

COMPUTER SCIENCE
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*Informatics-based Quality Improvement in Healthcare: an
Analytic Information Warehouse*

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Abstract: An increasing volume of patient data in clinical data warehouses makes possible the identification and analysis of populations with therapeutic responses, outcomes and clinical care processes that are reflected by multivariate trends and patterns over time. This presentation will describe a grid-based software system that is under development at Emory, the Analytic Information Warehouse (AIW), that aims to facilitate discovery and query of those patterns. The AIW will provide controlled terminology support in queries. It will also provide analytic services for extracting concepts from unstructured text, de-identification, discovering features of a patient population and predicting responses and outcomes. Schema adaptors will support connecting to Emory Healthcare's existing clinical data warehouse and other research and clinical databases with appropriate levels of security. These capabilities ultimately will provide broad support to Emory Healthcare and researchers in risk factor identification, prediction, and evaluation of interventions to improve patient care quality and outcomes.

Bio:

Andrew Post, MD, PhD is a Clinical Informatics Architect at Emory University's Center for Comprehensive Informatics, and Assistant Professor in the Department of Biomedical Engineering. Dr. Post completed an MD at the University of Pennsylvania, and a fellowship and PhD in Biomedical Informatics at the University of Pittsburgh. He is faculty lead of an Analytic Information Warehouse supporting informatics-based quality improvement and research at Emory. He has conducted research in temporal pattern detection, clinical decision support, clinical user interfaces and the promotion of cross-disciplinary collaborations in clinical and translational research environments. His roles have included hospital and research information systems planning.

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