

Wise Regional Health System Automates Patient Documentation to **Save Time, Improve Care**

Wise Regional Health System operates a state-of-the-art cardiac catheterization laboratory, a full-service dialysis center and one of Texas' best-equipped emergency departments among hospitals its size. Yet this impressive facility was needlessly spending countless hours manually charting patient data. Recognizing the need to streamline its clinical workflow, Wise Regional chose a clinical automation solution developed by iSirona.

A Less-than-optimal Reporting Process

Prior to implementing iSirona, monitor technicians printed tables from the central monitor displaying a patient's vital signs at a minimum of every four hours. They would then insert the report into the patient's paper record. At the end of the shift, they would insert an additional report that included blood pressures into the patient's paper record. In addition, the nurses were required to manually enter the patient's temperature into Siemens MedSeries4 Clinical Suites (MS4), either at the time the reading was taken or later via transcription from a piece of paper. Because the physicians practice at the time was to review patient data from the paper record, the nurses also would write the temperature on the patient's paper record.

Recognizing the inefficiencies of the process, Wise Regional contracted with a third-party consulting firm to document the amount of time nurses spent charting patient data. They discovered that nurses spent two and one-half hours of a 10-hour shift documenting—a staggering 25 percent of their time.

Today's Clinical Workflow: An Advanced Approach

Armed with this data, Wise Regional selected a clinical automation solution from iSirona. Today, iSirona technology is being used in the Intensive Care Unit (ICU) and Cardiac Vascular Unit (CVICU), automating patient data collection for Fukuda Denshi patient monitors through central stations. Wise Regional is using an inbound ADT interface from MedSeries4 (MS4) for positive patient identification and an outbound interface to deliver patient data to MS4.

In the current workflow, the nurse logs into MS4 and selects the appropriate patient. The nurse then selects the iSirona menu option to associate the patient monitor. From this point forward, all patient data generated by the device is captured electronically for documentation at required intervals. Once the nurse has authenticated the data, it is viewable within MS4 for review and clinical decision-making.

The effect to the clinical workflow is that monitor technicians no longer have to print vital sign and blood pressure reports from the central monitor for inclusion into the patient’s paper chart. In addition, patient temperature is recorded at the time of authentication, saving the steps of having to document on paper for later recording into MS4.

The amount of time nurses spend documenting has dropped from an average of 25 percent to an

estimated 15 percent, which equates to a time savings of 10% or one hour per nurse over a 10-hour shift. Nurses also report an improvement of five percent in the amount of time they are able to spend delivering direct patient care. The result: higher-quality care and improved patient outcomes.

The average amount of time elapsed between generation of data by a patient monitor to when it is authenticated in MS4 has dropped significantly, from an average of 12 hours to two hours. This decrease in latency greatly improves the timeliness and availability of data for clinical decision-making. Additionally, nurses and physicians interviewed believe that the quality of patient data in the clinical system has gone from a five to a nine (with 10 being the highest-quality data possible).

A summary of the effect on clinical workflow, quality care and patient safety:

EFFECT ON CLINICAL WORKFLOW, QUALITY CARE AND PATIENT SAFETY	KEY METRICS	CLINICIAN TYPE	BASELINE (PRE-ISIRONA)	IMPROVEMENT (POST-ISIRONA)
Amount of time spent charting/documenting	% of time nurses spend charting/ documenting patient device data	Nurse	25%	15%
Data latency	Amount of time elapsed from when patient data is generated by a device and when it is validated in clinical system	Nurse	12 hours	2 hours
Time delivering patient care	% of time spent delivering direct patient care	Nurse	80%	85%
Quality and availability of patient device data	One a scale of 1-10, how would you rate the timeliness, accuracy and breadth of patient device data available in clinical systems?	Nurse	5	9
		Physician	5	9

Additional Improvements to the Process

Prior to iSirona, monitor technicians needed to print out patient vitals from the central monitor at a minimum of every four hours per patient. With a total of 20 beds in the ICU and CVICU, monitor technicians printed at least 80 reports in an eight-hour shift. Since implementing iSirona,

monitor technicians are no longer required to print out the patient vitals, leaving them significantly more time to focus on monitoring the patients on telemetry units and interpreting ECG strips.

A summary to the effect on workflow:

EFFECT ON CLINICAL WORKFLOW, QUALITY CARE AND PATIENT SAFETY	KEY METRICS	CLINICIAN TYPE	BASELINE (PRE-ISIRONA)	IMPROVEMENT (POST-ISIRONA)
Amount of time spent charting/documenting	% of time monitor technicians spend charting/documenting patient device data	Monitor technicians	25%	15%
Data latency	For monitor technicians: amount of time elapsed from when patient data is generated by a device and when it is validated in clinical system	Monitor technicians	4 hours	0 minutes

Improved Efficiencies and Patient Care

Wise Regional is realizing significant benefits since improving its clinical workflow in the ICU and CVICU. By automating patient documentation from its Fukuda Denshi patient monitors, the health system’s documentation demands have been greatly reduced, saving each nurse an average of one hour per shift. Those reduced documentation demands in turn allow nurses to spend an average of 30 additional minutes per shift delivering direct patient care. In addition,

the efficiency improvement for monitor technicians is drastic—virtually eliminating the need to print vitals reports for inclusion in the patient’s record. Thanks to automated patient documentation, Wise Regional nurses and monitor technicians are able to spend more time focusing on what they do best—delivering high-quality patient care.

iSirona has made a vast impact on patient care in the ICU. Documentation has been made easier as I am able to access information right at the bedside.

—Stephanie Brown, RN

About Wise Regional Health System

Wise Regional Health System provides a wide range of inpatient and outpatient services to a service area that includes Wise, Jack and Montague counties. Wise Regional operates 148 acute-care beds in two facilities in Decatur, Texas. Wise Regional operates a state-of-the-art cardiac catheterization laboratory, a full-service dialysis center and one of the best-equipped emergency departments in a hospital its size in Texas. The new main hospital, licensed for 99 beds, opened in August of 2006 with the most advanced acute-care equipment available. Wise Regional also operates rehabilitation and psychiatric facilities in its newly renovated West Campus. It should also be noted that Wise Regional was one of the first hospitals in Texas to receive the highly prestigious Nurse Friendly Hospital designation from the Texas Nurses Association. For more information about Wise Health System, visit www.wiseregional.com.

The nurses like the ability to access the interface through our Clinical Suites charting without having to go out to another system. The ease of authenticating the information is great and being able to comment at that time on a vital sign change has saved time with charting it elsewhere in the notes."

– Pam Martin, ICU Director

About iSirona

Panama City, Florida-based iSirona (www.isirona.com) develops clinical automation solutions for healthcare. The iSirona Enterprise™ product suite delivers medical device data from bedside and mobile devices to clinical information systems, simplifying the process of patient data collection. iSirona accelerates return-on-investment by streamlining workflow and maximizing IT investments. Uniquely positioned to deliver the most robust solution, iSirona guarantees delivery of accurate, timely and complete patient data.



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