

IMPACT

Real results for today's hospitals.



Renowned Patient Safety Advocate Spearheading Medical Division



In September 2008, Suzanne Delbanco, Ph.D., joined Arrowsight as President of its Health Care Division. Suzanne is working to introduce Hospital Video Auditing (HVA) to the health care community, starting with a focus on hospitals and critical care.

Highly regarded in the health care industry for her work to improve patient safety and the quality of health care, Suzanne was the founding CEO of The Leapfrog Group — a national organization driven by major employers and other health care purchasers focused on breakthrough improvements in the safety, quality and affordability of care. Regularly listed by *Modern Healthcare* as one of the “100 most powerful people in health care,” along with her duties at Arrowsight she also sits on the Advisory Committee to the Director and the National Biosurveillance Advisory Subcommittee of the Centers for Disease Control and Prevention (CDC).

In the following interview, Suzanne discusses how HVA provides the industry with an innovative approach for reducing medical errors.

Q: How does Arrowsight Medical help hospitals?

Arrowsight Medical helps hospitals improve the quality and safety of their care by using video to measure adherence to protocols and provide feedback on performance to hospital administrators, physicians, nurses and other clinical staff. The company's services, most notably Hospital Video Auditing, or “HVA”, enable health care providers to make significant reductions to the defect rate in the delivery of care.

This is a breakthrough on the patient safety front in two ways. First, video audits can measure practices that can only be assessed visually, where medical records and claims data provide no insight. Second, using video audits to capture performance provides much more dense and accurate data than do typical observational studies, which assess performance through a snapshot in time and the eyes of a single observer.

Q: What specific points of value does video auditing deliver?

HVA can monitor a wide range of mission-critical protocols spanning hand hygiene, central line insertions, prevention of pressure ulcers and falls and others. The value of video auditing comes from its ability to accelerate patient safety dramatically and cost effectively in just weeks — as well as to sustain improvements over the long term.

After Pilot Program Yields Sustainable Improvements, Arrowsight Moves to Larger-Scale Implementation at Major Academic Medical Center

In its first health care pilot at an outpatient surgery center in January 2007, Arrowsight Hospital Video Auditing (HVA) — a system of video-based monitoring, assessments and reports — improved hand-hygiene performance rates from 38% to 90% within two months, and sustained those levels throughout the 12-month pilot. Now, Arrowsight Medical has implemented HVA in a well-known academic medical center with similar results.

With the industry's average rates of hand hygiene compliance stuck well under 50%, hand hygiene could use improvement in any part of the hospital; but the stakes are arguably highest in the Intensive Care Unit (ICU). This academic medical center worked with its infection control and medical ICU teams to define the specific hand hygiene protocol to monitor for compliance in the medical ICU, namely: doctors and nurses and other health care workers must sanitize their hands upon entering and exiting a patient's room.

The HVA methodology for hand hygiene entails:

- **Implementing Data-Capture Systems.** Arrowsight video cameras avoid patient views by focusing on hand hygiene stations (sanitizer dispensers and sinks). Once installed, the cameras are connected to laser triggers in the doorways of patient rooms and record activity onto digital video recorders (DVRs).
- **Compiling Baseline Data.** Once the hardware is installed, the hospital collects baseline data on hand hygiene practices. In addition, infection control leaders train ICU staff on both the hand hygiene protocol and the methodology with which Arrowsight gathers data on performance and provides feedback to staff.
- **Providing Feedback.** After the hospital completes its baseline data collection, Arrowsight provides regular feedback at multiple levels on clinician compliance with the hand hygiene protocol. For example, the nurse managers and attending physicians get email updates one-quarter of the way into each shift letting them know, room by room, the rate of compliance with the hand hygiene protocol. These reports also include aggregate data that separately document the performance of physicians and other health care workers. Further, these intra-shift emails include comparative trailing one-, seven- and thirty day-averages by room.
- **Deploying Near Real-Time Results.** In addition, an electronic LED (Light Emitting Diode) scoreboard is mounted in a fully visible location in the ICU that updates current shift statistics at a near real-time interval (every ten minutes), as well as comparative statistics for the current week and month.
- **Summarizing Performance.** For use by supervisors, Arrowsight also summarizes statistics each week and each month, including performance data by room, day of week, time of day, and comparing performance under each nurse manager and attending physician to their peers.



Rapid Improvement and Sustained Results

During the first few weeks of feedback, staff compliance with the hand hygiene protocol jumped significantly. In less than two months, staff members achieved the target of 90% performance. Ongoing feedback has been able to sustain the high performance scores in many implementations of Arrowsight's methodology, both in health care environments and across other safety-sensitive industries.

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HVA METHODOLOGY

Implement System



Compile Baseline Data



Provide Feedback



Deploy Near Real-Time Results



Summarize Performance

How It Works

In partnering with hospitals, Arrowsight provides full-service support from hardware installation to data analysis and feedback.

First, video cameras that are linked to Digital Video Recorders (DVRs) capture activity. Then, in Arrowsight's Network Operation Centers, the company's auditors —assisted by user-friendly web tools — sample and view activity and rate it according to protocols that are defined by each hospital.

Finally, the auditors provide near real-time feedback to workers on their performance while on the job.

... continued from page 1

Q: How has HVA improved patient safety and reduced hospital-acquired infections (HAIs)?

According to the CDC, recent studies place hand hygiene adherence in hospitals at between 29% and 48%. What's the connection between hand hygiene and hospital-acquired infections? A study from Geneva, Switzerland, for example, showed that when adherence to hand hygiene protocols in the hospital increased from 48% to 66% (a 28% increase), hospital-acquired infections dropped from 16.9% to 9.9% (a 42% decrease).

Given that hand hygiene is critical to preventing the spread of infections in hospitals, current hand hygiene practices are untenable and unacceptable to both patients and those who pay for health care.

In Arrowsight's first health care pilot, launched at an outpatient surgery center in January of 2007, HVA improved hand-washing compliance from 38% to 90% within two months, and kept it above an average of 90% for twelve months running. This is the level of performance a hospital or health care system must maintain and demonstrate to be able to say that it is safe.

Q: What were the driving factors in your decision to move from a more general advocacy role to one in which you are working on a specific approach?

I'm privileged to have helped enhance the quality of health care already in my career. Yet, in spite of the all the talk about improving patient safety in hospitals, I haven't seen as many real strides as I hoped. After looking far and wide, I found Arrowsight's methodology

to be the most compelling — it not only accelerates improvement, it sustains it. This is the difference between talking about change and using the tools at hand to make an enormous and lasting difference.

I also really appreciate having a position that allows me to continue my mission to improve the quality and safety of health care for a company vested in seeing its clients experience positive outcomes.

PatientSafetyFocus.com

An Online Resource for the Health Care Industry



In early 2008, Arrowsight launched Patient Safety Focus.com, an online resource to deliver news and commentary on efforts to improve the safety and quality of health care. Due to the volume and time-sensitive nature of developments in the health care industry, we determined that a blog format — updated several times weekly with brief postings — best fit the needs of our busy readers spanning hospital administrators, physicians, insurers, patient safety advocates and the media.

We invite you to learn more at www.PatientSafetyFocus.com. You can also subscribe to our RSS feed or sign-up to have posts delivered directly to your inbox.

Improving Patient Safety is Arrowsight's Focus:

- Up to **98,000 Americans die** each year from infections acquired in a hospital.
- There are an estimated 1.7 million hospital-acquired infections each year — the **sixth leading cause of death nationally** — a number higher than motor vehicle accidents (43,458), breast cancer (42,297), or AIDS (16,516).
- Between **5% and 10% of patients** admitted to acute-care hospitals acquire one or more infections during their stay.
- **One in five Americans** (22%) report that they or a family member have experienced a medical error of some kind in a doctor's office or hospital.
- Hospital-acquired infections (HAIs) cost the health care industry **\$6 billion annually**.