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SETTING THE WORLD ON FHIR®

Published by HL7® International, a not-for-profit organization, Fast Healthcare Interoperability Resources (FHIR®) is a standard for exchanging healthcare information electronically

A series of case studies illuminating how HIT professionals are using HL7®FHIR® to improve and advance modern healthcare

CASE STUDY

HL7 FHIR

UNIVERSITY OF CHICAGO MEDICINE

The University of Chicago Medicine (UChicago Medicine) provides world-renowned patient care, while advancing medical science through groundbreaking research.

VANDERBILT UNIVERSITY MEDICAL CENTER

Founded in 1874, Vanderbilt University Medical Center is the anchor of Vanderbilt Health, one of the largest and most prominent academic medical centers in the Southeastern United States.

RTI INTERNATIONAL

RTI International is an independent nonprofit research institute dedicated to improving the human condition.

Goal

To improve the management of chronic pain through shared decision-making between providers and patients

Creating ways to cultivate collaboration between patients and providers and enhance the patient experience and outcomes is critically important.

— Laura Haak Marcial, PhD, FAMIA, senior health informaticist/researcher, RTI Institute

Opportunity

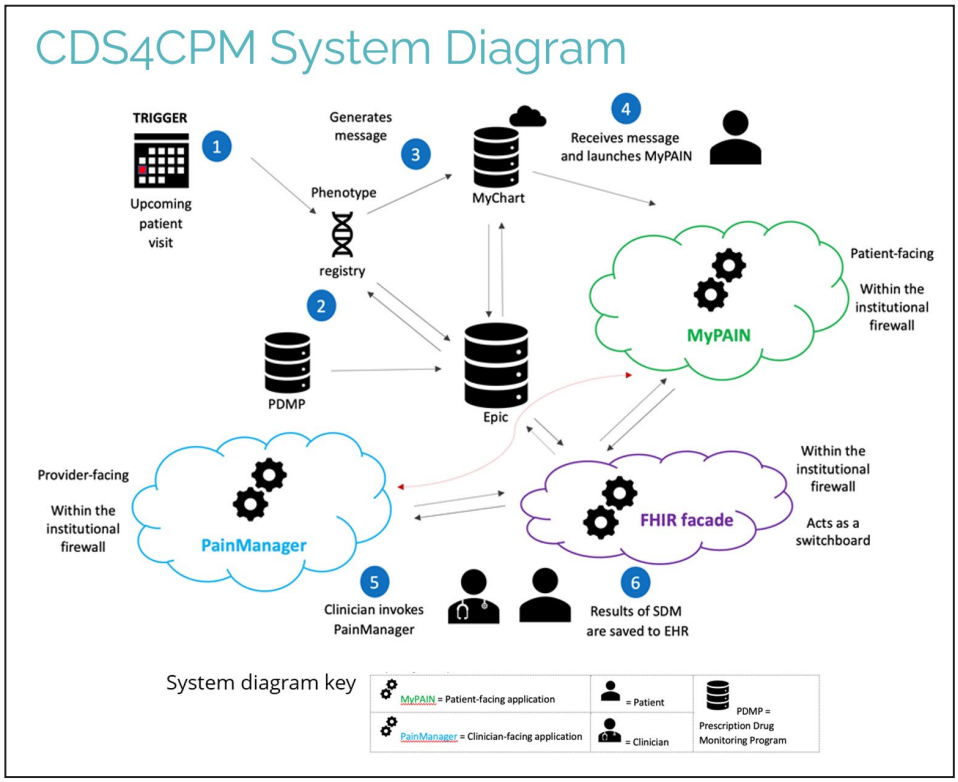
To develop two standards-based interoperable HL7® SMART on FHIR® applications—a patient-facing app, MyPain, and a clinician-facing app, PainManager—to aid in pain management

HL7® International

Project

Patient-centered health care relies heavily on shared decision making. It is a collaborative process in which providers and patients use clinical evidence to make decisions and choose care plans that reflect patient preferences and balance risks and expected outcomes.

As part of a contract with the Agency for Healthcare Research and Quality, RTI International, UChicago Medicine's Center for Healthcare Delivery Science and Innovation, and Vanderbilt University Medical Center partnered to develop two SMART on FHIR applications to be used in tandem to promote shared decision making between providers and patients with chronic pain.



MyPAIN is accessible via a patient portal (e.g., MyChart for EPIC systems). Patients can enter information about their pain, mobility, and treatment preferences. Information is stored in the electronic health record (EHR) and is accessible by providers. Educational materials and resources are also available to help patients prepare for shared decision-making with providers.

PainManager provides a dashboard of patient data from MyPAIN as well as EHR data, such as relevant diagnoses and medications, to further support shared decision making.

Progress

UChicago Medicine launched a two-month pilot of the two apps with 15 providers in four primary care and specialty pain clinics. Vanderbilt University Medical Center conducted a pilot study with ten providers spread across three clinics.

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The MyPAIN app successfully captured and transmitted patient-reported data to the EHR database. Without any aggressive promotion, about 15%-20% of patients clicked on the invitation link in the MyChart reminder message and completed the MyPAIN survey.

As originally developed, PainManager proved difficult to use in clinical settings. As a solution, an alternative report was created within the EHR to allow providers to more easily review MyPAIN data.

The project's pilot period provided valuable insight into how to improve on the current framework and highlighted the importance of the patient voice in chronic pain management.

The HL7 FHIR implementation guide is available at [Clinical Decision Support for Chronic Pain Management and Shared Decision-Making IG]

We will leverage the latest technology to integrate several data systems and provide a user-friendly interface for both patients and providers to facilitate shared decision-making.

— Cheng-Kai Kao, MD, associate chief medical information officer, UChicago Medicine

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