Fall 2009

Quality Report

A special report on quality improvement in Wisconsin hospitals

The Quality Landscape in Wisconsin Hospitals

The Wisconsin Hospital Association recently conducted a survey of hospital quality improvement (QI) managers in hospital settings. The survey was conducted in partnership with Aligning Forces for Quality, an initiative of the Robert Wood Johnson Foundation. In Wisconsin, Aligning Forces for Quality is a joint initiative by the Wisconsin Collaborative for Healthcare Quality and the Wisconsin Hospital Association.

In mid-April 2009, 138 QI managers in Wisconsin hospitals were asked to participate in the survey. Ninety-two acute care facilities participated, resulting in a response rate of 66 percent. Of the respondents, 51 percent were smaller hospitals (those with 1 to 25 beds), 32 percent were mid-sized facilities (up to 200 beds), and 17 percent had 200 beds or more. This is similar to the profile of Wisconsin hospitals overall.

Quality Improvement Knowledge and Engagement

Studies have shown that understanding the how-to's of quality improvement is key to the adoption of a continuous improvement orientation (1,2). This survey examined what the relative knowledge of QI might be among key stakeholder groups in hospitals. In addition, QI managers were asked to assess which groups are more, versus less, engaged in QI efforts (Chart 1). Compared to leaders in administration and clinical areas, it appears that staff nurses, other caregivers, and support staff are significantly less likely to be ranked as either very knowledgeable or very engaged (ranking 4 or 5 on a scale of 1 to 5).

Chart 1: QI knowledge and engagement in hospitals (% ranking 4 or 5 on a scale of 1 to 5)

Source: WHA Survey

Quality Methods

The most common QI method in use is the Plan-Do-Check-Act (PDCA) cycle. Increasingly, measurement-based approaches, such as Six Sigma, and process-focused approaches, such as Lean, are being adopted in health care (1,2).

While many hospitals use only one improvement method (typically PDCA or Plan-Do-Study-Act), the survey found that 62 percent use two or more methods. An additional breakdown of this data shows that hospitals using Lean/Six Sigma

varies by facility size: 32 percent of smaller hospitals, 52 percent of mid-size hospitals and 40 percent of large facilities employ a Lean or Six Sigma approach.

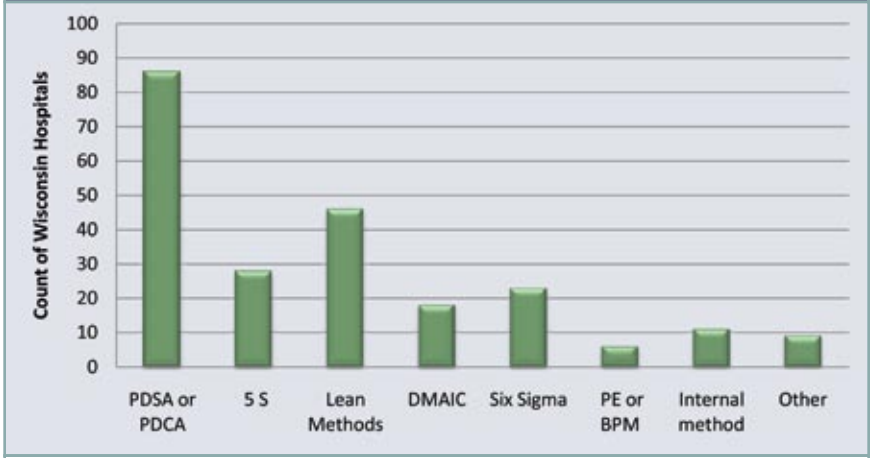
In addition to the improvement methods of choice, hospitals have numerous external drivers of continuous change (Chart 2). Other than compliance requirements, these include programs that are customer focused, outcomes focused, or development oriented efforts that are designed to drive enterprise-wide improvement and gain competitive advantage (Chart 3). Survey results show that 44 percent of responding Wisconsin hospitals also participate in programs beyond their compliance requirements.

Effective Improvement

Ask hospital senior leaders about their expectations for QI efforts that result in lasting change, and no doubt they would be high. A broad spectrum of business literature tells us that a high percentage of change efforts stall and are never fully realized (3). QI managers in this survey were asked "At your hospital, what would you say is the percentage of teams or projects that are successful in creating sustained change?"

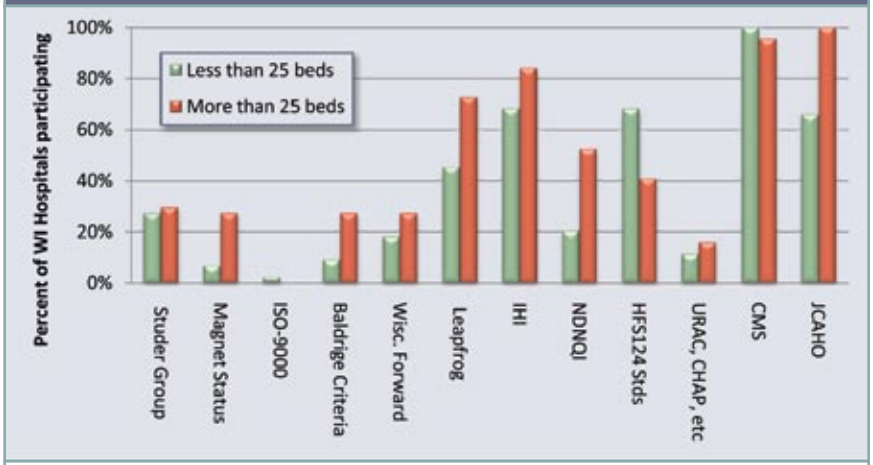
When the responses are calculated as an average, QI managers indicate that 67 percent of projects are successful in creating sustainable change (Chart 4). Although a standard benchmark does not exist, if a desired success rate of 80 percent or better is assumed, then only 30.2 percent of Wisconsin Hospitals, according to this survey, achieve that rate of success in QI initiatives creating lasting change.

Chart 2: Wisconsin QI managers survey QI methods in use



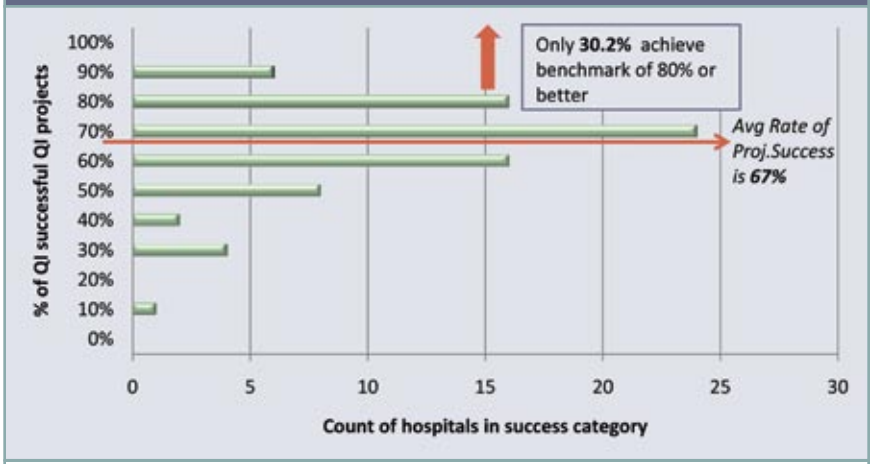
Key to QI Methods Abbreviations: ***PDSA*** *= Plan-Do-Study-Act;* ***5S*** *= Sort-Set-Shine-Standardize-Sustain;* ***DMAIC*** *= Define-Measure-Analyze-Improve-Control;* ***PE*** *= Process Engineering;* ***BPM*** *= Business Process Management*

Chart 3: Wisconsin hospitals' participation in state or national QI drivers



Source: WHA Survey

Chart 4: QI managers estimate of project success (success = % of projects resulting in sustained change)



Source: WHA Survey

Quality Improvement Success Factors

QI managers were asked to list their top three barriers to successful engagement of others in improvement initiatives (Table 1). The top barrier to engagement is staff time that can be devoted to participate in hospital improvement efforts. Less commonly identified were factors such as new processes and procedures that are not followed, teams not following a consistent improvement process, and lastly the visible support of management and leadership.

Table 1: Top three barriers to successful engagement in QI:
1) Staff having the time to participate in QI efforts.
2) Prioritizing improvement work along with many other duties.
3) Uneven understanding of QI across the hospital.

To assess factors for enhancing QI success, respondents were also asked to rate the likelihood that their hospital would incorporate key success factors (Table 2). These success factors are gleaned from a three year international study of 500 organizations' successful projects [3]. The study findings indicated that all of these factors are important in achieving successful adoption of changes. When further analyzing this survey data, only 27 percent of responding Wisconsin hospitals score high (defined as 4 or 5 on a scale of 5) on integrating at least six of these factors for success.

Table 2: Factors enhancing QI success How well does your hospital do each of the following:	Avg. Score (out of 5)
Hospital leadership supports and encourages QI efforts	4.29
Every project uses data so that actual improvement can be measured	3.58
Internal champions of improvement efforts are identified and involved	3.48
Successful improvement efforts are widely recognized in the hospital	3.39
All employees are encouraged to be involved in improvement efforts	3.37
Managers ensure that the work for improvement efforts is shared by many	3.36
Widespread communication about improvement efforts occurs at least monthly	3.21
There are specific strategies used to ensure that the change "sticks"	3.11

Time for Improvement

So how do we know, after this review of the quality landscape in Wisconsin, what "works" in quality improvement? In addition to having an educated and engaged staff, another factor is the percentage of daily work spent by staff working on QI. These findings may indicate that endorsing and supporting a defined time to participate in improvement activities is necessary. In this data, there was wide variation in the percentage of time QI managers report various constituencies have to apply to improvement efforts (Table 3).

Table 3: QI managers estimate of time dedicated to work on QI activities						
	Hospital Leadership	Nursing Leaders	Nursing Staff	Other Care Givers	Support Staff	Physicians
MEDIAN	**20%**	**25%**	10%	10%	10%	10%
ST DEV	±18.18	±17.67	±11.56	±11.30	±12.70	±14.63

When the percentage of staff time actively engaged in improvement efforts is cross-tabulated with the 80 percent project success benchmark discussed earlier, the data shows a difference when comparing better project success rates with lesser success rates (Chart 5).

Although there is recognition that having FTEs fully dedicated to working on improvement is a key piece of the puzzle, the question is often, "How many?" This survey provides some indication of the average number of fully dedicated QI positions by hospital size among respondents (Table 4). Nonetheless, in any hospital the number of people dedicated to QI is a very small proportion of the total workforce. Therefore, the need for an engaged workforce, educated in QI, is also important for an improvement based mindset to take hold [2].

Chart 5: Average percent work time engaged in QI vs. project success

Source: WHA Survey

Table 4: Wisconsin hospital average FTEs dedicated to hospital quality improvement

1.2	4.7	11.7
Smaller Hospitals (25 beds or less)	Mid-size Hospitals (up to 200 beds)	Large Hospitals (200 bed and up)

What is Next?

- Gather survey data from the staff nurses perspective on quality improvement.
- Offer resources to hospitals via WHA's Quality Resource website.
- Use survey feedback to design useful information, materials and services to assist hospitals in their effort to improve the efficiency and effectiveness of QI efforts across Wisconsin.

Coming in October 2009: The WHA Quality Resources Website

References:

1. *A Survey of Hospital Quality Improvement Activities, Alan B. Cohen et al. Medical Care Research and Review 2008 (65) 571.*
2. *Quality Improvement Implementation and Hospital Performance on Quality Indicators. Bryan J Weiner, et al. Health Services Research 2006 41:2, 307.*
3. *New Ways of Working in Hospitals. American Hospital Association publication 2008. Price Waterhouse Cooper study reference: http://www.healthcareworkforce.org/healthcareworkforce/content/nww-res-s9b.pdf*