

Performance Strategies



10 Years After IOM Report: Protecting Patient Safety & Reimbursement

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Regional West Uses Analytics to Improve Safety and Protect Reimbursement



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Using Data to Drive Change and Compliance to Prevent Adverse Drug Reactions

Although [Regional West Medical Center](#) is a small hospital serving a largely rural population, we've long had a strong commitment to using technology to improve clinical processes. As these solutions generated increasing amounts of data, we began looking at how it could be used to improve processes in ways that increased patient safety and financial performance.

One of the processes we've focused on is medication safety surveillance. Reducing adverse drug events (ADEs) is not only good for patients, but vital for the financial health of our organization. More and more payors and regulatory agencies are demanding that we identify and prevent serious, costly and preventable medical errors such as the National Quality Forum's list of "never events." Agencies and payors are enforcing these demands by withholding reimbursements.

Knowledge of the Facts is Power

Our medication surveillance began with the realization that our stakeholders had no ready means for accessing ADE or never events data in a format they could use and understand. We had to provide a view of the data that was easy to understand. Users also needed the ability to drill down to a specific medication and nurse at a particular date and time while also having access to a broader view of the hospital and health system.

The result became an [analytics](#) initiative that identified key measures of performance and then aggregated disparate sources of data into actionable medication safety scorecards. Now anyone in our organization can evaluate root cause or identify a best practice — from department managers and nurses to our board chairman.

With the data in hand, stakeholders can drill down from the department level all the way to the individual nurse in the nursing unit. We can even assess how individual personnel are performing with specific medications, and most importantly, flag suspected ADEs such as administering Naloxone to counter the effects of narcotic overdose.

As a result, we've been able to replace anecdotes with numbers. We can also measure the costs of ADEs both in terms of extra days patients spend in the hospital and extra dollars.

Steps to Safety

The first step was setting specific performance standards. A couple of years ago, we set a target of scanning 80% of medications. Now with more medications "bar-codable," we've increased the compliance level to 95%. Individual scanning data is posted, and each nurse who achieves this level is highlighted in pink and receives a compliance reward.

With performance standards in place, we then created a standardized and automated process for reviewing and documenting results, eliminating what previously had been a time-intensive manual process. A work list of adverse drug events, and the patient

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records in which they're found, is reviewed by our clinical pharmacist for reporting to a therapeutics committee. With insights into performance and trends, and the types of medication involved in ADEs, we can develop and fine-tune best practices for greater patient safety and reduced costs.

We're also tracking time-sensitive protocols. Five of our eight medication safety measures have improved to 100%. For example, "beta blocker at arrival" increased from 50% to 100%.

Scorecards Provide a Playbook

Scorecards enable clinicians to drill down into data to gain a clearer understanding of where breakdowns occur. From these encounters, we can quickly and easily correct problem areas and enhance best practices.

Analytics is playing an important role in enhancing compliance with [computerized provider order entry \(CPOE\)](#). Although overall compliance is just 40%, we've achieved a remarkable 100% rate by emergency department physicians. By analyzing data on medication errors in the ED, we've shown other clinicians the benefits of the solution in reducing errors.

Since we began this process a year ago, we've made rapid progress in achieving our goals. Like many healthcare organizations, we're seeking to increase patient safety and quality at a time when budgets are tightening and reimbursements are declining. With fewer resources to commit to manual processes, the cost effectiveness of automation becomes much more apparent.

Data that was once hidden in silos across the organization increasingly is available to those who need it the most and can use it to achieve the best outcomes. By bringing actionable information together for caregivers and managers, we are not only providing better care through greater patient safety, but we're also helping to ensure our financial stability by reducing errors, reducing costs and protecting reimbursements.

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Regional West Medical Center — Evidence-Based Reliable Care

Measure	Previous 5 Months					Current Month	Action Trigger
	Jun 2009	Jul 2009	Aug 2009	Sep 2009	Oct 2009		
Medication Administration							
Doses Administered	42,442	41,433	39,156	42,591	43,655	11,780	0.27 ✓
Percent Meds Barcoded	92.6%	92.8%	91.1%	92.6%	91.9%	89.6%	0.98 ✗
Narcotic Doses Administered	8,286	7,780	7,529	8,448	8,470	2,556	0.30 ✓
Percent Narcotics Barcoded	96.3%	95.6%	95.1%	96.5%	97.4%	97.1%	1.00 ✗
Percent Med Admin Overrides	19.5%	20.4%	21.3%	21.3%	20.5%	22.3%	1.09 ✗
Adverse Drug Events							
Confirmed ADE	21	19	18	23	‡	23	‡
Confirmed Preventable ADE	3	1	5	‡	‡	‡	‡
Preventable ADE Percent of Total	0.0228%	0.0073%	0.0293%	0.0000%	0.0000%	0.0000%	1.00 ✓
ADEs/1000 Doses - Preventable ADEs	0.07	0.02	0.09	0.00	0.00	0.00	1.00 ✓
Preventable ADE w/ Harm Count	0	0	0	0	0	0	1.00 ✓
Preventable ADE w/ Harm Percent of Total	‡	‡	‡	‡	‡	‡	‡
ADEs/1000 Doses - P. ADEs w/ Harm	0.00	0.00	0.00	0.00	0.00	0.00	1.00 ✓
Opportunity Cost: P. ADEs w/ Harm	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	1.00 ✓
Opportunity Days: P. ADEs w/ Harm	‡	‡	‡	‡	‡	‡	‡

The Regional West analytics scorecard for the five-month period since June 2009, shows it has not had an Adverse Drug Event (ADE) with Harm and has exceeded its goal for preventable ADEs in the same period (green checks). It has also improved to 100% compliance in five of eight medication safety measures and has achieved its goal of 95% in barcode administration compliance.

Learn More

[AHA: Hospitals in Pursuit of Excellence](#)

[AHIMA: Understanding HACs and SREs for Quality Reporting and Reimbursement](#)

[AHRQ: Patient Safety Primer for Never Events](#)

[IHI: What Zero Looks Like — Eliminating Hospital-Acquired Infections](#)