

# Case Study

## Medical University of South Carolina Establishes Interfaces to EHR for Improved Workflow

### At a Glance

#### Organization

Medical University of South Carolina  
Charleston, S.C.

- 16 sites
- 650 physicians
- Nearly 900,000 patient visits per year

#### Solution Spotlight

- Practice Partner® Patient Records

#### Critical Issues

- Establishing connectivity and interoperability to the EHR within a very complex IT environment
- Supporting high transaction volumes through the interfaces in a mission-critical environment

#### Results

- Successful deployment of more than 10 interfaces encompassing the full spectrum of clinical and administration systems
- Effective production support of high volume interface environment, exceeding 600,000 annual transactions

The Medical University of South Carolina (MUSC) has a busy integrated delivery system with many different software applications that generate an enormous amount of patient data daily. To streamline workflow, MUSC established interfaces to Practice Partner® Patient Records, its electronic health record (EHR) solution from McKesson. As a result, MUSC has achieved an impressive level of interoperability between multiple applications and Practice Partner Patient Records. More than 10 interfaces are in place, supporting nearly 900,000 patient visits per year.

#### Challenges

MUSC wanted all software applications generating patient data to converge into its EHR. "Without those interfaces our systems couldn't talk to each other," explains Jim Smith, MUSC's manager of Ambulatory Care Information Systems. However, achieving interoperability for an organization the size of MUSC was a tall order. The ambulatory group at MUSC treats close to 900,000 patients per year at 16 different outpatient facilities. MUSC's 650 physicians work in more than 30 specialties. All of them use Practice Partner, as do 800 nursing staff, 500 residents and numerous administrative, compliance, pharmacy, radiology and lab staff. Systems include lab information

systems, ADT, radiology, practice management, transcription and many ancillary tools such as cardiac or pulmonary systems.

"The idea is that everything from these third-party systems must get into Practice Partner's electronic patient chart so that we do not have to rely on paper or manual entry of data," says Smith. In this all-electronic environment, it is critical that patient information from all the different systems can easily communicate with the EHR.

#### Answers

Building the interfaces was a collaborative effort by MUSC, McKesson and individual software vendors. Using HL7 protocols as the framework for the interfaces, MUSC took advantage of an interface engine (Cloverleaf) to help centralize interface efforts to a single "appliance," which can receive inputs from various systems and deliver data as single feed into Practice Partner Patient Records.

#### Results

MUSC's efforts paid off. It now has more than 10 interfaces to Practice Partner Patient Records, encompassing both administrative and clinical functions. Annually, the system manages more than 600,000 transactions into and out of Practice Partner Patient Records.

The open architecture of Practice Partner Patient Records has allowed

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**Jim Smith**

**Manager of Ambulatory Care  
Information Systems  
Medical University  
of South Carolina**

MUSC to streamline administrative functions by implementing an:

- Interface to the hospital's master patient index (MPI) and ADT system (Keane) — generates financial and medical record data for both inpatient and outpatient activity and provides Practice Partner with detailed patient demographics
- Interface to an ambulatory practice management system — includes a registration feed that triggers the creation of a chart for new patients and a scheduling interface that lets clinicians see their patient schedule from within Practice Partner
- Interface to LIS transfers data from Palmetto Primary Care, a specialty clinic that is one of MUSC's business partners
- Interface to radiology information system allows Practice Partner Patient Records to download textual radiology results for all imaging protocols including X-rays, MRIs, CAT scans and PET scans
- Interface to the AssistMed transcription service allows easy downloading of transcribed notes directly into Practice Partner Patient Records
- Interface to Medflow ophthalmology EMR allows ophthalmologists' progress notes to be incorporated into Practice Partner Patient Records

Other interfaces manage the seamless distribution of clinical and laboratory information between systems:

- Interface to MUSC's primary hospital laboratory information system (LIS) passes both discreet data for specific tests and text reports for pathology and microbiology results
- Interface to Labdaq accepts data coming from one of MUSC's 16 sites
- Interface to Labcorp allows out-of-area patients who have had transplants or are being treated for cancer to have their follow-up test results from their local Labcorp facility transferred to MUSC
- Interface to Oacis clinical data repository receives progress note information from Practice Partner via an outbound interface

The project was a success. Practice Partner Patient Records provides MUSC with a level of application interoperability that is crucial to the hospital's workflow. "My vision for Practice Partner was to have it as a one-stop shop," says Smith. "The physician accesses Practice Partner and is able to do all the business of patient care without having to stop and log into other systems. By and large, we have achieved that vision."

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