May 20th, 5:00 PM - 7:00 PM

Integrating Patient-reported Symptoms in the Arthritis Care Record

Hua Zheng  
*University of Massachusetts Medical School*

David C. Ayers  
*University of Massachusetts Medical School*

Janel Milner  
*University of Massachusetts Medical School*

*See next page for additional authors*

Follow this and additional works at: [https://escholarship.umassmed.edu/cts_retreat](https://escholarship.umassmed.edu/cts_retreat)  
Part of the [Biostatistics Commons](https://escholarship.umassmed.edu/biostatistics), [Databases and Information Systems Commons](https://escholarship.umassmed.edu/databases), [Rheumatology Commons](https://escholarship.umassmed.edu/rheumatology), and the [Vital and Health Statistics Commons](https://escholarship.umassmed.edu/vital)

Zheng, Hua; Ayers, David C.; Milner, Janel; Yang, Wenyun; and Franklin, Patricia D., "Integrating Patient-reported Symptoms in the Arthritis Care Record" (2011). *UMass Center for Clinical and Translational Science Research Retreat*. 8.  
[https://escholarship.umassmed.edu/cts_retreat/2011/posters/8](https://escholarship.umassmed.edu/cts_retreat/2011/posters/8)

This material is brought to you by eScholarship@UMMS. It has been accepted for inclusion in UMass Center for Clinical and Translational Science Research Retreat by an authorized administrator of eScholarship@UMMS. For more information, please contact Lisa.Palmer@umassmed.edu.
Presenter Information
Hua Zheng, David C. Ayers, Janel Milner, Wenyun Yang, and Patricia D. Franklin

Creative Commons License
This work is licensed under a Creative Commons Attribution-Noncommercial-Share Alike 3.0 License.

This poster is available at eScholarship@UMMS: https://escholarship.umassmed.edu/cts_retreat/2011/posters/8
For knee and hip arthritis patients, self-assessed pain and physical function are central to treatment decisions as well as to clinical and outcomes research.

Both paper and electronic health records capture the clinician’s summary of the patient symptoms.

Brief patient-reported arthritis symptom assessments have been broadly tested and validated in clinical research, yet have not been integrated into routine office practice.

The introduction of electronic health records offers an opportunity for patient direct-entry and real-time scores of standardized symptom assessments to be included in the routine health record.

The data collection and management system was implemented in the Arthritis and Total Joint Center (TJC) ambulatory clinic at UMass Medical Center.

The host system allows development and delivery of custom web-based surveys and serves as a database archive system with interfaces to hospital information services (HIS) and a data storage location.

The survey data are divided into 21 tables representing clinical categories (e.g., pain, function, clinical diagnoses) with 259 measures, and 66 among them are used for QA reports.

The patient-entered survey data are merged with the clinical data in a structured format, providing comprehensive longitudinal records for individual patients. In addition, real-time symptom trend reports are produced using query, search and analysis functions.

The core system was established in 2007, fully operational in 2008, and by June 2010, over 1,000,000 clinical measures had been collected from over 30,000 patients visiting the Arthritis and Total Joint Center (TJC). Among patient measures, around 400,000 measures (28,500 surveys) are related to patient self-assessed symptoms.

To both support patient-centered health care in arthritis care and to track aggregate outcomes for longitudinal research, a comprehensive arthritis care record system was designed and implemented with the goal of integrating standardized symptom assessments and clinical metrics in an individual patient health record.

- Trend pain and function metrics over time,
- Provide real-time data to patients and clinicians to inform treatment decisions, and,
- Track aggregate outcomes for quality assessment and research.

The system implemented in our clinic is a successful model for collecting and integrating patient symptom data with clinical data as part of a patient health record.

This template is the foundation for a newly funded national research registry for comparative effectiveness in total joint replacement surgery (FORCE-TJR).