

Patient Entered Electronic Recording System (PEERS)

Category

Electronic Medical Records (EMR)

Problem

Current patient portals for EMRs do not fit the needs of patients and clinicians and adoption is poor

Technology Overview

A secure, web-based application which can collect data

IP Status

- Available for Non-Exclusive Licensing

Value Propositions

- Secure collection of data in multiple languages
- Data can be used to provide feedback for patients and providers
- Can collect data in multiple formats outside of the office using web or mobile devices
- Supports value based care

Market Advantages

- Patient portal market will reach \$7B by 2026 with a CAGR of 17.6%
- Increasing demand and technological advances are driving the market

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About CU Innovations

CU Innovations is the technology transfer office for the University of Colorado Anschutz Medical Campus. CU Innovations seeks to bring together industry partners, entrepreneurs and investors to translate discovery into impact. <http://innovations.ucdenver.edu>

Problem: Patient portals, web-based applications that enable patients to interact with their health care providers remotely, offer a resource to improve communication between patients and clinicians between visits and support value-based care. Patient portal use has increased recently; however, adoption has not been rapid, and overall rates of sustained use remain low. Currently few tools fit the needs of both patients and clinicians. There are limited options that can be accessed through a mobile device, tools can be hard to navigate, and patients have concerns about the privacy of their data.

Solution: A University of Colorado research team developed the Patient Entered Electronic Recording System (PEERS), a secure, web-based application that collects and stores information from patients or caregivers and provides feedback to both the individuals reporting and their designated healthcare providers. The system has been in use for over 15 years and has supported over 20 different research and clinical projects. An example of an implementation of PEERS, MyAsthma, is shown in Figure 1. It supported multiple methods of patient reported outcomes data collection and offered robust reporting and data management features. This system collects data outside of the clinical setting using web, mobile, integrated voice response (IVR) systems, while using email, text messaging, and phone calls for reminder systems. The system has collected data in English, Spanish, and French Canadian. PEERS includes a robust, table-driven approach to developing and deploying data collection instruments including support of video and audio files with each question, complex data processing and skip patterns based on multiple manipulated data points across time, as well as standard branching logic.

Advantages and Value Propositions: This system can be used to collect data securely in multiple languages, in multiple formats from outside of an office setting using web or mobile devices. PEERS data manipulation capabilities, as well as the clinical decision support data manipulation capabilities, will provide several approaches to interpret and present patient-reported outcomes data for patients, staff, and clinicians. This system is attractive to both patients and clinicians and could be integrated into a value-based reimbursement system.

Additional Documents and Sources:
Fiks A, DuRivage N, Mayne S, Finch S, Ross M, & Giacomini K, et al. Adoption of a Portal for the Primary Care Management of Pediatric Asthma: A Mixed-Methods Implementation Study. *Journal Of Medical Internet Research*. 2016;18(6):e172.

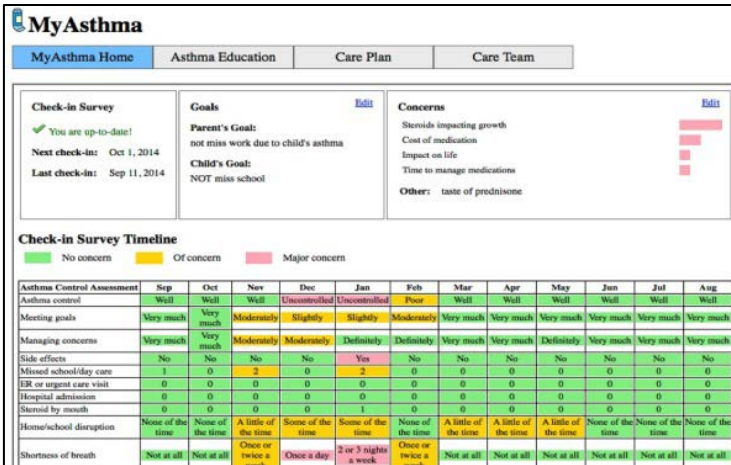


Figure 1. Example of PEERS implementation, MyAsthma (Fiks et al, 2016). MyAsthma provides educational material; enables sharing of families' treatment concerns, goals, symptoms, medication, and side effects with the clinical team; tracks asthma control; and provides decision support to both families and clinicians.