
Abstract

The Benefits of Direct-to-Patient Data Collection for Data Consistency and Completeness: Lessons From Force-Tjr

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Abstract

Background: In 2011, the Department of Orthopedics and Rehabilitation at UMass Medical School was awarded an AHRQ grant to establish a national registry of comprehensive total joint replacement (TJR) outcomes registry, FORCE-TJR. This led to the development of an infrastructure for successful longitudinal direct-to-patient data capture, which has now been translated into a product to support orthopedic outcomes measurement in hospitals and surgeon practices around the country.

Objective: To use data from the FORCE-TJR registry to demonstrate the benefits of direct-to-patient data capture for data consistency and completeness.

Methods: To be a comprehensive TJR outcomes registry, FORCE-TJR required the development of a data capture system that supported complete and consistent research quality data. For this work, we first explored how our data capture system differs from other commercial and research based outcomes measurement systems. We then queried our integrated database of patient-reported outcomes, risk factors, adverse events, and claims to demonstrate how these differences affect data consistency and completeness.

Results: We found that direct-to-patient data capture led to more complete measurement of adverse events as 25% of post-TJR ER visits, hospital readmission, and early revisions occurred outside of the surgical hospital. Direct-to-patient data capture increased the capture of key risk factors, such as morbid obesity, eight-fold as compared to claims data. Finally, when compared to “in-office” outcomes measurement, web-based, direct-to-patient methods increased data completion rates from 53% to 86%.

Conclusions: Web-based, direct-to-patient outcomes data collection improves data consistency and completeness as compared to other data capture methods supporting the collection of research quality data.

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KEYWORDS

patient-reported outcomes; Registries; routine outcome monitoring; orthopedics

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