Strategic Investments in the Operating Room (OR): Information Technology (IT) to Generate Rapid ROI and Long-Term Competitive Advantage

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The current economic downturn has not spared hospital organizations. With capital markets inaccessible to many hospitals, the financing for major investments and physical plant expansions is suddenly unavailable. Additionally, income from hospital endowments, which is often dependent on equity investments, has been dramatically reduced. All of this has occurred within a very short timeframe, giving hospitals little time to react and prepare for this economic downturn; the end of which is not clearly in sight. In some markets, demand for elective surgery is down as much as 30% as patients either postpone surgical decisions based on a lack of insurance coverage or fear that a medical leave will jeopardize their current employment. Overall hospital volumes are down 10%–20% in many areas as well.

The recently passed economic stimulus for healthcare and especially the $19 billion for adoption of an electronic medical record may offer hospitals some funding relief in the long term, but initial funding for hospitals will not begin until 4th quarter 2010. In addition, the regulations for determining funding and eligibility could still be altered as the “rules” are crafted and the Obama administration defines new priorities.

Long-term assistance may be on the way, yet demands on hospitals remain high for now and the foreseeable future. These demands include the need to maintain a high level of quality, operate ever more efficiently, continue with patient safety initiatives, comply with regulatory requirements and attract and retain talented clinicians. Certainly, this is not a time for “business as usual” and it offers a real opportunity for renewed leadership, strategic vision and action.

The traditional response to tough economic conditions is to put current project expenditures on hold or to implement an “across-the-board” belt-tightening budget process (“Every department needs to reduce their expenditures by 10%”). This latter approach, while appearing straightforward and fair, may have unintended consequences. Failure to act strategically can eliminate the opportunity to drive near term Return on Investment (ROI) advantages, while positioning hospital organizations to miss out on long term strategic benefits once economic recovery occurs. But where can an organization begin to effectively navigate through these unprecedented times?

One sound approach involves a back-to-basics look at the economic underpinnings of the organization. The perfect example is the hospital operating room (OR). According to recent HFMA studies, today’s OR is the
economic engine of most hospitals - accounting for up to 60% of a hospital’s revenue and some 35%-40% of the hospital’s expense. Over 60% of the hospital’s margin typically comes from surgical patients. Based on data from DJ Sullivan Healthcare Consulting’s database of 700+ ORs, each empty but open OR suite costs a hospital an estimated average of $1,000 per hour (including pre/post op staffing and anesthesiology costs). The OR is also a primary source of up to 50% of hospital-based errors. The impact of the OR is felt well beyond the perioperative department, according to the AHA’s Quality Center, “Because the OR is a primary source of admissions, it is virtually impossible to streamline hospital-wide flow without first streamlining patient flow through the OR. Smoothing patient flow in the OR will help eliminate ambulance diversions, reduce overcrowding in the emergency department (ED), decrease the number of patients who leave the ED without being seen and improve staff morale.”

An inefficient OR will invariably result in a poorly performing hospital. According to George Masi, Executive Vice President and Chief Operating Officer of Harris County Hospital District in Houston, Texas, “The perioperative department is at the heart of the hospital’s economic well-being. When it is properly managed using the right information technology tools it can quickly and dramatically improve the hospital’s bottom line. Poorly managed ORs without the right Information Technology (IT) in place, can be devastating to the entire enterprise.”

The OR is a highly complex service area commanding highly compensated clinicians and support staff as well as some of the most expensive equipment and devices found anywhere in the hospital. As a result, the work flow of the OR arena from scheduling to final billing is often not well understood throughout the rest of the hospital and the OR has often been referred to as “the hospital within the hospital”.

Optimizing the performance of the perioperative department through a combination of financial, operational and clinical initiatives can significantly improve performance of both the perioperative department and the hospital. This idea was underscored by Mary Jo Harrington, Director of Surgical Services for HealthEast Care System in Minnesota, “With our information and patient tracking systems, surgeons have needed information at their finger tips. Our tracking system provides instant communication—surgeons arrive and look at the board to see where their patient is, what OR they are operating in and which staff are taking care of their patient. This saves many phone calls and greatly reduces surgeon frustration”.

Through the use of new perioperative information systems coupled with improved work flow processes, hospitals can expect the following improvements in their OR:

1. More accurate scheduling resulting in (a) less procedures occurring during unscheduled times at the end of the day and (b) a more rational schedule
2. Increased on-time case starts due to an effective pre-surgical screening and documentation so that surgeons and staff waste less time

3. Improved quality of care and patient experience by reducing redundant assessments and repeating data collection through an integrated digital record

4. Preference cards maintained on actual usage not “what was used last time” so that the case time is not elongated due to missing equipment or supplies and wasted supplies are minimized to reduce cost

5. Documented cost-per-case averages to offer greater access to surgeons with higher margin case mixes

6. Generated comparable metrics showing cost-per-case by surgeon by procedure so that standardization decisions can be made based on full information and not just purchasing data

7. Published empirical performance outcomes to demonstrate quality and efficiency to other surgeons and the community using analytics and business intelligence tools

8. Web access to create a path of least resistance for surgeons and their offices

9. Consistent and predictable surgical days for which everyone can plan

10. Integrated Anesthesia record driving increased efficiency, charge capture, and safety

This information can be used to determine what types and mix of surgical procedures can result in better economic performance or if the hospital should be in that particular business at all. By redefining workflow processes and using these automation tools, long term improvements in financial and clinical performance can be achieved.

To enable hospitals to make an investment in focused perioperative technologies during the current economic downturn, some healthcare IT vendors have already announced special subscription pricing models that enable hospitals to fund such initiatives from operating budgets rather than capital budgets that may be currently on hold. This approach can result in hospitals reducing annual expenses for these investments by spreading payments over a longer time horizon, enabling them to realize a positive ROI even more quickly.

Much attention has been given to the future reimbursement models of healthcare in the US. No one knows for sure what is in store, but one principal is for certain: highly efficient, highly safe organizations will continue to garner revenue and support and thus drive higher volumes. Proving efficiency and safety will be paramount as we evolve our payer system.
**Surgeon and OR Staff Recruitment and Retention**

Another strategic consideration for moving forward with an investment in perioperative IT is that it can be a powerful motivator in attracting both talented surgeons, residents, OR nurses and other OR staff. With competing hospitals cutting “across the board”, forward thinking organizations can use this investment as a way to dramatically enhance their attractiveness. Moreover, improving the speed and ease with which physicians can use services drives current physician loyalty and can turbo-charge recruitment of surgeons.

According to James Pennington, Chief Information Officer, JPS Health Network, located in Ft. Worth, Texas, “Our hospital has long been a preferred institution for incoming residents due to its diverse levels of patient acuity, service lines and our use of advanced technology. We recognize that top new residents understand the benefits of advanced IT solutions in the provision of care and expect them to be available. We plan to deliver leading edge perioperative solutions to continue to attract these top physicians for their residency”.

Since the reimbursement for the majority of surgical procedures is often based on a fixed (DRG) reimbursement rate and the hospitals costs are variable, the opportunity to generate a greater margin is created with improved efficiencies. These efficiencies are substantial and lead to less “friction” in the care and service process. The potential gains are not limited to cost reduction and efficiency; we must also look at increased revenue generation. One way to dramatically increase OR revenue is to attract surgeons with high volume practices from competing hospitals.

The Centers for Medicare and Medicaid Services (CMS) reports that the average surgeon reimbursement from Medicare has decreased by some 7% over the last three years, resulting in surgeons seeking hospitals that can demonstrate efficiencies that will enable them to maximize volume and revenue for themselves and consequently the hospital. We believe that if the following key considerations are met, surgeons will be willing to consider moving their OR schedule to a different provider:

1. Referral patterns from primary care and other surgical physicians are not disrupted
2. Ability to perform at least one more procedure per day
3. Improvement in life style (earlier leave times, reduced extended hours, assisted by a reliable and competent team)
4. Regular access to OR time using an easy, repeatable process (e.g. guaranteed block times)
5. High satisfaction ratings from patients relative to their hospital experience
While the above factors are influenced by several variables, the use of a robust information system that is well integrated into the workflow of a perioperative department can be a key underpinning in recruiting (and retaining) talented surgeons and increasing volume.

In addition, a perioperative information system can go a long way in helping recruit new physicians who have grown up in a digital age and are expecting ever greater levels of automation in their practices. Experienced OR nurses, a scarce resource in many communities, are also attracted to perioperative departments that demonstrate a commitment to new information technology that supports the nurse through minimized data input, charting by exception, tailored data collection based on the complexity of the case instead of adding to workload, and moving the focus of the nurse from data entry to patient care.

**Conclusion**

This is a time for leadership. Recognizing the perioperative department as the economic engine of the hospital offers many opportunities for change that can result in quick economic wins. Prioritizing this area to ensure the ability to gain and maintain economic advantage is a critical step. A robust perioperative system is one of many improvements that can be made relatively quickly with significant and early ROI payback. The strategic long-term benefits can be even more significant. While such investments may seem counterintuitive in challenging economic times, they can in fact result in both tactical and strategic advantages that will lead to financial success for the organization.

To take on this initiative, support from senior management is essential. It requires focus, team work, leadership, and the final key ingredient – courage. However, those organizations that do make the decision to proceed with these initiatives increase their chance of not only surviving in the days ahead, but also thriving.

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