



## Joslin Clinic A NextGen Case Study

### Overview

#### Practice

Joslin Clinic  
Boston, Massachusetts

#### Practice Profile

Fully integrated care model of healthcare providers support 20,000 unique patients a year in self-management of their diabetes

#### Business Problem

Need to identify opportunities for clinical improvements and better patient care through outcomes evaluation

#### Solution

NextGen® EMR to capture and assess discrete patient outcomes data

#### Product Distinctions

- ▶ Standardized method of gathering patient data
- ▶ Customized templates
- ▶ Searchable database

#### Benefits

- ▶ Enhanced outcomes management
- ▶ Increased compliance with clinical guidelines
- ▶ Collaboration among providers
- ▶ Improved documentation

## The Joslin Clinic “JoslinCare” Outcomes Management Initiative

Leadership at Joslin Clinic in Boston has long recognized the critical role that high quality data plays in the delivery of effective care. Without information about which treatments delivered the most ongoing success, physicians can be handicapped in their efforts to identify specific areas for clinical improvement and better patient care.

To overcome this barrier—and respond to the healthcare industry's emphasis on quality of care and reduction of costs—Joslin Clinic began to look for ways to enhance outcomes reporting and management. In 2001, Joslin Clinic turned to NextGen® electronic medical records (NextGen® EMR), configured to establish a consistent method to gather patient data as well as create a formalized process to continually track patient care.

Joslin Clinic combined this technology with sophisticated analysis tools, designed to be user friendly while allowing providers to review outcomes over time, identify trends in patient data, and develop enterprise-wide solutions for enhancing care and improving outcomes.



*“ Because we can objectively evaluate the success of our JoslinCare treatment methods, we can develop more effective therapies that greatly benefit the patient - our ultimate goal.”*

**Martin J. Abrahamson**  
**Acting Chief Medical Officer**

## **Outcomes Management Demands "Data Mining"**

Individual physicians and providers (e.g., nurse practitioners and diabetes educators) at the Joslin Clinic knew they were sitting on a wealth of information that would facilitate effective outcomes evaluation and analysis - which in turn could only lead to enhanced patient care. However, they needed to develop a way to mine the data so it could be used to formulate more effective care plans and promote clinical performance that would meet or exceed national guidelines.

Joslin Clinic is the clinical arm of Joslin Diabetes Center, an institution devoted to improving the lives of people with diabetes and its complications through innovative care, education, and research that will lead to prevention and cure of the disease. With these objectives in mind, Joslin Clinic began its search for a technology solution that would fit its unique requirements. Joslin Clinic specifically wanted a system that could help providers better prevent and manage complications associated with diabetes across specialties for the 20,000 patients it serves.

## **Prospective Vendors Measured Against Goals**

Of course, clinic leadership expected any system to exhibit the typical functionality of an EMR - like advancing

efforts to become a paperless practice; offering flexible, user-friendly note-taking alternatives; saving on transcription costs; and enhancing workflow efficiency. But at the onset of the EMR selection process, Joslin leadership also outlined specific requirements it wanted in the system above and beyond those more typical attributes. Specifically, they wanted a system that would enable them to:

- ▶ Implement a consistent method for gathering patient data to improve documentation and facilitate effective outcomes evaluation and analysis
- ▶ Gather outcomes data that can be used to better prevent and manage complications associated with diabetes
- ▶ Increase quality of care by identifying areas for clinical improvement, raising awareness of those areas and developing strategies to address them
- ▶ Evaluate and measure the success of steps taken to improve clinical outcomes across the Clinic
- ▶ Facilitate comparisons between Joslin Clinic's outcomes and the outcomes of those national organizations the group benchmarks itself against
- ▶ Compare the effectiveness and efficacy of treatments or medications across the patient population



- ▶ Improve the practice's adherence to clinical guidelines

To fulfill these requirements, Joslin implemented NextGen® EMR, a system that allows it to automate daily workflow and store patient information. Joslin chose the NextGen® system because it provides a significant advantage: the ability to store data in a searchable format. The system accomplishes this by using customized templates to standardize the capture of patient information and by storing all data in a single database. Other systems were unable to supply this opportunity because of variations in the way data is recorded and stored.

Because of the wealth of information now at its fingertips, Joslin Clinic is able to regularly conduct queries, research specific aspects of care delivery and benchmark various therapies and approaches—the three primary components of outcomes management.

### **Templates, Metrics and Reports Enhance Performance**

In addition to developing customized templates, Joslin Clinic established a series of JoslinCare clinical metrics by which it measures adherence to group guidelines and compares its outcomes

with national averages. By generating monthly reports that feature up-to-date information, the Clinic can determine where it is performing well and where improvement is needed.

This structured system for capturing patient data has increased the quality of documentation across the Clinic and increased access to valuable patient information. With NextGen® EMR, providers are more likely to know if the patient is on once-a-day aspirin therapy, for instance, or is a smoker. Having access to this information makes it easier for providers to participate in a more collaborative approach to patient care.

The NextGen® EMR system also incorporates the clinic's unique set of evidence-based practice guidelines, which are created, published and updated by a collaborative team of Joslin clinicians. NextGen® EMR makes this information available to providers at the point of care in a variety of ways, including a summary screen that serves as a snapshot of the patient's condition in relation to practice guidelines. With a quick glance at the screen, providers can evaluate a patient's status against nationally recognized goals for indicators such as HbA1c and blood pressure, two of the many vital indicators for patients with diabetes.

*“By developing our ability to analyze outcomes, Joslin Clinic is able to benchmark our JoslinCare clinical efforts and results against national averages.”*

**LuAnn Kimker, RN MSN**  
**Executive Director of Nursing**



*The searchable EMR allows Joslin Clinic to conduct queries, assess care delivery and benchmark therapies - the three primary components of outcomes management.*

In addition, Joslin Clinic uses the system's report writer to develop customized reports for evaluating the long-term effects of various treatments. The clinic recently used this feature to develop practice guidelines for classroom patient education by comparing the outcomes of patients that attended no classes with those that attended one class, two classes and so on.

Finally, NextGen EMR has also enhanced Joslin Clinic's ability to identify candidates for clinical trials. While a paper-based recruitment process could easily take up to 80 hours of staff time, the EMR system allows researchers to find viable candidates in less than two hours.

### **Benefits of Application Are Wide-Ranging**

According to Joslin Clinic, the value of its improved outcomes reporting capabilities through NextGen EMR is too great to quantify. The benefits they have experienced have touched every component of care, from enhanced levels of documentation to increased compliance with clinical guidelines and algorithms.

For example, Joslin Clinic publishes a monthly management dashboard featuring up-to-date clinical performance metrics that are available to the

entire organization. Originally, Joslin produced this dashboard to quantify the outcomes of changes to the organization's approach to solving problems. However, the simple existence of these metrics in and of itself has led to increased awareness of areas where the organization is under-performing - resulting in corrective action being taken. Today, nearly 14% more patients have an LDL value of less than 100. Joslin was already exceeding nationally recognized standards, but can now demonstrate that it is performing as a top-tier organization.

Finally, documentation of physicians offering patients who smoke the tools to quit has increased significantly. This is the result of a metric indicating that few physicians were documenting this previously in the EMR and also due to the EMR development steering committee taking action to make documentation easier. Joslin Clinic has now surpassed the requirement for the percentage of patients receiving counseling for smoking cessation as per the National Committee for Quality Assurance (NCQA) and American Diabetes Association (ADA) recommendations. (Joslin Clinic was recognized by the NCQA and ADA National Diabetes Physician Recognition Program in October 2004. This recognition is valid for three years.)

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