Cost Cutting in Health Systems Without Compromising Quality Care

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Summary • Intermountain Healthcare is a high-performing health system and a recognized leader in quality improvement. We use a clinical integration strategy focused on eight clinical programs to support the practice of evidence-based care. Accelerated improvements that enhance patient safety, clinical excellence, and operational efficiency are tested and then spread across the system via care process models and program-specific board goals. While we have nearly 60 evidence-based care process models in place (in addition to multiple operational effectiveness initiatives), we provide three exemplars to illustrate cost savings and the relative impact on hospital/medical group versus payer benefit. These clinical best practices include very early lung recruitment (VELR) for neonates with respiratory distress syndrome, guidelines for elective inductions in labor and delivery, and prevention of congestive heart failure (CHF) readmissions. Due to perverse incentives in the third party payment system—where healthcare providers are often paid to do more tests and treatments as opposed to providing clinical value—doing what’s right for our patients commonly yields savings to our payers while negatively impacting the delivery system budget. In this article, we present a suggested strategy for negotiated capture of these savings.
Opportunities exist in many hospitals and health systems to consistently provide an extraordinary patient care experience while reducing operating costs.

Introduction and Overview
The purpose of this article is to discuss healthcare efficiency improvement initiatives that can be implemented in ways that will not compromise quality outcomes. Clinical outcomes data at Intermountain Healthcare suggest that quality can actually be enhanced when some cost drivers—particularly those associated with intracase utilization management—are appropriately minimized and standardized within the context of providing value-driven healthcare. Opportunities exist in many hospitals and health systems to consistently provide an extraordinary patient care experience while reducing operating costs. Recognizing and appreciating that structure follows strategy, the organization that builds a continuous learning and performance improvement culture is in a better position to design an organizational structure that sustains progress toward clinical and operational improvement goals.

Hardwiring: The Organizational Design to Make and Sustain Change
Intermountain Healthcare has been recognized as a national leader in high-performance healthcare delivery (Bohmer 2009; Staines 2009). Three foundational elements contribute to Intermountain’s performance, as Exhibit 1 shows: clinical integration, quality improvement (QI) training, and information systems.

These infrastructure elements, together with leadership support, act as a catalyst for culture change.

Clinical Integration
As part of its vision, Intermountain Healthcare is committed to delivering the best clinical care at the lowest possible cost and to always improving through innovation and evidence-based practice. Visionary leaders identified a limited set of common workflows around which integrated clinical programs were embedded in the organizational structure in the 1990s. The development of evidence-based care process models (EB-CPMs) at Intermountain Healthcare is anchored in our clinical programs—primary care, pediatrics, women and newborns, intensive medicine, cardiovascular, surgical services, oncology, and behavioral health. Each clinical program is staffed with a medical director, a nurse administrator, a statistician, and a support team that includes information technology and finance personnel. Clinical program workgroups identify problems and work to develop, test, and implement EB-CPMs in a phased approach as warranted. Bohmer (2009) provides a detailed description of clinical programs and the role of the Institute for Health Care Delivery Research. However, EB healthcare does not spread automatically (Dopson and Fitzgerald 2005). As Bohmer (2009) and Staines (2009) describe, Intermountain Healthcare provides three key factors: (1) a supportive infrastructure and culture for improvement, (2) commitment from leadership and executive sponsorship, and (3) neces-

Exhibit 1: Mission Critical Support for Performance Excellence

- QI Training
- Clinical Integration
- Information Systems

Foundation for Performance Excellence
Quality Improvement Training
Intermountain Healthcare has made a major, lasting investment in quality improvement training. One of the most significant investments occurred in 1990 with the establishment of the Institute for Health Care Delivery Research, which began to offer internal education programs under the direction of Dr. Brent James. In 1992, the first advanced training program (ATP) in healthcare delivery improvement was offered to senior managers. It was followed two years later by a course for physicians called “An Introduction to Clinical Quality Improvement.” This 20-day course was followed by a 9-day mini-ATP course in 1999 and “A Culture of Patient Safety” for physicians in 2005. The institute currently offers half-day, 2-day, 9-day, and 20-day courses for internal and external participants. Specialized frontline staff training—with 100 percent participation—is offered via a series of 20-minute modules on DVD. To date, nearly 400 Intermountain staff and over 1,700 external participants have been trained on the tools and concepts needed to conduct state-of-the-art clinical practice improvement projects, use QI methods to manage and integrate nonclinical processes, implement QI programs, and conduct internal QI training.

Information Systems
Intermountain has a highly developed electronic medical record (EMR) system. Our homegrown system is linked with clinical ancillary, billing, case mix, and administrative data via an electronic data warehouse (EDW). The EDW provides the capacity to create registries that generate reports to support population-based management. Responsible, clinical program work groups or medical directors review population-based reports to look for outliers and opportunities for improvement. Physician acceptance of the EMR has been high because it incorporates EB-CPMs and decision support tools that make it easy to do the right thing. This is a conscious component of Intermountain’s strategy as a learning organization with a mission of performance excellence.

The Importance of and Strategies for Cost Cutting
The New Normal
One of the fundamental building blocks of effective healthcare management is an ongoing and consistent commitment to expense reduction in its varied forms. Expense management took on a new meaning in late 2008, as credit markets roiled the industry. For many hospitals, traditional financing for construction and other business operations became exorbitantly expensive or evaporated altogether. Simultaneously, patient utilization declined, charity care and bad debt increased at unsustainable rates, and we witnessed usual declines in federal and state government reimbursement. CFOs around the industry began referring to the altered operating environment as “the new normal.” The feeling is reminiscent of the scene in The Wizard of Oz when Dorothy says, “I’ve a feeling we’re not in Kansas anymore.”

Our experience demonstrates that you can cut operating costs and still improve clinical outcomes, service excellence, and physician and employee engagement. Like other healthcare systems responding to a
Our Commitment to Affordable Healthcare

While meeting with a local legislator who is also a small business owner, I asked this gentleman to describe his greatest concerns about his business. Without hesitation, my friend responded, “My three greatest business concerns, relative to healthcare, include costs, costs, and costs.” He went on to say that people in our community expect quality care, nice buildings, and state-of-the-art equipment, but they are tired of the significant increases in insurance premiums that hit them year after year and are fed up with high and stressful hospital and medical bills. This business owner also expressed his resentment with the cost-shifting practices that routinely occur and exclaimed, “I am willing to pay my fair share, but I don’t appreciate having to pay for all the charity care and government shortfalls, too.” Our conversation then turned to specific tactics hospitals are employing to keep healthcare more affordable, including supply chain management, staffing best practices, patient flow initiatives, Financial Assistance and Improved Registration (FAIR) initiatives, and tightly managing discretionary expenses. I told him that being part of a large, integrated delivery system was a tremendous benefit in learning best practices from others and then implementing such practices—both clinical and operational in nature—in a standardized manner among all 23 Intermountain hospitals, our employed physician group (Intermountain Medical Group), and our insurance division (SelectHealth).

My friend seemed satisfied, and even impressed, with our organizational commitment and high engagement in keeping healthcare affordable. Then we discussed the impact of these cost-cutting measures, and he inquired about any unintended consequences relating to quality outcomes. It was a pleasure to discuss with him the use of the organizational balanced scorecard that demonstrates a number of favorable outcomes relating to clinical and service excellence. It was acknowledged that leadership is both an art and a science, and that it’s incumbent on healthcare leadership to find the “performance sweet spot” where value added is truly realized. I showed my friend that, despite our organizational weaknesses, we are a learning organization and we have a few success stories relating to the organization-wide commitment to clinical and operational process improvement.

—David D. Clark

difficult economic environment, Intermountain Healthcare has challenged past assumptions (e.g., staffing ratios, premium pay, revenue cycle management, supply chain management, patient registration and financial assistance process), solicited input from our volunteer board members and community advisory councils, and made improvements in operational efficiency. Through a strong focus on management development and enhancing operational effectiveness, Intermountain has reduced salaries, supplies, and discretionary expenses—as a percentage of net revenue—a favorable trend we have continued since 2006. For example, salaries were reduced by 0.4 percent and 1.5 percent in 2008 and 2009 respectively.
this sentiment well when he said, “You never want a serious crisis to go to waste. And what I mean by that is an opportunity to do things you think you could not do before.” Intermountain Healthcare can and is aiming higher while targeting marked improvements in employee and patient satisfaction. In the past few years, it has been demonstrated that improving efficiency and increasing employee satisfaction are mutually compatible goals. Employee engagement surveys (as measured by Gallup in a 2010 survey for Intermountain) improved from 2009 to 2010, despite numerous initiatives to reduce cost and improve operations.

Fitch Ratings (2010) recently reported that hospitals improved financial performance in 2009 due to increased focus on cost control and expense management. While this is commendable, sustained viability over the long run will require substantive changes not rewarded in today’s system of reimbursement. As Dr. Atul Gawande (2009) noted, the current system rewards “quantity, not quality.” Moreover, to reach the continuous goal of improving the patient’s health status, Intermountain has, for years, made improvements to clinical processes (and therefore outcomes) that have come at the expense of financial remuneration for hospitals. However, because of the value of an integrated delivery system with closely aligned incentives, Intermountain recognizes and appreciates the value proposition for communities. As the system board and leadership emphasize, the focus is on what is best for the individual patient in terms of access, cost, and quality. By putting the patient first and providing appropriate care that maximizes value, the entire community and the organization are better off.

(see Exhibit 2). With the assistance of key physicians, Intermountain continues to tackle device, implant, and infrastructure cost reductions through aggressive supply chain initiatives designed to maximize purchasing power and significantly reduce waste across the entire organization. The organization has improved patient flow and partnered well with community long-term acute care hospitals, skilled nursing facilities, and our homecare division to place patients in the most appropriate care settings. Additionally, Intermountain Healthcare has either established our own community- and school-based clinics or provided financial assistance to strengthen existing community clinics that provide preventive and primary care, especially to low-income households. As community access to primary care resources increases, overall healthcare costs have been decreased through avoiding more costly emergency department admissions while delaying expensive capital projects.

Unlike years past, the recent recession has provided an environment more amenable to farther-reaching efficiency goals. Rahm Emanuel (2008) articulated this sentiment well when he said, “You never want a serious crisis to go to waste. And what I mean by that is an opportunity to do things you think you could not do before.” Intermountain Healthcare can and is aiming higher while targeting marked improvements in employee and patient satisfaction. In the past few years, it has been demonstrated that improving efficiency and increasing employee satisfaction are mutually compatible goals. Employee engagement surveys (as measured by Gallup in a 2010 survey for Intermountain) improved from 2009 to 2010, despite numerous initiatives to reduce cost and improve operations.

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Operations Management: Focus on the Patient
Dr. Charles Sorenson, Intermountain’s president and CEO, has encouraged and inspired employees and physicians:

We are engaged in a noble and tremendously important endeavor—helping others regain and retain their health. We need to be a learning organization in order to truly succeed in this effort. First, we need to accurately measure how we’re doing and be willing to recognize we’re never really as good as we think we are. Then we need to carefully change how we do things. Our clinical goals lead the list of our system goals for a good reason. As we implement evidence-based practices, we’ve demonstrated that we not only improve clinical outcomes, but we do so at a lower overall cost to the community. And finally, as we care for our patients, we must help them understand that we also care about them as individuals. That will improve the experience for our patients and for those of us who provide that care.

While participating in a recent award ceremony, the American Heart Association recognized Utah Valley Regional Medical Center (Provo, Utah) as one of the top 5 percent of hospitals in the United States for the treatment of heart failure. During his award acceptance speech, our local cardiology leader Dr. Eric Carter said, “I’m very impressed with the bright, talented, and committed employees who work as a unified team in addressing processes that need to be improved. It is truly an honor to be associated with an organization that puts the patient and the community first in all that we do.” Dr. Carter’s comments, pertinent to the congestive heart failure initiative, also described the organizational aspiration to provide extraordinary care to each patient. Extraordinary Care is defined in six dimensions, as depicted in Exhibit 3.

From an organizational accountability and stewardship perspective, each month the leaders of Intermountain hospitals, physician clinics, and insurance company hold accountability and stewardship meetings with management team members to review actual performance and compare this performance against board-approved goals in each of the six dimensions of care. On a quarterly basis, each regional vice president and division executive reports to senior leadership on progress toward goal attainment. The focus during these accountability reports relates to the six dimensions of extraordinary care, with a primary focus given to patient safety, clinical excellence, and operational effectiveness. During the past several years, all regions of Intermountain
discussed, he offers extensive training in clinical process improvement. Those same principles also apply to our efforts in the area of operational process improvement (see Exhibit 4).

Intermountain’s commitment to providing on-site employee training and development in process improvement principles and practices has also been a commitment to human capital, the organization’s greatest asset.

Since its beginning in 1975, Intermountain Healthcare’s leadership teams...
have been charged to become a model healthcare system. With a strong emphasis on clinical process improvement and overall value to patients, Intermountain is equally committed to operational effectiveness and strives to be best in class in all aspects of day-to-day operations. Bert Zimmerli, Intermountain's chief financial officer, often says that “not-for-profit should never mean not-as-efficient.” His vision as CFO is to build world-class finance and support services, similar to the goals of the clinical excellence initiatives.

To fully actualize the mission, Intermountain recognizes the value of and is working toward becoming an integrated delivery system that is truly accountable for providing quality and affordable care across the entire care continuum. Throughout the organization, demonstration or pilot projects are in process to help prepare for “the new normal” of healthcare operations.

In at least a couple of instances, these pilot projects are structured under an episodic bundle payment or primary care medical home payment arrangement in anticipation of the modified payment plans under federal healthcare reform. Most of these clinical initiatives are in the early stages of development but promise to enhance quality and achieve affordability.

Clinical Care Improvement
Intermountain’s clinical programs drive much of the success with patient safety and clinical excellence and influence the organization’s culture throughout all the hospitals, clinics, and other care delivery sites. Clinical programs are the heart and soul of the organization.

Since the early 1990s, clinical programs have evolved into a vibrant, patient-focused organizational function that takes a multidisciplinary approach to identifying and implementing best clinical practices. According to Jill Nielsen, RN, MBA, regional clinical program leader responsible for women and newborn services at Utah Valley Regional Medical Center, “without physician champions, it doesn’t work.” Nielsen also says, “the nurse managers, clinical educators, and data collection analysts do an incredible job, too. They engage in chart review with our physician champions each month, and they continually improve patient care protocols and outcomes.” Reliable clinical data, an activity-based costing system, transparency, and accountability reporting are fundamental building blocks in the performance improvement process.

**Improving Quality and Sharing Gains**

**CPAP for Neonates with Respiratory Distress Syndrome**
Continuous positive airway pressure (CPAP) for neonates with respiratory distress syndrome is a quality improvement effort that was pioneered in the Urban South Region. The QI effort targeted neonates younger than 33 weeks gestational age who developed respiratory distress syndrome. These patients were historically transferred from American Fork Hospital (a community hospital) to Utah Valley Regional Medical Center (a tertiary facility). The use of nasal CPAP with oxygen and surfactant (preventing alveolar collapse) at the birth hospital allowed the region to reduce transport to NICU from 78 to 18 percent in the first year following implementation. The financial impact measured in terms of net operating income (NOI) is shown in
Exhibit 5: Financial Impact of CPAP for Neonates

<table>
<thead>
<tr>
<th></th>
<th>Before</th>
<th>After</th>
<th>NOI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Birth Hospital</td>
<td>$84,244</td>
<td>$553,479</td>
<td>$469,235</td>
</tr>
<tr>
<td>Transport (staff only)</td>
<td>$22,199</td>
<td>–$27,222</td>
<td>–$49,421</td>
</tr>
<tr>
<td>Tertiary Hospital (NICU)</td>
<td>$958,467</td>
<td>$209,829</td>
<td>–$748,638</td>
</tr>
<tr>
<td>Delivery System Total</td>
<td>$1,064,410</td>
<td>$736,086</td>
<td>–$328,824</td>
</tr>
<tr>
<td>Integrated Health Plan</td>
<td>$900,599</td>
<td>$512,120</td>
<td>$388,479</td>
</tr>
<tr>
<td>Medicaid</td>
<td>$652,103</td>
<td>$373,735</td>
<td>$278,368</td>
</tr>
<tr>
<td>Other Commercial Payers</td>
<td>$429,101</td>
<td>$223,215</td>
<td>$205,556</td>
</tr>
<tr>
<td>Payer Total</td>
<td>$1,981,803</td>
<td>$1,103,070</td>
<td>$872,733</td>
</tr>
</tbody>
</table>

Exhibit 5 based on 110 patients per year, which compares before and after data. Revenue to the birth hospital (American Fork) is increased, but it is decreased at the tertiary hospital (Utah Valley).

Further, transport costs are reduced, but staffing is not changed. This results in a net loss to the healthcare delivery system. However, all payers benefit from this QI effort in terms of reduced costs, and one of these payers is Intermountain Healthcare’s integrated health plan, SelectHealth. SelectHealth, in this case, saves $388,479. However, because resources cannot legally be transferred across business units, the delivery system (the entity that bore the expense and drove savings) actually realized a NOI loss of $328,824.

The CPAP QI effort is an example of a health system electing to do the right thing. It emphasizes the perversity in the reimbursement system that does not necessarily align financial incentives with improvements in quality and efficiency.

Elective Induction in Labor and Delivery
In November 1999, national guidelines were established for elective inductions before 39 weeks’ gestation. The goal was to reduce inappropriate elective inductions across the United States. Intermountain started the elective inductions clinical project in 2000, initially including nine urban sites. During the early stages of the project, considerable time was spent reviewing local clinical and financial data, identifying elective induction as a growing problem in Utah, addressing obstacles, educating physicians and nurses about the new national standards and the need to change, tracking progress, and reporting results.

After clinical program leaders identified best practices by consulting with various experts and reviewing available evidence, goals were prioritized and specific protocols were established. An implementation plan was developed that included an education program and training materials. In 2000, a baseline of about 28 percent was established for elective deliveries before 39 weeks’ gestation. Ten years later, the organization’s elective inductions improved to less than 2 percent.

Preventing Congestive Heart Failure (CHF) Readmissions
During the 18-month period between July 1998 and January 2000, Utah Valley Regional Medical Center discharged
3,391 patients with heart failure. Of those discharges, 26.5 percent were readmitted within 90 days. The CHF clinical program team organized a performance improvement initiative, reviewed best practice data, and determined that optimal management of chronic heart failure required coordination of all aspects of care and would be best accomplished by an integrated multidisciplinary team. The team developed an objective: “to prevent and manage heart failure using a multidisciplinary approach that focuses on clinical, educational, and supportive needs for patients and providers.” The CHF clinical program team also established short- and long-term goals around key clinical outcomes.

In the initial implementation phase, the team concentrated its efforts on patient education and discharge medications. With the assistance of a local cardiology champion and the system-wide cardiovascular services clinical program leader, the CHF team implemented enhanced discharge instructions referred to as MAWDS (medications, activity, weight, diet, symptoms and planned follow-up). Additionally, smoking cessation counseling was provided.

Physician education and buy-in was another key success factor early on in the implementation process. With the support of the cardiology leader, the team provided education and training to a variety of key physicians, including family practitioners, internal medicine specialists, and other community cardiologists.

As of July 31, 2010, the readmission rate at 90 days for heart failure patients had decreased from 26.5 percent 10 years before to 4.9 percent. In comparing today’s clinical outcomes and cost data with the CHF clinical program goals set a decade ago, it is fair to say that all those goals have been accomplished. Because of the commitment to being a learning organization that incorporates best practices, Intermountain Healthcare realizes the importance of avoiding complacency and refining goals—raising the bar—each year.

**Positioning for the Future**

The impending financial insolvency of the Medicare Trust Fund (Leavitt 2010) has prompted declining payment for services. At the same time, Medicare is raising the bar on quality and outcomes, essentially requiring more from providers while paying less.

While the full impact of healthcare reform has yet to unfold, the focus over the past few years has been primarily on the economic recession, whose wake has sent fresh swells toward an already rocking provider boat. Yet most providers have managed reasonably well to date, in some cases even boosting operating margins from 2.2 percent to 2.8 percent (Fitch Ratings 2010).

Predictably, the sustained economic challenges of the past few years are negatively affecting hospital admissions and elective procedures. Even in high-growth areas in Utah, acute inpatient admissions have flattened, while the state population continues to grow between 2 and 3 percent annually (Utah governor’s office 2010). In other words, the relatively high population growth of Utah is softening the blow of decreased utilization, a benefit not enjoyed in many US metro areas.

According to Greg Poulsen, senior vice president of Intermountain Healthcare, “Recent economic challenges have had an

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*Medicare is raising the bar on quality and outcomes, essentially requiring more from providers while paying less.*
Among the numerous changes in the healthcare market landscape and recent economic turmoil, how can providers best position themselves for the future? Generally, the fulcrum for market competitiveness is tilting from revenue generation and increasing utilization to favor the most efficient and lowest-cost providers with the best clinical outcomes.

Industry experts and policy wonks acknowledge that in the coming years, healthcare reform will introduce the biggest utilization change of all—internal utilization management via bundled payment and capitation. If commercial insurers adopt accountable care organization strategies, we are likely to see an emergence (or, in some cases, a reemergence) of provider-led value enhancement.

**Summary**
The actuarial and consulting firm Milliman and other organizations predict that utilization could be reduced by 40 percent without harming clinical care if incentives were aligned to maximize value through payment reform. Of course, there is much speculation in these predictions. Mr. Poulsen says, “The roughly two-to-one variation in age-adjusted utilization between the highest and lowest utilizing parts of the country supports the possibility of such large potential reductions.” Hospitals throughout the United States must reach above the low-hanging fruit and begin picking the higher fruit associated with intracase utilization management and the entire healthcare value proposition.

Joe Horton, senior vice president of hospital operations, explains: “Challenging times require leadership, both to create the changes needed in a new environment and to keep the organization steady in its pursuit of its noble mission. Strong and principled leaders continually point out the mission of the organization as the North Star. Strategies and approaches may change, but the bedrock of mission, vision, and values will always be the foundation for true success.”

To successfully adapt to the rapidly shifting marketplace, organizations will need to invest substantively in structures designed to enhance clinical outcomes and simultaneously improve efficiencies (and lower costs). Continuous organizational improvement processes require steady and consistent commitment to measured clinical and operational goals that require leadership sponsorship and a culture committed to improvement. Once considered mutually exclusive, improved quality and lower costs have become compatible notions.

**References**