviewed as part of this process. The team also conducted interviews with 17 I/T/U patients (most working at I/T/U facilities or involved in healthcare for AI/AN communities) and 8 Tribal leaders.

Questions gravitated around how staff experiences their environment, their workflows, what pain points they have, what they would like to get from Health IT, and what made the work and the needs at I/T/U facilities unique and different from facilities outside of I/T/U.

Site Visits

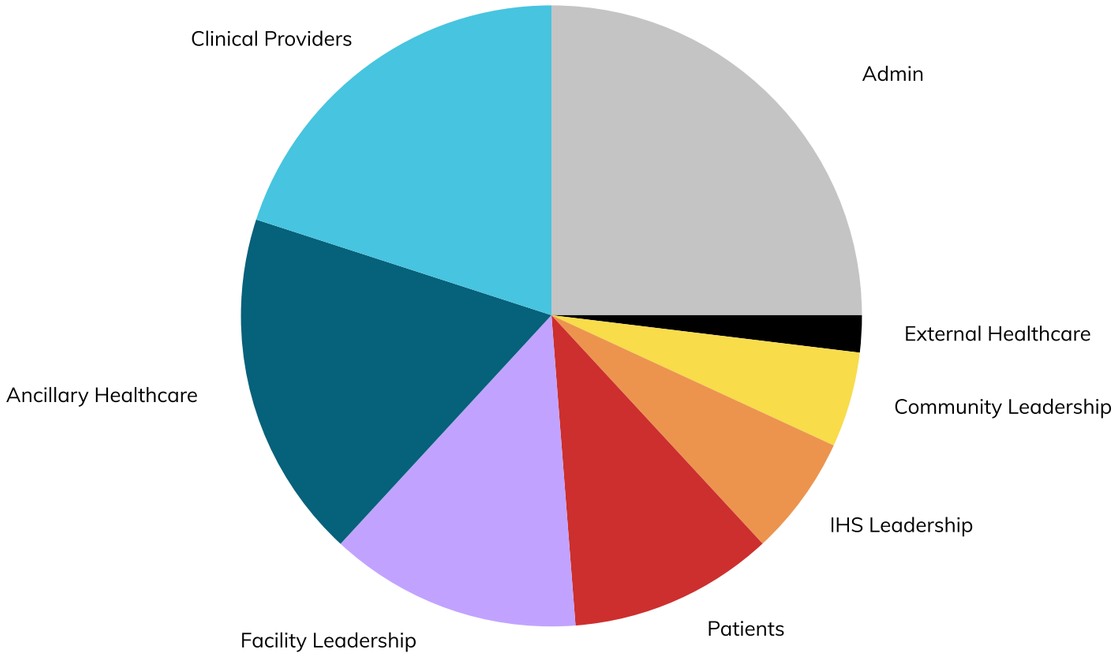
The HCD team joined site visits to facilities in the following Areas: Billings, Nashville, Alaska, Phoenix, Tucson, California, and Great Plains. Visits included a tour of the facilities, followed by ad-hoc interviews, while remote interviews were recruited through previous site visits and referrals from various members of the IHS team. Site visits were organized by the Regenstrief team, also part of the HHS / IHS Health IT Modernization project.

Workshops

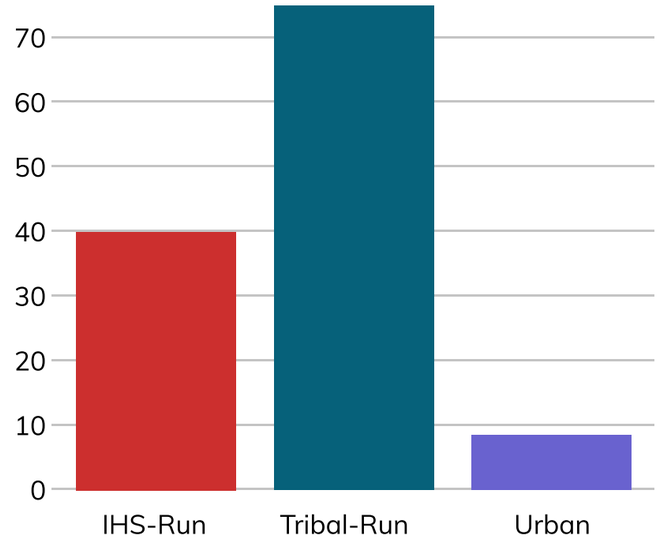
Once a first draft of the synthesis content was created, the HCD team ran several in-person and remote workshops with key IHS, National Indian Health Board (NIHB), and Health IT Modernization stakeholders to validate the content and ensure it was targeting key goals for Health IT and how it can improve healthcare in I/T/U facilities.

Other Resouces

Stakeholder interviews, Legacy Assessment Report work, Site visits report, and literature review (see References for detail).



INTERVIEWS BY ROLE GROUPS



INTERVIEWS BY FACILITY TYPE

HHS / IHS Health IT Modernization

Created by the HCD team at &Partners:

Sabrina Fonseca
Arden Klemmer
Rients van Blanken
Kate Murphy
Angela Palm
Eduardo Ortiz

Sponsored by the US Department of Health and Human Services (HHS).

Developed with invaluable contributions from:

Indian Health Service (IHS)
Regenstrief
National Indian Health Board (NIHB)
Emerging Sun

Thanks to the team at the NIHB and the IHS for their dedication and passion.

Special thanks to all staff members at IHS-run, Tribal, and Urban facilities, and patients who contributed with their time, knowledge, experience, and connections.

& partners
(302) 505-1472
hello@andpartners.io
andpartners.io

Office of the CHIEF TECHNOLOGY OFFICER