

Brown & Toland Physicians

Clinical Reporting and Proactive Healthcare

Business Overview

Brown & Toland Physicians (BTP), based in San Francisco, is an independent practice association (IPA) of more than 800 community physicians serving 300,000 Bay Area residents. One of the nation's leading medical groups, Brown and Toland was one of the first to deploy integrated electronic health records in a private practice setting. BTP partners with major HMO, PPO, and Medicare Advantage plans to coordinate patients' health care, from routine illnesses to specialty care and hospitalization. Physician Practice Solutions (PPS), a division of BTP, provides practice management services to BTP groups, including an integrated practice management and electronic health record system, as well as a full billing system.

Business Challenge

BTP implemented an electronic health records (EHR) system, along with a practice management solution, to physician groups beginning in 2005. These applications allow for robust entry of virtually all aspects of a physician's encounter with a patient. Individual patient health records entered in the EHR are available to physicians, but reporting and analysis capabilities on the rich, comprehensive patient and practice data base did not exist.

The main objective of the Clinical Reporting project was to unlock the data available in the EHR database and utilize this data to provide actionable information to BTP physicians, and ultimately result in proactive healthcare administration for BTP patients.

BTP undertook a project with the following goals:

- Provide clinical reports for physicians to generate on demand at the point of care, enabling proactive healthcare
- Architect an integrated Clinical Data Warehouse to the HER to enable future BTP electronic healthcare systems and data marts
- Change physician behavior in the usage of the EHR by giving the physician reporting and analysis capabilities on the data after it is entered into the EHR to address the question "Why enter data into the EHR if there is no way to report on the data we enter?"
- Improve patient outcomes for those patients with chronic diseases, such as diabetes and coronary artery disease, by providing actionable reporting.

Solution

To meet this objective, BTP engaged LPA Systems to assist them in implementing a clinical data warehouse and business intelligence solution.

Working with BTP physicians and BTP's internal Information Technology department, LPA designed and developed a clinical data warehouse using IBM Cognos 8 Business Intelligence technology that serves as a secure, dependable foundation for clinical reporting and analysis. Extraction and transformation processes based on published IBM best practices are in place to routinely extract information from the EHR.

Patient screening and disease state management reports were developed in conjunction with BTP's Quality Initiative, Physician Practice Solutions, and Medical Services departments. These reports focus on the following subject areas:

- Patient appointment / health maintenance – During regular health checkups and scheduled appointments, age and gender specific health maintenance screenings, results, and past-due reminders are available at the point of care
- Immunizations Record– Pediatric (Infant, Childhood, Adolescent) and Adult immunizations are tracked and administered based on BTP and CDC guidelines
- Chronic Disease Analysis– comprehensive patient metrics from the EHR are extracted and consolidated logically for specific disease states, such as diabetes, hypertension and hyperlipidemia
- Risk Profile – Generated to show all patients at risk for a particular chronic disease such as Coronary Artery Disease (CAD), based on industry and BTP risk factors. Lab dates, lab values, and health maintenance measures that are outside of the recommended ranges are highlighted for reference and follow-up care

Results

The LPA reporting solution allows BTP physicians and their staff the ability to automatically receive patient information from their EHR and proactively address patient health maintenance items. Each day, the physician receives gender and age specific patient screening reports, identifying past-due or out of range lab tests, procedures and immunizations. This gives the physician and staff the ability to proactively address specific problem areas for individual patients.

The Coronary Artery Disease Risk Profile gives the physician the ability to analyze those patients at risk for CAD, as well as those patients with diabetes, hypertension, or hyperlipidemia. Key metrics for each condition are included, and values outside acceptable ranges are highlighted for immediate attention.

BTP central office staff members have the ability to create and distribute standardized reports developed from the Clinical Data Warehouse to member physicians and their staff. BTP continues to enhance the clinical reporting solution, combining clinical, managed care, and financial data for distribution to its physicians.