

Digital Hospitals Succeed

Old Fashioned Values, New Fashioned Roles

Charles R. Denham, MD

INTRODUCTION

In this column, we hear from the healthcare leaders who have been instrumental in the spectacular success of two specialty hospitals - Nebraska Heart Hospital and The Heart Center of Indiana. They share their dramatically different journeys to the same success - how the old fashion values of Quality and Customer Service became the heart of their triumph, and how they moved from a typical buy-sell relationship with their technology supplier to a new fashioned role of performance partnering. We will also examine the best practices they share with other specialty and general hospitals through a Cardiovascular Collaborative.

This article is a preview of a broader case study of these two institutions that will be published in a future issue. These two hospitals are “matched twins,” yet one had more rapid success than even they anticipated and the other had what could have been an almost disastrous course. The current clinical outcomes and patient satisfaction within these two institutions now appear to be on par with the best and most illustrious institutions in the US, whereas resource consumption is less than many average hospitals. The comparison provides significant lessons that can be learned.

The Nebraska Heart Hospital

The Nebraska Heart Institute’s Nebraska Heart Hospital (NHH) opened in May 2003, to serve local Lincoln and Nebraska state-wide patients with inpatient and outpatient care. The NHH philosophy of care, from the beginning, has always centered on the individual patient. As decisions are made from diagnosis through treatment and rehabilitation, the NHH physicians maintain a strong interactive relationship with patients, family and referring physicians in a team-based approach to assure that proper and informed decisions are made. Closer proximity of patients to services was designed into the technology to improve efficiencies. Centralization of services was created to promote cost-effectiveness.

Currently, the NHH, a nearly paperless and film-less facility, provides state-of-the-art cardiac, vascular and thoracic care services. Additionally, each year, the Nebraska Heart Institute performs more than 1,000 open-heart procedures, 2,000 interventions and more than 7,000 cardiac catheterizations. In addition to offices in Papillion, Omaha, Lincoln, Grand Island, Hastings and North Platte, the 25 cardiologists and seven surgeons with NHH visit and collaborate with more than 40 hospital based clinics throughout the region.

NHH’s electronic health record provides clinicians with secure, anytime, anywhere access to patient data, images, physiologic waveforms and procedure data collected at the point of care. Single sign-on to all clinical and business applications is achieved with smart card technology.

The operational and financial performance of NHH has been outstanding, having exceeded proforma projections within 7 months of operations.

From the Texas Medical Institute of Technology, Austin, Texas.

The author will gratefully receive suggestions for future topics and suggestions for future thought leader interviews at Charles_Denham1@tmit1.org.

Funding support for this session was provided by Texas Medical Institute of Technology (TMIT).

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The Heart of Center of Indiana

The Heart Center of Indiana (THCI) was the first free-standing heart hospital to open in the Indianapolis area and provides state-of-the-art acute cardiovascular services. Ownership is divided evenly between St. Vincent Health, a community-based health care ministry serving Indiana and The Care Group a premier group of heart care physicians. THCI, a specialized all-digital facility, focuses on cardiovascular disease. Since opening in December 2002, THCI has reduced medical errors, length of stay, and improved clinical outcomes through its unique integration of imaging and information technology. Although THCI used the same integrated technology solution provider as NHH, it experienced difficulties in adoption, and significant rework in bringing technology systems up to usability. Siemens provided resources and consulting support to help THCI optimize applications.

TWO ROADS, ONE DESTINATION

The two hospitals are “matched twins,” as they are similar in size, specialty, mission, start-up date, technology implementation and patient-centered philosophy. They have a common goal - to lead their market by enabling certain best practices with state-of-the-art technologies. Common characteristics of NHH and THCI (once it stabilized its technology adoption) included the following:

Both suppliers and hospitals focused on best practices first
 Products, services, and technologies were combined as a performance solution to enable best practices
 Rather than a buy-sell technology purchase relationship, the hospital team and the supplier team worked together to achieve Integrated Performance, ie, best clinical, operational, and financial performance
 Focus on outcome, process, structure, and patient measures first and financial metrics second.

Though the major goal for each of these hospitals was to be a leader in technology and old fashioned quality and customer service, the major difference between the two hospitals was in the technology adoption path. The NHH “implemented” the technologies with a care process-centered approach requiring a great deal of upfront planning, frontline interaction and training from the provider right from the start – definitely a long and hard road. Legal constraints and aggressive timelines led THCI to deploy the technologies first but resulted in approximately a year’s delay until they were able to fully integrate processes, structure and outcomes. This rework was costly in both time and money. Their road at first seemed shorter and easier than NHH...which was their lesson learned.

Both hospitals deliver world class outcomes now they have achieved stable adoption of the technologies. (Medical Solutions Magazine, 2005) In coronary artery bypasses, the average length in stay at THCI and NHH is 6.4 days and 4.8 days respectively, to be compared with the Society of Thoracic Surgeons (STS) benchmark of 9.0 days. Mortality is down to 1.1% and 0.9% for THCI and NHH, compared with the STS benchmark 2.1%. These results are similar to the 0.95% achieved by what many considered the “Gold Standard” – the Cleveland Clinic. Also, in percutaneous coronary intervention (PCI), the PCI success rate is 99% at THCI, and 98% at NHH

compared with the American College of Cardiology (ACC) benchmark of 91.6%. (STS National Database, 2004) Patients have also experienced the difference, with more than 98% rating THCI care and nursing care as “good or excellent.” (Personal communication – Brenda Edner – THCI-2005) Satisfaction rating of “satisfactory” for NHH is 94%, which is a different scale but similar to THCI. (Personal communication – Trish Smith – NHH-2005) The national average for patient satisfaction for quality of care is in the 80% range. (National Res. Corp., 2003)

Whereas these institutions are in different markets, different geographies and have different clinicians, they both achieved similar world class performance through leadership and continued refinement of best practices.

These best practices can be learned and applied by both specialty and general hospitals wishing to generate extraordinary care with excellent outcomes.

The following operational, financial and clinical best practices were achieved by both hospitals:

NHH and THCI Common Technologies – Operational, Financial and Clinical Best Practices

- Operational Best Practices
- Optimized Admission flow process (in room registration)
- Universal Bed model (care comes to the patient)
- Staffing practices – 12-Hour Shift and same Team allow relationship building between Patient and Caregivers
- Reduced hand-offs of information because of Staffing model and Technology
- Real time data provides immediate feedback on process improvements
- Information dissemination to the whole care team, i.e., Report is generated as Patient leaves cath laboratory and report is immediately faxed to referring physician
- One technology vendor reduces integration and accountability challenges
- Financial best practices
- Real time data capture on cases reduces discharge to billing cycle
- Reduction of unnecessary (duplicate) test due to missing information
- Data capture provides more complete and accurate billing
- Account receivables cycle 50% shorter than industry
- Reduced medical record delinquency provides timely billing
- Greater efficiency of staff means reduced overtime and need of travelers
- Standardization of the devices and consumables provides better pricing and efficiency
- Improved staff retention reduces hiring and training costs
- Comprehensive documentation reduces malpractice exposure
- Clinical best practices
- Standardization of the process of care and protocols reduces variability in outcomes
- All critical information available at all time from anywhere to caregivers
- Real time documentation maximizes patient care time and reduces administrative task for care givers
- The right information for the right patient at the right time
- Fewer hand-offs of information reduces adverse events

Education of the patient and family in the care
 Better patient and family-centered care
 Technology supports team training to improve efficiency
 Technology supports clinician review and analysis of complex procedures.

INTERVIEWS WITH THE LEADERS

Sheryl D. Dodds, RN, MS, President, CEO, The Nebraska Heart Institute; CEO, Nebraska Hearth Institute Heart Hospital, Lincoln, NE.

John Stewart, CEO, The Heart Center of Indiana, Indianapolis, IN.

Richard Fogal, MD, Vice Chairman, The Heart Center of Indiana Hospital Board.

Volker Wetekam, PhD, President, Global Solutions (GS), Siemens Medical Solutions (Med), Erlangen, Germany.

Thomas N. McCausland, MBA, President, CEO, Siemens Medical Solutions USA, Inc.

Dr. Denham: How were Nebraska Heart Hospital (NHH) and The Heart Center of Indiana (THCI) formed? Can you tell us a little about that?

Sheryl Dodds: NHH came into being because there was no access to care in a timely manner within our community. With the hospitals being on diversion over 90% of the time, we had to get patients into the hospital more quickly than that, and so it was felt for quality of care, we needed to build a heart hospital.

John Stewart: Capacity was probably the number one driver in founding THCI. The program at St. Vincent Health System was seeing tremendous growth in their partnership with the physician's care group and it finally reached a point where there were capacity issues. Therefore, a 50-50 joint venture was created to form THCI as a specialty hospital for heart patients.

Dr. Denham: Tell me about the challenges that you all faced working with the existing hospital organizations when you contemplated building a specialty hospital.

Sheryl Dodds: We looked at partnership with our hospital that we had worked closely with for a number of years, but they weren't interested in doing that. They wanted to maintain all of the market share and so they said "no," they didn't want to have a partnership. We felt it was critical enough that we do something for patient care; so we decided to move forward whether with or without that partner.

John Stewart: The St. Vincent project hospital leadership had great vision. They found that they shared a similar vision with their physician group. Both of them had quality as a driver in their mission statements. They felt like this was an opportunity to joint venture with the physicians to change the model of care delivery so that they could improve quality.

Dr. Denham: You achieved tremendous results here at THCI. Tell us about the vision.

Dr. Fogel: The vision of the heart center was really to make it a very patient-centric center where we are truly focusing on the quality of care. Our driving force was that high quality care would yield low cost care. Higher quality means shorter lengths of stay and fewer complications. So our overriding vision was quality, quality, quality. And everything else would follow from that.

Dr. Denham: Tell me, what do you say to the skeptics who say quality doesn't pay off?

Dr. Fogel: I would say, "look at our data." I would say, "it's one thing to have an opinion, but let's see what data you have to support the opinion." Our data says that if you have high quality, you basically provide a shorter length of stay. You have happier patients. You have happier families, and ultimately – lower costs. And with the current economical environment, high quality and low costs seems to be the wave of the future.

OLD FASHIONED VALUES: QUALITY AND CUSTOMER SERVICE

Old fashioned values of quality and customer service were enabled by both hospitals through the use of digital solutions.

In this era of hospitals focusing on "production-centered care" and our technology suppliers focusing on "profit centered" sales, it was refreshing to see the old fashioned values delivering not only to the bottom line but generating pride of workmanship in hospital leaders and staff.

Culture and Care Model

Dr. Denham: Both of your organizations have outstanding clinical operational and financial performance. What are the other similarities?

Sheryl Dodds: I believe it's the culture and the care model, where the patient is the center of care and everyone works together as a team, from the physician down to those who provide the dietary support for the hospital.

John Stewart: I think the most important part of the culture is the focus of the entire organization on quality, from the board all throughout the organization. Secondly and equally as important is the focus on customer satisfaction.

Adoption Technology – Lessons Learned

Dr. Denham: You both said that you would have liked to have worked earlier with your technology partner; why is that?

Sheryl Dodds: I think that it would have been very helpful to have had our technology partner with us earlier in the process. When we brought them in, we already had much in place such as our building plan and operational plan. If we had partnered with them earlier, we would have made appropriate decisions together instead of scrambling to try to make alternative arrangements at the end.

John Stewart: In our case, we recognized early on that we wanted our strategic partner there with us. However, we were a joint venture model and at the time were still finalizing our agreements. We had legal constraints because our corporate structure was not in place; so, consequently, we ended up partnering with our technology partner after a year and a half or so after construction began. We had to retrace our steps to plug in the technology to get to our level of 'optimization.' That took additional time and effort, which, had we spent more time on the planning and involving our strategic partner upfront, we could have saved.

Common Technologies

Dr. Denham: Tell us about the technologies. We know that these technologies are in their infancy and they continue to evolve. Tell us about the lessons learned regarding adoption of these new technologies that enable your best practices.

Sheryl Dodds: Know that they will not work at first sometimes, or won't work as well as you want them to. But you are, as early adopters, on the cutting edge. You can help to mold it to what it needs to and become a part of making change.

John Stewart: Use the data to support your decisions and go into the decisions with your eyes open. Keep in mind how you think technology is going to improve operations. Whether you call it the focus PDSA (Plan Do Study Act) model or whichever terminology you want to use, use the data to focus on solutions and determine when it works and when it doesn't work. It's not always an exact science and there is no reason at all that it couldn't be applied in a general hospital. In fact, they are in several general hospitals.

Dr. Denham: You both have world-class outcomes and yet you are on the beginning of your quality journey. What are the common technologies that you have from this solution provider?

John Stewart: Starting with our core business systems, we have the same financial systems. When we look at our information systems on the front end and the clinical documentation side, we have the same. We also started with the same patient monitoring systems. On the higher-end imaging, we actually had the same image archiving and storage system, which essentially gave us seamless access.

Dr. Denham: How good would your outcomes be if you didn't have these enabling technologies?

John Stewart: I think the professional group that is impacted the most, in the care-delivery model, are the physicians or the clinicians. Hospitals often don't make their decisions on what improves the physicians' efficiency. But if you think about it, the physician is the ultimate driver. If he or she has to go to multiple departments to be able to access records and the records may or may not be available in those departments, then it only adds to inefficiency and frustration.

Sheryl Dodds: And the result may be poor quality of care for the patient, because then you have to make assumptions on what was done or try to gather what happened before. So then the decision about the next treatment of that patient is based on incomplete data.

Workforce and Adoption

Dr. Denham: These new technologies are challenging and there's always a fear that we can't adopt them very well. What was your experience?

Sheryl Dodds: Workforce – our greatest challenge in health care. When we were beginning to plan for the opening of the hospital, we thought the technology would be a wonderful recruiting tool. In reality, nurses said “no,” because their experience in other hospitals with technology, such as bedside charting, was bad for them. It took more time away from patient care. Now, it is our greatest recruiting tool because the nurses themselves are recruiting other nurses saying, “This is the best thing that has ever happened. I am able to spend the majority of my time providing care for the patient because the

data is captured and it is accurate data.” So the technology has been a huge success for us.

Dr. Denham: So retention and recruitment – better or worse with the technology?

Sheryl Dodds: Retention and recruitment is phenomenal with it.

John Stewart: It's not that a traditional hospital setting can't achieve the same outcomes, but they've got a significantly different challenge in that the traditional hospital has multiple silos. Frequently, those that make the decisions on what is the best technology for the ancillary department systems aren't necessarily always including or even talking to the nurses at the bedside or the physicians on what makes best sense. So consequently, you have disparate systems that really don't work well together.

Dr. Denham: What are the features of this care model that are similar between your organizations?

Sheryl Dodds: It's that patient-centered care. In a traditional hospital setting, a patient often transitions from one room to another, changing nursing care. The whole team could change up to 5 times before the patient is discharged. In our facilities, they are in the same room, eliminating that transition of care from one team to another and thus hopefully eliminating some of the errors that can occur and things that are left out in providing care to that patient.

John Stewart: Just to carry that a step further, if you think about the care model that most hospitals have used, it is based on a hospital organizational structure and a reimbursement structure that has been in existence since the '50s, if not before. When decisions are made, based on what supports that organizational structure instead of what supports the patient best, then you are not going to make the best decisions. When you are making decisions, you always start first what makes the most sense or the best sense for the patient.

Dr. Denham: How could these new care processes and new best practices have been accomplished without having a performance solution partner that would enable them?

Sheryl Dodds: No, you need support to facilitate the changes so that you have critical information where you need it and when you need it.

Dr. Denham: As you compare your clinical, operation and financial outcomes, what jumps out at you?

Sheryl Dodds: The outcomes clinically are phenomenal and the financial follows that. If you have great clinical outcomes, then you are going to have great financial outcomes. We have seen that happen.

John Stewart: One of the things that amazes me is that when we compare our case studies, they are very similar with completely different team members, different physicians, different market but yet the outcomes are almost identical.

Dr. Denham: If you had a chance to talk to a CFO today, who was involved in managing the finances and you could share with them the financial impact of focusing on quality, what would you share with them?

Sheryl Dodds: You want to see your finances improve? Focus on quality and the patient; the finances will improve.

John Stewart: Our focus for our market has been on quality. I think feel that, philosophically, once you focus on quality, and you focus on doing it right the first time, then

inherently your expenses will be reduced. So that's why, currently, we have the lowest length of stay, and the lowest expenses in our market.

PERFORMANCE PARTNERING: NEW GAME NEW POSITIONS

Dr. Denham: Dr. Fogel, tell me about how you selected your technology partner?

Dr. Fogel: We thought there were two choices. One strategy would be to go for what they call a 'best of breed'. Take the best products in each, and then create an interface, interfacing these different products. A second strategy would be to go with a common source vendor, where the products would be integrated, so we would have an integrated delivery model.

Dr. Denham: Tell me about the key lessons learned.

Dr. Fogel: I think there were three key lessons learned. The first one is that there are limitations to technology. And it's very critical to manage the expectations to the technology. The second lesson learned is that it is very important to have the right people at the right place. It is very important to have the same shared vision. And the third lesson learned is that our vision of high quality yielding lower costs has been realized.

Dr. Denham: What is it like to see that embracing quality is good business and actually has terrific financial returns?

Dr. Wetekam: This is a new experience and we are starting to see what it is like to be involved with customers who have goals of improving quality and cutting costs.

This experience has been extremely exciting to us because we have seen a number of customers, including our own "internal customers," try not only to improve quality, but cut costs at the same time. Previously trying to achieve those two concepts at the same time never seemed possible or worth trying.

For the first time we're starting to see good performance where clinical, operational, and financial performance are being delivered at the same time and that embracing quality is good business.

Dr. Denham: How does it feel to be part of that process as a performance partner?

Dr. Wetekam: It's very exciting. We believe this is the very best concept for the future. THCI has quickly and successfully implemented a concrete and unique set of ideas that not only help improve the quality of care, but also drive the business model—not just cost, but really drive the entire business model.

Dr. Denham: One of the lessons learned by the team was not to believe too much in the technology being ready to "plug and play." They really needed to manage expectations. Is that something that providers need to recognize when they adopt solutions?

Dr. Wetekam: Absolutely. And I don't think that only providers need to recognize that; also the industry needs to recognize it. Connecting information technology is one piece but normalizing, standardizing and also qualifying your information prior to implementing the technology is another thing. Sometimes we have underestimated that.

We need to provide the right people for the best quality and cost-effective result. And the best way we can do it is to complement or provide complimentary skill sets. To do so, we have to understand the skills on the providers' side and then we are in the best position to provide complementary skills on the supplier side.

Dr. Denham: So that is the major motivation of Siemens - to get those right teams?

Dr. Wetekam: That's absolutely correct - absolutely the key. It is more important than the technology.

Dr. Denham: Do suppliers believe and are you finding that general hospitals can experience as much benefit in enabling these best practices as specialty hospitals?

Tom McCausland: Absolutely. Does it require re-thinking of the processes and the relationships? Yes it does and it requires real effort, but the results are so spectacular that the effort is really worth it to improve the quality of care for the patients. And that benefit translates to the bottom line.

Dr. Denham: Do you and other suppliers see continued development of solutions that will enable the best practices that deliver performance that can be seen in improved safety and quality measures?

Tom McCausland: Yes we do. In fact our language is changing with the quality and safety movement. We are now describing new innovations not just in terms of their technical specifications, but in terms of their performance specifications - how they improve work flow, process improvement, and care outcomes.

CARDIOVASCULAR COLLABORATIVE

NHH and THCI have both decided to share their best practices with specialty and general hospitals on a national basis. Despite the controversy between such segments, these leaders believe that the performance opportunities and the lessons learned must be shared with the healthcare community regardless of competitive interests.

Dr. Denham: We think it is commendable that you have both specifically supported sharing the information with general hospitals. Why have you done such a kind thing?

John Stewart: Particularly at THCI, our philosophy is that data should be transparent. People ask, "What do you mean by that?" If you look at health care, which is a consumer-driven or a service industry, of all the industries, we share the least with our customers, the patients. So we feel that, not only should we share knowledge, but actually the patients deserve having that knowledge. We also feel by sharing that it is going to raise the bar of healthy competition.

Sheryl Dodds: I would agree with that and what we are all about is excellent patient care. If you are a facility that has made changes and you see the outcomes and you keep it all to yourself, what have you done? You haven't really made an improvement for society as a whole. And that is where you need to go forward and share with others and help.

Dr. Denham: Would either of you ever have envisioned back when you started on this project that you would actually become a national contributor to quality and other communities?

Sheryl Dodds: No, we just wanted to do better by our patients.

CONCLUSION

Both hospitals have been proactive at defining performance gaps and utilizing technologies to enable best or better practices. There are lessons to be learned by these pioneering organizations as they break new ground in performance improvement and safety.

The performance gap between the current “is state” of typical hospitals and best achievable performance can be closed by taking a best practices approach that is enabled by performance solutions where the supplier becomes the performance partner.

Future articles will report on the collective impact that a community of like-minded healthcare organizations can have when they share best practices building on the experiences of NHH and THCI.

These two hospitals have proactive teams, a physician-driven plan of action, highly educated and experienced nurses, and hotel-like environments that offer patients round-the-clock visiting hours without the need to change rooms or be moved from station to station. As a result, clinical, operation and financial performance has been vastly improved.

The good news is that this kind of performance does not need to be limited to specialty hospitals. Through willing collaborative efforts by these two “innovators,” their methods may be adapted to general hospitals helping patients on a national basis.

In the final analysis, the winning combination was not high sizzle technology alone. Business leaders like Ann Rhoades of Jet Blue and Southwest Airlines fame, and Jim Collins the author of *Built to Last* and *Good to Great* have taught us that leaders drive values, values drive behaviors, and behaviors drive the performance of an organization. The winning combination is a patient-centered approach, grounded in best practices that are enabled by performance solutions that are implemented together by providers and suppliers as performance partners. Success begins with leadership, ends with

leadership, and is all about leadership – that of providers and suppliers.

In closing, the words of one of our nation’s most successful quality entrepreneurs, Jim Throneburg, come to mind: “The long road is the short road...and the hard road is the easy road.”

The long and hard road of quality and customer service turns out to be the shortest and easiest road to success for healthcare providers.

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May 24, 2007

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