Abstract

When a patient visits a hospital’s Emergency Department for treatment, the primary care provider can sometimes feel as if he’s at the end of the line in a variation of the Telephone Game.

With the patient, the ED doctor and the hospital staff responsible for sending messages about the visit, its outcome, and instructions for aftercare down the line, communication can slow or break down at critical points.

Overloaded manual processes for information delivery sometimes result in inefficiencies and errors that can produce incomplete or inaccurate results. The PCP is left without valuable information regarding a patient’s care received outside of the practice, and with an incomplete record of the patient’s healthcare needs.

For Scottsdale Healthcare, a solution to the problem would deliver ED notifications effectively and efficiently, improve patient care and satisfy its medical community’s need for information. In June 2010, Scottsdale became the first hospital system to implement RelayHealth’s Health System Notifications.

ED Notification™ automatically notifies physicians by message of their patients’ ED admissions and sends reports upon discharges, eliminating the need for hospital staff to manually fax patient records and follow up with telephone calls. Because of its neutral status, it can work with any health information system.

Quick Facts:

**Scottsdale Healthcare:**
- Based in Scottsdale, Arizona
- Two comprehensive medical centers and a new community hospital
- Outpatient surgery centers, home health services, military medical training programs and community outreach services
- Medical staff of more than 2,000

**Solution Spotlight**
ED Notification™

**Critical Issues**
- Automatic notification to PCP when patient is admitted to ED
- Summary report sent to the PCP when patient is discharged from ED
- Communication with hospital information system, allowing automated delivery of notifications to fit into normal staff workflow
In just over six months, Scottsdale Healthcare generated more than 4,000 notifications. It has received positive feedback from hospital staff for its ease of use, and from the medical community for the valuable service it provides.

Scottsdale Healthcare: ED Notification Provides Instant, Consistent Messaging

When a patient visits a hospital’s Emergency Department for treatment, the primary care provider can sometimes feel as if he’s at the end of the line in a variation of the Telephone Game. In this version, the patient, the ED doctor and the hospital staff are responsible for sending messages about the visit, its outcome, and instructions for aftercare down the line. With 1 in 3 Arizonans on average seeking emergency care each year, overloaded manual processes for delivering information sometimes result in inefficiencies and errors that can — just like in the children’s version of Telephone — produce incomplete or inaccurate results.

Communication can slow or break down at several critical points, leaving the PCP without valuable information regarding care received outside of the practice and with an incomplete record of the patient’s healthcare needs. In cases where the doctor isn’t notified of the encounter before the patient’s next visit, additional time and resources must be expended to have records delivered while the patient is in the office.

Scottsdale Healthcare, a nonprofit, community-based health system with three hospitals and a medical staff of more than 2,000, sought a solution that would deliver its messages effectively and efficiently, improve patient care and satisfy its medical community’s need for information. A system that automatically notifies physicians by message of their patients’ ED admissions and by sending reports upon discharges, eliminating the need for hospital staff to manually fax patient records and follow up with telephone calls, provided the answer.

About Scottsdale Healthcare

Scottsdale Healthcare is a not-for-profit, community-based health system based in Scottsdale, Ariz., and led by a volunteer board of directors comprised of leading local citizens. Its staff members and expert physicians are dedicated to providing world-class patient care.

Founded in 1962, Scottsdale Healthcare and its medical staff of more than 2,000 serve the northeast greater Phoenix metro area and beyond through two comprehensive medical centers and a new community hospital:

• Scottsdale Healthcare Osborn Medical Center, a 337-bed, Level I trauma center and primary stroke center, is a full-service hospital and a leader in the fields of trauma, orthopedics, neurosurgery, cardiovascular and critical care
• Scottsdale Healthcare Shea Medical Center, a 433-bed, full-service hospital providing emergency, medical/surgical, critical care, obstetric, pediatric, cardiovascular, orthopedic and oncology services
• Scottsdale Healthcare Thompson Peak Hospital, a 64-bed community medical-surgical hospital.

Scottsdale Healthcare also offers outpatient surgery centers, home health services, military medical training programs and a wide range of community outreach services.

Setting the Goal: Instant, Consistent Messaging

As primary care providers become more focused on practice-based care, they still need a method for tracking patients’ visits to hospital emergency departments. Responding to community requests for a more reliable method of receiving ED notifications, Scottsdale sought a solution to provide:

• Automatic notification to the primary care physician when a patient is admitted to the ED
• A summary report sent to the PCP when a patient is discharged from the ED
• Communication with its hospital information system (HIS), allowing automated delivery of notifications to fit into the staff’s normal workflow

“We were looking to improve communication with PCPs in general, and ED communication was one they really wanted to get a handle on,” said Paula Williams, Scottsdale Healthcare’s IT Project Manager. “We needed some way when a patient was admitted to the ED to send a message to [the primary care provider].”
The search led to RelayHealth, where Territory Director Kevin Rahn and Deployment Specialist Julie Jaster heard their request, as well as similar queries from other systems. RelayHealth Health System Notifications was developed from those discussions, and Scottsdale Healthcare was the first hospital system to implement it.

“It went quickly and smoothly,” Williams said. “It was fairly easy to get testing done, and in June 2010, we started sending messages.”

**Implementing ED Notification: Seamless, Behind-the-Scenes Functionality**

The ED notification module requires implementation of HL7 ADT (Admission, Discharge and Transfer) messaging between the health system and RelayHealth, and accepts inbound messages related to emergency department admissions and discharges. It takes the raw data from the feed and generates a routable formatted message. Because of its neutral status, it can work with any HIS.

“We want to respect the investment a community physician has already made in his EMR, or if they haven’t made any investment at all,” Rahn said.

When a patient registers at the ED, he is asked for the name of his primary care provider. An alert that notifies the PCP of the admission is routed to any inbox — the provider’s, to other associates of the practice, or to a custom inbox designated to receive alerts.

Upon discharge, a report of the visit is automatically generated from the ED physician’s discharge summary and sent to the provider through RelayHealth. After the provider reviews it, he can forward it to a colleague, message it to the patient or release it to the Patient Health Record (PHR).

“In the past, we were notified if the ED called to speak with Dr. Ritchie or when the patient called for a follow-up, or when the patient came in for follow-up,” said Deborah Tucker, office manager for Dr. Stephen Ritchie, who practices internal medicine in Scottsdale. “Then, Dr. Ritchie would have to leave the exam room and ask me to retrieve the reports.”

Using data mapped from Scottsdale Healthcare’s HIS (McKesson STAR), the module populates notifications that may include:

- Patient Name
- Date of Birth
- Event Type
- Attending Doctor
- Diagnosis
- Admit Date
- Discharge Date

“They do their normal work flow, and behind the scenes we take a feed from their HIS,” Rahn said. “That allows us to then populate the message and securely route it. From the ER’s perspective, they wouldn’t even know they did it.”

**Delivering Positive Results: Messages Received, and Welcomed by PCPs**

Scottsdale Healthcare sent out its first notifications on June 21. By the end of December 2010, more than 4,000 had been generated, and the system is receiving positive feedback from the community, Williams said.

“It’s helpful for them to have that information when they go into the office,” Williams said. “They know to look in Relay for the discharge summary report and get information about patient disposition.”

Receiving the discharge summary report the same day as the patient’s ED encounter can help the primary physician provide better follow-up care. “If the discharge says patient should follow up with doctor in five days, the doctor knows to follow up with the patient if they don’t schedule an appointment,” Williams said.

**Results:**

- More than 4,000 messages generated June-December 2010
- Positive feedback from hospital staff
- Helping PCPs provide better follow-up care
- Positive feedback from medical community
As primary care providers become more focused on practice-based care, they still need a method for tracking patients’ visits to hospital emergency departments. Responding to community requests for a more reliable method of receiving ED notifications, Scottsdale Healthcare sought a solution to provide automatic notification to the primary care physician when a patient is admitted to and discharged from the ED.

In June 2010, Scottsdale Healthcare was the first hospital system to implement RelayHealth Health System Notifications. By the end of December, it had generated more than 4,000 notifications and is receiving positive feedback from hospital staff for its ease of use and from the medical community for the valuable service it provides.

Notifications Generated, by Month

Source: Julie Jaster, via emails to author, 16-Nov-10 and 25-Jan-11.

Conclusion