FROM TODD C. EBERT

As president and CEO of Amerinet, I understand the role that our organization must take in quality and patient safety and am committed to continuing to build trust as an industry leader and partner. Our team of healthcare professionals knows the issues that can pull time and resources away from your focus on patient care, and we provide much-needed solutions and programs to our members.

The continued evolution in quality and patient safety is one that we will monitor closely and participate in completely. Through our ongoing contacts with healthcare executives, we have engaged in dialogue with a number of thought leaders on these issues and others vital to the healthcare industry.

We firmly believe that Amerinet has a unique outlook on linking improved healthcare quality and reduced healthcare costs, and these discussions will offer additional insights and information on delivering improved quality and patient safety.

Amerinet thanks Gary Kaplan, MD, of Virginia Mason Medical Center for a look at the culture of quality and safety from a physician/chairman and CEO of one of the leaders in the field. Dr. Kaplan’s presentation set the tone for an extremely productive executive roundtable.

As always, your feedback is greatly appreciated and will be used to enhance the value proposition we deliver.

Roundtable Attendees
Michael King, President/CEO, Camden-Clark Memorial Hospital
Mina Ubbing, President/CEO, Fairfield Medical Center
Ken Freeman, President, Health Resource Services
Sandra Eliza, President/CEO, Jackson General Hospital
Marilyn Follen, Administrator, Quality Improvement and Care Management, Marshfield Clinic
Ted Praxel, Medical Director, Quality Improvement and Care Management, Marshfield Clinic
Tom Van Dawark, Board Trustee, Virginia Mason Medical Center
Jim Moore, CEO, OSF Healthcare System
Kevin Schoeplein, EVP, OSF Healthcare System
Alan W. Brass, CEO, ProMedica Health System
Randy Oostra, President/COO, ProMedica Health System
Larry Mullins, President/CEO, Samaritan Health Services
Theodore Pasinski, President, St. Joseph’s Hospital Health Center
*Douglas Black, Board of Directors, Intermountain Healthcare
*Edward Andersen, President/CEO, CGH Medical Center
*Chris Coons, Regional VP, Intermountain Healthcare
Scott Parker, President Emeritus, Intermountain Healthcare
*Michael Farnell, CEO, Somerset Hospital
*Robert Mulcahey, Vice President/Chief Operating Officer, Stratum Med
Gary Kaplan, MD, Chairman/CEO, Virginia Mason Medical Center
*Albert R. Zimmerli, Senior VP/COO, Intermountain Healthcare

Amerinet Attendees
Todd C. Ebert, President/CEO
RJ McNaughton, Executive VP, Sales
Randy Walter, Executive VP, Contracting and Enterprise Solutions

*Member, Amerinet Board of Directors
For decades, our nation’s hospitals and alternate care sites were viewed first and foremost in their communities as a service provider and a community resource. Rarely did the quality and patient safety elements of that patient care enter the picture.

Due in large part to the preventable errors and medical mistakes that were occurring and ensuing regulatory changes, the quality of healthcare and overall patient safety has been reviewed, evaluated and scrutinized more than ever before. Recent headlines confirm this sharpened focus:

- AHA urges Congress to ‘invest in quality’
- Joint Commission report shows gains in safety, quality
- Quality movement is honing in on priorities, AMA conference hears

Methods to improve patient care – or best practices – are being cultivated from input received from all levels of a healthcare organization. For many facilities, subsequent improvements in quality and patient safety will result in financial improvement for the organization as inefficient processes are replaced by more effective care.

This Amerinet Executive Briefing – A Thought Leader Discussion – takes a multifaceted look at quality and patient safety and serves as a summary of a three-step process including:

- Results of a nationwide survey of Amerinet member executives
- A Q&A discussion with a select panel of healthcare executives
- Summary of a best practice presentation by the chief executive of one of healthcare’s quality and patient safety leaders, Virginia Mason Medical Center

The findings detailed in this report point to a focus by all healthcare facilities on continued and significant improvements in the quality of care they deliver and patient safety. As a group, those surveyed were in agreement – the processes and systems implemented to improve patient care are, in the final analysis, worth the effort expended.

**Improvement, Continued Emphasis Shown in Industry**

Quality and patient safety have been more of a focus in the healthcare spotlight in part because of recent headlines and action from some of the leading organizations in healthcare – American Hospital Association, The Joint Commission and the Centers for Medicare & Medicaid Services (CMS).

The Joint Commission’s annual report on hospital care quality shows steady improvement in the quality of care for heart attack, heart failure and pneumonia patients. Between 2002 and 2007, the commission-accredited hospitals’ performance rose at least 9 percentage points in each area.

And more evidence to the importance of increased quality and patient satisfaction comes from a recent survey. According to researchers at the Harvard School of Public Health, hospitals performing in the top quartile on the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) survey of patients’ perception of care had slightly higher average scores – 2 to 4 percentage points higher – for clinical quality than hospitals performing in the bottom quartile.

According to a Press Ganey study, continued improvement in clinical quality can be achieved at little or no cost. The 2009 Safety Culture Pulse Report – Staff Perspectives on American Health Care stated that communication – or its absence – is the foundation of many of the issues surrounding patient safety and presents the greatest opportunity for improvement.

This activity comes as hospitals will begin to report on nine patient safety and inpatient quality indicators recently adopted by CMS. Earlier this year, facilities participating in the quality reporting program were part of a “dry run” to familiarize themselves with the measures.

The new patient safety indicators reflect quality of care for adults inside hospitals but focus on potentially avoidable complications and iatrogenic events, and the quality indicators reflect quality
of care for adults inside hospitals. These measures will be publicly reported on the Hospital Compare Web site in December 2009.

Also, opportunities for providers to share information on patient safety outside their organizations – without fear of legal liability, sanctions or harm to their reputations – increased late last year when final rules were issued for patient safety organizations (PSOs). Signifying the government’s commitment to fostering a culture of patient safety, PSOs collect, aggregate and analyze confidential information reported by healthcare providers, identifying patterns of failures and proposing measures to eliminate patient safety risks and hazards.

Currently, 56 PSOs are certified in 25 states and the District of Columbia, a result of the passage of the Patient Safety and Quality Improvement Act.

This drive to improve quality and patient safety has resulted in mixed results thus far, according to researchers, from pay-for-performance programs.

Researchers from RAND, a nonprofit research organization, looked at a program that started in 2003 and includes seven major health plans in California and 225 physician groups, which employ 35,000 physicians who treat 6.2 million patients. Most of the groups reported that the program’s financial incentives – about $1,500 to $2,000 annually per physician – were not large enough to prompt change among physicians, with researchers suggesting that incentives should increase two to five times in order to see improvements in quality.

Another study that included interviews of physicians in California and Great Britain found that physicians resented the intrusion of such plans on the doctor-patient relationship.


Amerinet Survey Points to Quality, Safety Priority

In conjunction with Amerinet’s Executive Roundtable in February 2009, nearly 200 executives at Amerinet member facilities responded through March 2009 to a 24-question, online survey titled “Assessing Patient Safety Readiness in Your Organization.” From asking respondents to rate their organization’s level of commitment to quality and safety to questions about the involvement of their Board of Directors and recently implemented safety measures, the survey sought to add to our foundation of knowledge about quality and safety practices in place at member facilities.

The results confirmed the national movement to a pinpoint focus on quality and patient safety as respondents reported that their priorities have changed. With respondents representing Amerinet member facilities in all bed-count categories, almost all (96 percent) said quality and patient safety are “Our No. 1 priority” or “Very important.”

“Intermountain Healthcare recognizes the value and importance of quality care. We are committed to our goal of implementing best practices that minimize unnecessary treatment variation.”

– Albert R. Zimmerli

- Source: Amerinet, Inc. survey, March 2009
This focus on quality and safety is not without budgetary support, the survey showed. Nearly half (44 percent) said at least 6 percent of their budget is a line item for patient safety initiatives annually. Further evidence of their resolve on clinical priorities came from 69 percent noting that quality and patient safety items are “Always on the Board agenda,” with an additional 9 percent saying it is the first item to be discussed.

An article titled “The Role of Hospital Boards in Improving Quality” reinforced these survey results, outlining the benefits of Board members having access to the key indicators connected to overall organizational performance. The article stated the key “reads” for a Board, rather than financial in nature, are clinical quality and patient safety.

Additional evidence that patient safety is never out of sight or out of mind came when respondents ranked eight aspects of their organization from the highest to lowest priority. Patient safety received almost as many highest priority rankings as the next most popular responses – patient satisfaction and operational performance – combined.

When asked about their organizationwide patient safety efforts, documentation regarding present-on-admission conditions – an important factor in receiving proper reimbursement – was the most widely implemented initiative. Electronic medical record – another key reimbursement-related improvement – was next, followed by patient safety dashboard.

Electronic medical record systems are expected to remain a focus nationally, according to survey results in the New England Journal of Medicine. The report said only 1.5 percent of U.S. hospitals have a comprehensive electronic records system, and an additional 7.6 percent have a basic system, with larger hospitals, those located in urban areas, and teaching hospitals more likely to have the systems.
“The biggest obstacle was the previous culture or philosophy. There was a basic review of incident reports but never any follow-up or action taken. ‘Here is where we are, the benchmark lies here.’
The change now is we have a root cause analysis on every error or infection.”

– Michael Farrell

Although 49 percent said their organizations “have fully adopted” patient safety practices and another 44 percent “have partially adopted,” the survey showed this did not come about without challenges or obstacles to clear. According to respondents, their greatest challenge in the adoption of this culture ranged from limited resources and legal concerns to medical staff resistance and effective communication.

Survey results did show that all levels of organizations are participating in quality and patient safety initiatives, with 68 percent of executives indicating they participate in patient safety walkarounds. The survey also showed high participation by employees in various patient safety programs.

One area that showed signs for growth was in linking supply costs to increased quality and safety. Only 23 percent of the respondents said their organizations made the connection between costs and quality.

Source: Focus, May-June 2008, HFMA New Jersey Chapter; NEJM - Use of Electronic Health Records in U.S. Hospitals
Executive Roundtable

Results from the 24-question survey mirrored the responses from a panel of healthcare leaders to questions focused on the executive level and development of patient safety cultures. These thought leaders addressed the hurdles that their organizations encountered while pursuing quality and patient safety goals, the role that their Board of Directors has played in patient safety and how they have balanced financial and quality and safety obligations.

What barriers have you encountered in developing your organization’s culture of safety (an atmosphere of mutual trust in which all staff members can talk freely about safety problems and how to solve them) and what actions were taken to overcome these barriers?

MICHAEL KING: “Hospitals are still relatively, as an industry, neophytes when it comes to understanding tools to improve. We spend a lot of time talking about quality and performance, but still many hospitals haven’t made investments in the science part of performance improvement. I think that’s true here. “We are in the midst of developing a new executive position in charge of quality and safety. A CFO creates healthy tension within operations, generating a series of metrics to make sure you are achieving your goals and outcome. That same kind of healthy tension and discipline, you can have that level with an executive driving performance improvement and safety.”

EDWARD ANDERSEN: “By far, the biggest barrier at CGH Medical Center is breaking old habits. A distant second is time constraints, or stated differently, your staff gets busy and starts skipping steps in a process to save time. In both cases, we attempt to use persistent training and management oversight to improve results. Sometimes we use special programs to assist in reminding the staff, especially with hand washing or sanitizing. We have had staff wear a green hand to remind them of hand washing or have handout cards to give a physician or co-worker if they saw them not wash their hands.”

ALAN BRASS: “Some of the obstacles were in developing an awareness, from direct caregivers to ancillary and support departments. We made a concerted effort to ensure our Board of Trustees was also educated and realized the importance of communicating a consistent message and of having our staff and physicians reporting all patient safety incidents, especially near misses.

“It took a comprehensive effort – from educating our Board to mentoring those at the bedside – to truly overcome the barriers. We removed obstacles for employees so they may now report incidents via a variety of ways, including anonymous reporting, and our systemwide Patient Safety Steering Council is multidisciplinary and meets quarterly. Members of our leadership team round with the staff and ask if they have what they need to do their jobs. And last but not least, we developed a follow-up process with physicians after reporting an incident.”

SUMMARY: The Executive Roundtable participants were nearly unanimous in their responses by identifying at least one safety and quality obstacle. A number said just making a change was one of the barriers, and one respondent pointed to the previous philosophy that did not include a follow-up for any identified event where safety and quality was compromised.
What changes have been made with your Board of Directors’ meetings in order to focus on patient safety and what type of information is your Board requesting and receiving regarding patient safety?

**SANDRA ELZA:** “At the top of our list of strategic goals is to become a ‘Center of Excellence’ in quality, safety and service. Every meeting addresses our goals and the progress we are making toward reaching the goals. Our Board is also more active in our process improvement and quality meetings. We now have three Board members serving and participating on that committee.”

**MICHAEL FARRELL:** “We have moved quality and patient safety up to No. 1 on the Board agenda. We have a patient safety committee that includes myself as chair, a practicing physician as well as three individuals from the community. We not only review such things as medication errors, patients falls and hospital-acquired infections, but we ensure there’s a plan in place that whatever caused the problem, it is resolved going into the future.”

**TOM VAN DAWARK:** “A key here is that the Board can get overwhelmed with details of information just like any of us can in our daily lives. We created a dashboard that comes to the Board on a monthly basis. It contains 12 items, six of which are safety and quality focused. On a quarterly basis, our Quality Oversight Committee (QOC) – led by three public Board members and the senior leadership – reviews its dashboard of 15 quality/safety items with the full Board.”

**SUMMARY:** Quality and safety occupies a better seat at the table for meetings as healthcare boards are more involved today in quality and patient safety than ever before. One executive said their Board agenda has flipped, going from 75 percent financial to 75 to 80 percent “talking about quality, safety and performance improvement.”
What specific goals did your organization set to reduce harm this year?

**THEODORE PASINSKI:** “We have focused on two major initiatives – ventilator-associated pneumonia and urinary tract infection rates – and instituted 90-day action plans to reduce and eliminate both. We have seen progress in those areas.”

**MICHAEL FARRELL:** “A lot of it is awareness. For instance, any patient at risk for falls and on certain meds, we provide them with red slippers that are different from any other patients. Then, any employee of the hospital who sees a patient with red slippers knows they are at risk of falls. We put a whole lot of prevention into the patient safety program.

“We brought down our device-related infections to near zero, our patient falls are at all-time low levels and our medication errors have been reduced pretty drastically. We put a lot of attention on patient safety from the Board level.”

**SUMMARY:** Goal setting and achieving is an integral part of the quality and patient safety cultures at these facilities. At least one respondent spoke of a goal of 100 percent of their measures being “at target” and 30 percent at “benchmark performance level.”

How can an organization reach a balance between financial and quality and patient safety obligations? Provide examples of what your organization is doing to reach that balance.

**MINA UBBING:** “Several years ago, we invested in having GE Medical Systems onsite for Six Sigma training. We spent $1 million for GE to come in. They were here for 16 months, and that created the staying power for our lean culture. It enforced discipline. You don’t realize the staying power involved in a change to lean principles.

“It took just one project, and we paid back our investment. We looked at surgeries. How much does it cost to do a surgery? And how much of custom packs do we waste? Do we need to revise what goes into these? We built a database of pictures of these surgical items and developed a barcode system to track our inventory. We ID’d revenue and cut costs of $1 million in a year.”

Has your organization linked supply costs to increased quality and safety?

- Yes – 23%
- No – 77%

(Source: Amerinet, Inc. survey, March 2009)
CONCLUSION

Few initiatives have received the attention and buy-in on all levels of healthcare organizations like those focusing on quality and patient safety. The benefits of an organization committing to providing the highest quality of patient care are being realized from the front lines of patient care to healthcare leadership.

It is through organizational commitment and the involvement of industry leaders such as Amerinet and its supplier partners that quality and patient care excellence comes at a price tag that does not invoke sticker shock. And with today's economic climate as an overarching factor, hospitals and alternate care sites are seeing the benefits financially from a focus on quality and patient safety through greater operating efficiency and effectiveness.

Please list other examples of how your organization has established a safety culture or is working on developing one.

CHRIS COONS: “We are in the process of developing the patient safety culture throughout the Intermountain system. This culture is based on a relationship of trust and accountability. Some of it is very much cultural, sitting down with people to tell them why gathering this information is important.

“Also, we are learning how to effectively use automation like an electronic medical record to avoid some of the mistakes. We have been using medical alerts that page nurses for years.

“From a global perspective, we try to have a balanced way of setting goals throughout the organization as well as in operating units. We use our six dimensions of care – clinical excellence, service excellence, physician engagement, employee engagement, operational effectiveness and community stewardship.

“And with Intermountain Healthcare being vertically integrated and horizontally aligned, it has been important to the culture of patient safety to have a strong chief nursing officer for the whole system along with a chief medical officer to oversee the common vision for the organization.”

MINA UBBING: “We are making progress. I want to get to the point where we stop the line, where our entire staff is comfortable with confronting their quality and safety concerns.”

KEVIN SCHOEPLEIN: “In response to ‘To Err is Human,’ we created the OSF Patient Safety Collaborative, which provided a platform for each facility to use improvement techniques to effect change and bring about learning and sharing. At the outset, it was clear at an organizational level that the culture of safety was central toward providing our patients with a safe, defect-free environment.

“In one of the pivotal decisions in determining a culture of safety, the Board of OSF Healthcare has standardized the Serious Adverse Event Reporting across the system. We recognize the key importance of signal detection, signal response, the performance of a standardized Root Cause Analysis and corrective actions. The importance of this must be underscored; in the past, we have had examples where OSF facilities made similar errors independent of each other. As each event in the Serious Adverse Event Reporting system is reviewed by the Board, it allows us to learn from the mistakes of each other and provides a far greater opportunity to prevent medical error and thereby fulfill our mission to ‘serve with the greatest care and love.’”

SUMMARY: A common theme of sustainability came through in these responses, with one executive noting that “sustaining is just as important as the initial change.” The Executive Roundtable participants and their facilities are engaged in this process for the long term, making the investment to develop a stronger quality and patient safety culture throughout their organizations.
With the introduction of new technology and increasing governmental mandates, the landscape in healthcare is constantly changing. Healthcare leaders that realize the organizational benefits of improving quality and patient safety at the same time they lower the cost of delivering care will have an advantage in the marketplace.

Further emphasizing the importance of our members being able to reduce costs and improve quality, Amerinet launched a program – Amerinet Quality Solutions – that will meet the unique needs of all healthcare facilities, acute and alternate care sites alike. From healthcare leadership and facility administrators to patient safety officers and nursing professionals, Amerinet Quality Solutions offers the tools necessary to implement quality and safety initiatives and establish a relationship between being a quality organization and being cost efficient.

Amerinet is partnering with an increasing number of hospitals and alternate care sites to identify areas where quality and performance improvement are needed and provide the cost-savings opportunities that they seek. Many of this new program’s resources are found on QualityTouch, Amerinet’s online resource designed for ease of navigation and having information available at a touch. The Web site also provides access to a repository of practice protocols from leading healthcare facilities such as Intermountain Healthcare, which is home to the Institute for Health Care Delivery Research.

Amerinet Quality Solutions focuses on nine pillars of quality:

- Patient Safety Infrastructure
- Clinical Challenges
- Clinical/Benchmarking Guidelines
- Regulatory Compliance
- Quality Improvement Tools
- Safety/Environmental Issues
- Legislative Issues
- Key Industry Issues
- Education

The program also offers Amerinet QualityScore, a customized on-site quality assessment focused on areas including document review, policy and procedure review, and patient safety and quality assessment in clinical areas. This engagement also includes identification of practices to be shared under the clinical repository pillar and a closing conference with follow-up report regarding assessment. For more information on quality and patient safety, contact Amerinet at 877-711-5700 or visit www.amerinet-gpo.com.
The following is a synopsis of a presentation by Gary Kaplan, MD, chairman and CEO of the Virginia Mason Health System. Titled “Seeking Perfection in Healthcare: Applying the Toyota Production System to Medicine,” Dr. Kaplan related the successes achieved by the Seattle-based healthcare system, one of the nation’s leaders in quality and patient safety, to other healthcare executives.

Since Dr. Kaplan became chairman and CEO, Virginia Mason has received significant national and international recognition. Virginia Mason is also a national leader in deploying the Toyota Production System to healthcare management, reducing the high costs of healthcare while improving quality, safety and efficiency.

Seeking Perfection in Healthcare: Applying the Toyota Production System to Medicine

The challenges facing the healthcare industry in 2000 were numerous. A 3 to 4 percent industrywide defect rate, unacceptable in almost any other industry, affected many individuals and their families every year. The cost of poor quality was in the billions of dollars, and quality could become a sound business strategy. The lack of access to care for many patients and the lack of insurance coverage for millions clearly was an increasing challenge. In addition, the morale of the workers within the healthcare industry was generally low, with many physicians and nurses considering early retirement.

In examining where Virginia Mason Medical Center (VMMC) was heading and speaking to other industries in the Northwest such as Boeing, Virginia Mason officials discovered the Toyota Production System. Using the basic premises of the car manufacturer in seeking zero defects and eliminating waste, the system could be used in the medical field. This awareness and initial study was the origination of the Virginia Mason Production System. The vision was to become the quality leader in healthcare, not just in our region but across the country, and the Virginia Mason Production System represented a powerful approach to getting there.

Changes began at the top of the organization in 2000-2001 with the Board of Directors asking a simple question – Who are our customers? The obvious answer was the patient, but in examining the processes and systems, they discovered that those processes and systems were designed, to a great extent, around the hospital’s staff and not its patients. The decision was made to use the new production system to make the changes needed to keep Virginia Mason a patient-focused facility. This new system would put the customers first, delivering the highest quality service, along with an obsession for quality and patient safety. High staff satisfaction would also be an important objective and critical to organizational success.

This decision really required significant changes in the overall culture of the organization, from management down, and required challenging the deeply held assumptions that were very prevalent in the industry. The Virginia Mason Medical Center was not a huge multihospital mega system but was large enough to test these new processes and make major change. VMMC is an integrated, not-for-profit healthcare system with nine locations, including a main campus with a 336-bed hospital and regional centers. The center has more than 5,000 employees, including 400 physicians, a graduate medical education program, research center and foundation.
The 1999 Institute of Medicine report was a significant catalyst for change and willingness to implement new systems at Virginia Mason. Dr. Kaplan referenced an article in the March 2003 edition of The New York Times Magazine that chronicled four survivors of medical errors, with a front cover stating that half of what doctors know may be wrong. It also mentioned that 98,000 people that year would die as a result of medical errors. Then in 2004, a patient at Virginia Mason died of a preventable medical error during a common tertiary procedure. With the support of the Board, the facility went public immediately after identifying what happened. It was discovered that an identical error occurred two years earlier at another local hospital. The facility’s decision to go public and to become more transparent was to try to prevent the error from ever happening again.

One of the fundamental changes needed was to update the traditional compact between physicians and the organization. Physicians had clung to the fundamental things they felt were due, including protection, autonomy and entitlement. After a process lasting over a year consisting of deep conversation across the organization, a new compact was developed. The compact articulated the organization’s responsibilities to the physicians, including working to foster excellence, to listen and communicate, educate and reward, and to lead. The physicians’ responsibilities were also described and included – focus on patients, collaborate on care delivery, listen and communicate, take ownership and change by embracing innovation and continuous improvement. There is considerable detail beneath each of these categories, and most importantly, the compact reflects a reciprocal agreement between physicians and their organization.

The changes in management systems use very specific tools, such as the Value Stream Process that highlights what is happening with the work, where value occurs and where there is interruption in work flows. The Rapid Process Improvement Workshop (RPIW) is a quick, five-day process, where a team that understands the work of that specific department becomes fully engaged to use the tools available to achieve immediate results in eliminating waste and improving safety. These are reviewed, and the improvement cycle is repeated with several subsequent workshops. Virginia Mason has done more than 500 RPIWs so far, covering every department in the facility. 5S – short for Sort, Simplify, Standardize, Sweep and Self-discipline – is a way to organize a workplace to make it safer and more efficient. And the 3P process (production, preparation and process) is used in building a new facility or designing new space.

Another fundamental principle is standard work, which brings conformity to the low-touch, non-value-added variation that wastes time and resources. The process is done the same way every time by everyone that does it, and the steps are trained on, codified and posted. The goal is to observe and understand the work, analyze the work and identify waste, eliminate the waste and standardize the new work cycle. This makes it easier to apply innovation and creativity to the process – because the standardized work can be measured and proven – as well as eliminate hundreds if not thousands of possibly defect-prone processes.

The Virginia Mason Production System

We adopted the Toyota Production System philosophies and practices and applied them to health care because health care lacks an effective management approach that would produce:

- Customer first
- Highest quality
- Obsession with safety
- Highest staff satisfaction
- A successful economic enterprise
System Empowers Employees

A Patient Safety Alert (PSA) system was introduced based on Toyota's stop the line method for embedding quality. This brings real-time quality assurance by empowering employees to report safety issues with a patient or process. Department chiefs and vice presidents responded 24/7 to get to the root cause of the issue. The idea was that improvements cannot be made if they are not known, and the goal was to focus on any necessary change, moving away from negative reactions on reporting. It was important to answer reports quickly, reinforce and celebrate the reporting, and let the person who reported know what happened. PSAs have grown from three per month in 2002 to 226 per month in 2008, showing that employees are slowly becoming more confident in reporting issues. Of a total of 11,677 PSAs, 37 percent were for systems, 26 percent for diagnosis and treatment, 21 percent for medication errors, 13 percent for safety, security or conduct, and 3 percent for equipment and facilities.

Ideas for improvement from the staff are also encouraged, and an Everyday Idea System was created for the employees to share their ideas. However, it was not just a suggestion box, but suggestions have to be made in detail. The idea needed to be worked with a manager, listing what the plan is and what the impact would be, as well as listing how the change could be implemented.

These programs helped challenge deeply held assumptions at the hospital that were getting in the way of building our culture of safety. Some instances became legendary in the organization and actually added credibility to the program by saying that management really means what they say. These programs also helped make the corrections needed at the facility. For example, medication errors showed significant reductions in the process and went to essentially zero with the addition of a Computerized Physician Order Entry (CPOE) system and process improvements.

Another example was in the GI Services area, where 11 RPIWs were done over a six-year period. These not only increased staff, physician and patient satisfactions but also helped the hospital financially. GI Clinic access improved 50 percent, and the net margin per room increased 88 percent. In addition, a plan to add additional procedure rooms was not needed due to changing the work flow, and $2 million in construction costs was saved. Overall, because of improvements in work flow and just by changing how the work was done, millions in planned capital improvements throughout the facility were not needed.

Physicians and Staff Benefit from System

Other improvements include the concept of flow stations for all primary care physicians. These are designed to have a continuous flow in a U-shaped cell, where a doctor can come out of an exam room, do documentation and other jobs immediately with minimal waste of motion, and then see the next patient. Lead time for patients was cut in half, with physician face time staying the same or increasing. The flow station idea has grown to include orthopedics and the emergency department as well as other specialty areas. In addition, the emergency department looked at their value stream and created a special process for patients who will definitely be admitted to the hospital when they arrive. Because of this change, divert rates to other hospitals for emergency cases are now near zero.

One major change that developed was adding nursing cells in helping the registered nurse (RN) workforce complete their day. Research showed that nurses were walking about a mile in a four-hour shift and were asked to do work that is not RN work, which led to staffing issues and trouble retaining RNs. The nursing staff did an RPIW on workday issues and designed the nursing cells, which are zones or cells also staffed with a patient care technician that covers a certain area on the patient floor. Nurses are close to the patients and do more charting and care in the rooms. Nurse time in the patients' rooms increased from 32 to 90 percent, patient dissatisfaction went from 21 percent to near zero, and call lights on during the day also dropped to near zero.

And the number of steps an RN took per day went from 5,818 to 846, the time to complete a cycle of work dropped...
Gary S. Kaplan, MD

Gary S. Kaplan, MD, has served as chairman and CEO of the Virginia Mason Health System since 2000. Dr. Kaplan received his medical degree from the University of Michigan and is board-certified in internal medicine.

Under Dr. Kaplan’s leadership, Virginia Mason has received significant national and international recognition, including the HealthGrades’ Distinguished Hospital Award for Clinical Excellence for the past three years. Virginia Mason is a leader in deploying the Toyota Production System to healthcare management, improving quality, safety and efficiency.

In addition to his patient duties and position as CEO, Dr. Kaplan is a clinical professor at the University of Washington and has been recognized for his service and contribution to many regional and national boards. For more information about the Virginia Mason Production System, contact the Virginia Mason Institute at 206-341-1600.

First Challenge is Changing the Mind of Medicine

FROM
- Provider First
- Waiting is Good
- Errors are to be Expected
- Diffuse Accountability
- Add Resources
- Reduce Cost
- Retrospective Quality Assurance
- Management Oversight
- We Have Time

TO
- Patient First
- Waiting is Bad
- Defect-free Medicine
- Rigorous Accountability
- No New Resources
- Reduce Waste
- Real-time Quality Assurance
- Management On Site
- We Have No Time

© 2009 Virginia Mason Medical Center

from four hours to slightly more than two hours and RN time on indirect care dropped from 68 percent to 10 percent. All of this led to significant improvements in service, and staff and patient satisfaction.

The teams working on the value streams need to know the whole stream when they look at an issue, then have a method for taking a piece of it and improving it, not just for patients but for everyone. Reducing the burden of work for the workforce is part of the process, including measuring and reducing how much the staff and patients walk each day. By measuring the distances and reducing them, it improves both workflow and a hospital’s financial performance. Those changes in measurement at Virginia Mason led to improvements in cancer care, radiation oncology and other patient areas. Many of these improvements are designed into new space design such as new operating rooms using the 3P process, which dramatically improved case time, decreased turnover rates and created flow by placing things geographically in the design process.

Partnering with Regional Employers, Insurers

Another part of the process is working with and helping large regional employers and insurers. A project profiled in the Wall Street Journal involved a collaboration between Starbucks, Aetna and Virginia Mason. The No. 1 healthcare cost and the No. 1 reason for baristas missing work at Starbucks is back pain. Virginia Mason did value stream mapping with Starbucks and found it took multiple days to treat patients with back pain, with close to half of those with pain lasting more than 10 days receiving an MRI but only less than 6 percent actually needing the MRI. By changing processes so that patients are seen the same day, 90 percent get back to work within 48 hours, 76 percent have no prescription medications and 6 percent got MRIs. Both Starbucks and Aetna saved money and, in return, agreed to pay higher than the going rate for physical therapy services provided.

Although the changes provided by the Virginia Mason Production System are for the patients, many of these adjustments in the process have brought improved financial performance for VMMC. Overall margin per year grew from $700,000 in 2000 to a projected $25 million in 2008.

Because of the savings and the success of the Virginia Mason Production System, many in the healthcare industry have visited Virginia Mason to learn more about the programs. In order to optimize the educational and training opportunities, the not-for-profit Virginia Mason Institute was founded. Revenue from the institute is used to help accelerate the work at Virginia Mason, to show the healthcare industry what is possible and spread the message.

These types of changes require a long-term commitment and are about changing culture as well as the management systems. It is essential that all employees are trained in the Virginia Mason Production System and also trained on preventing defects and errors. It requires ongoing collaboration throughout the organization, and it is important to have a very robust team leadership model, with everyone from the CEO to the front-line working supervisor engaged in this work on a daily basis.