

# Medication History: A Path to Higher Quality Hospital Care



## New electronic medication history service improves medication reconciliation accuracy and health outcomes

In mid-2011, the care team at 179-bed, two-hospital system Rideout Health in Marysville, CA, knew they needed to improve their method of obtaining patients' medication history. Like many hospitals, Rideout's staff was dependent on patients remembering what medications they were taking when asked at admission. Patients might also come to the hospital with a "grab bag" full of medicine bottles and medications to help the process along; but even in those cases, the collection of pills could contain medications prescribed years ago and not related to the current care they were receiving. Pharmacy technicians would also get involved, calling the primary care physician and local pharmacies in an attempt to fill in the blanks and create as accurate a picture of each patient's current medications as possible. Further, many patients who are cared for at a hospital's emergency department are either unconscious or otherwise unable to provide any medication information.

Even with the diligence and time devoted to building a medication history, the fact remains that obtaining accurate medication history is a significant problem in health care, with up to 48 percent of all records having errors. And these errors and missing information can have a significant impact on patient care and the cost of care. For example, more than 40 percent of medication errors were the result of inadequate medication reconciliation<sup>1</sup> and more than 770,000 people are injured or die from Adverse Drug Events (ADEs) every year.<sup>2</sup>

Fortunately, gone are the days when hospitals need to rely on patient memory or accurate records of primary care physicians and pharmacists to begin the process of medication reconciliation. Today, electronic, automated processes create a complete and accurate medication history by querying and compiling data from pharmacies and pharmacy benefit managers. Armed with this information, care teams can confidently perform more complete medication reconciliation and, in the process, reduce the risk of ADEs and avoidable hospital readmissions.



### New Electronic Options Available

**"We had identified medication history as an issue we wanted to address; but, at that time there was nobody we knew of that provided an electronic solution."**

**Daniel Chibaya**  
Director of Information Technology & Systems  
Rideout Health

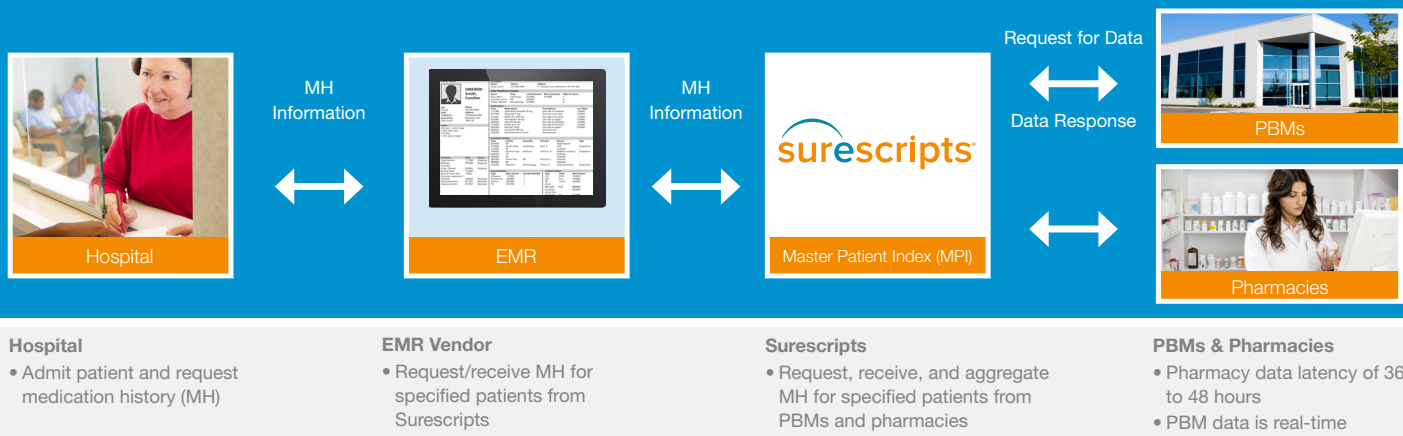
## Finding a better way to accurate medication history

Rideout Health's system for obtaining medication history in 2011 was not unlike that of many healthcare organizations: paper based and quite often reliant on the memory of the patients being admitted for care. According to Daniel Chibaya, director of Information Technology & Systems, the health system had identified that it needed to find a method to obtain much more accurate medication history data than it was able to generate under its paper-based system.

#### Sources

1. Rozich JD, Howard RJ, Justeson JM, et al. Patient safety standardization as a mechanism to improve safety in health care. *Jt. Comm J Qual Saf* 2004; 30(1):5-14.
2. Agency for Healthcare Research and Quality (AHRQ), *Reducing and Preventing Adverse Drug Events to Decrease Hospital Costs*, Public

# How hospitals get electronic medication history using Surescripts



At about the same time, it was also looking to bolster its in-house EMR to qualify for Meaningful Use Stage 1 incentives, while also seeking a way to meet the Joint Commission's regulations for medication reconciliation.

Rideout turned to Health Care Systems, Inc. (HCS), with whom the hospital already had a working relationship for its EMR. According to Reubin Felkey, vice president of business development at HCS, he was confident his company had just the source to help solve Rideout's patient data needs, via its partnership with Surescripts. With this combined solution, clinicians make a medication history query for a patient within the HCS EMR. The query then goes to Surescripts, which searches data from pharmacies and pharmacy benefit managers (PBMs) that encompasses more than 270 million insured lives. When the search is complete, Surescripts feeds the patient-specific medication history back into the EMR.

Felkey noted that with this partnership, HCS is able to leverage Surescripts' 10-year track record in e-prescribing and connections to the nation's pharmacies and PBMs to deliver robust, real-time medication history. "With electronic

medication history, clinicians can quickly move forward with confidence," he said. "Previously, clinicians frequently had to take a chance and start medical treatment without knowing their full medication histories. Unfortunately, patient safety often may have been compromised. Now, the medication history is presented to clinicians right at the point of care, making it possible to quickly get patients the care they need."

Like many hospital administrators, Chibaya wasn't aware that, similar to most EMR vendors, HCS could easily add the Surescripts medication history data to its EMR to aid its medication reconciliation efforts. "We had identified medication history as an issue we wanted to address; but, at that time, there was nobody we knew of that provided an electronic solution," he said. "It turns out nobody does it quite the way Surescripts does with its queries to pharmacies and PBMs. Using this brings us consistency across the board from everybody involved."

With its EMR leveraging Surescripts' medication history data service, Rideout has met its dual objectives of improving patient treatment and safety via a more

## The Joint Commission: Patient Safety, Medication Reconciliation

### National Patient Safety Goal #3 (NPSG 03.06.01):

#### Reconciling Medication - Maintain and communicate accurate patient medication information

##### Hospital Accreditation Program

- Obtain information on medications the patient is currently taking when he or she is admitted to the hospital or is seen in an outpatient setting.
- Provide patient (or family as needed) written information on medications the patient should be taking when he or she is discharged from the hospital or at the end of an outpatient encounter
  - Examples: name, dose, route, frequency, purpose



## Improves Dialog with Patients

**Using the data provided by Surescripts also changes the dialog the care team has with the patient. “This gave our staff something they could work from, so instead of asking ‘what are you taking for medication?’ they can now ask them if they are still taking the medications on the list.”**

— Daniel Chibaya

thorough medication reconciliation, while also meeting Joint Commission regulations and qualifying for Meaningful Use Stage 1 incentives. Using this data, the hospital now generates a new six-month medication history for each of its patients at every transition of care, with only a few keystrokes in their EMR. Once the data query is sent, results are returned in about a minute, a far cry from the 30 minutes or more it could take pharmacy techs to chase down doctors and pharmacists via the older method. Using the data provided by Surescripts – which includes medication name, dose, fill date and quantity – also changes the dialog the care team has with the patient. “This gave our staff something they could work from, so instead of asking ‘what are you taking for medication?’ they can now ask them if they are still taking the medications on the list,” added Chibaya.

For those on the hospital staff, once the HCS EMR was rolled out, the impact was immediate. Shawna Van Dusen, a registered nurse at Rideout’s Yuba City facility that focuses on women’s health and maternity care, said that use of the automated medication history service highlighted how incomplete the records would be under their prior method. She noted that under the old system, a patient would say they were taking “blood pressure medication” and that’s what would be written down instead of the specific name of the medication.

“The [old] system was incomplete, ineffective and time consuming,” added Alicia Enright, RN, a medical surgical nurse at Rideout’s other hospital in Marysville. “We often didn’t have specific information that was important for the physician. Even when the patient would tell us the specific medication they were taking, they didn’t know their dose, so we would end up having to call the pharmacy in order to get accurate dosing information.”

## Accurate information improves care in the emergency department and beyond

Being able to generate more complete and accurate medication history quickly and easily has a significant impact on the quality of care doctors can deliver. This is especially true at Rideout, where its emergency department (ED) sees between 120 and 150 patients on a typical day. Caring for this volume of patients makes it vital to quickly compile an accurate medication history. ED doctor Yash Brar, MD, who also is the CMIO for Rideout, noted that not only was the old system hit-or-miss in terms of generating an accurate record of the patient’s medications, but that the information often was unavailable when the doctor saw the patient. “For the admitting doctor, it is very handy to have that list,” Brar said. “Especially for many of the patients who come in and aren’t able to give you any useful information because of their condition. Even if we haven’t been able to confirm with the patient, it at least gives us a tool we can work with.”

In some cases, having the right information can make a significant impact. As an example, Brar mentioned the case of a woman who came to the ED at one in the morning with a GI bleed, vomiting blood, a few days after her hip replacement surgery. The team began treatment, but didn’t have a chance right away to get a current medication list. However, the older record showed that she had been taking aspirin regularly. This suggested a possible ulcer, so the woman was scheduled for endoscopy the next morning.

## Medicare and Medicaid EMR Incentive Program

### Meaningful Use Stage 2<sup>1</sup>

#### Objective

Medication reconciliation should be performed

- When receiving a patient from another setting of care
- When receiving a patient from another provider of care
- When you believe an encounter is relevant

#### Measure

Perform medication reconciliation for more than 50 percent of transitions of care

### Meaningful Use Stage 3<sup>2</sup> (proposed)

#### Objective

Medication history for adherence monitoring through connections to PBMs to retrieve external medication fill history for medication adherence monitoring

1. [http://www.cms.gov/Regulations-and-Guidance/Legislation/EHRIncentivePrograms/downloads/Stage2\\_HospitalCore\\_11\\_MedicationReconciliation.pdf](http://www.cms.gov/Regulations-and-Guidance/Legislation/EHRIncentivePrograms/downloads/Stage2_HospitalCore_11_MedicationReconciliation.pdf)

2. <http://www.healthit.gov/>



## Useful Tool at Admission

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**Yash Brar, MD  
CMIO  
Rideout Health**

Brar then went into the system to generate the Surescripts Medication History and discovered that upon discharge for her hip surgery, the woman had been prescribed a newer anticoagulant medication for which there was no reversal agent. The care team was able to act quickly to get the woman admitted, and within a half an hour she had “crashed” but was treated quickly in the intensive care unit where they were able to stop the bleeding. “We wouldn’t have known she was on the newer anticoagulant without the system,” Brar noted. “It allowed us to be proactive in approaching the GI bleed instead of the original plan of waiting until morning.”

## Improving medication reconciliation at discharge

Since Rideout runs a new medication history for all transitions in care, by the time a patient is ready for discharge, the discharge nurse has a highly detailed and accurate account of both the medications the patients was

taking while in the hospital and what they had been taking prior to admission. This allows for much more effective discharge planning and a much more effective process for medication reconciliation. “Before, even at discharge, we were not able to do reconciliation on what the patient’s home meds were. We were writing a new med list altogether on discharge,” Brar said.

Enright noted the discharge process now works very smoothly for medication reconciliation. Using the list from the medication history, the doctor can simply select either “continue” or “discontinue” and any new medications added to the list are sent automatically to the pharmacy without delay.

“We also have an opportunity to instruct them on which medications that they currently take (or prior to hospitalization, had ordered) that they will not need to continue further on discharge,” Van Dusen said. “This is extremely important for patient education regarding their medications and even decreasing the chance that they will be readmitted within 30 days.”

If accurate data delivered in a timely manner will be one underpinning of improving care quality and outcomes, then having a simple, reliable and accurate method for putting medication history at the fingertips of those who need most, will be an important part of this effort. In the end, it can allow clinicians to focus where it counts. “It’s all about the patients,” said Van Dusen. “You get a better picture of your patient, so it is safer for them. This is better patient care.” ●



### About Surescripts:

Surescripts is a nationwide health information network that connects, exchanges, and activates health information between pharmacies, payers, pharmacy benefit managers, physicians, hospitals, health information exchanges and health technology firms. By providing information for routine, recurring and emergency care, Surescripts is committed to saving lives, improving efficiency and reducing the cost of health care for all. For more information, go to [www.surescripts.com](http://www.surescripts.com) and follow us at [twitter.com/surescripts](https://twitter.com/surescripts).

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