Call Notes, Health Quality Call  
Wednesday, July 18, 2012  
Topic: Pursuing the Perfect Patient Experience: Virginia Mason Production System in Healthcare  
Guest: Henry Otero

Callers from coast to coast joined the call this morning to learn more about process improvement work in healthcare.

These notes are not a transcript. For fuller details, you can listen to an audio recording at plexusinstitute.org.

Joelle: Welcome to all our callers this morning, and a special welcome to Dr. Henry Otero of Virginia Mason Hospital. Our topic today is “Pursuing the Perfect Patient Experience.” Virginia Mason is where I go for specialty care since being treated there for cancer, 18 years ago. It has been fun for me to experience many of the positive changes that have been made as a result of the Lean work.

Dr. Otero received his Medical Degree from Michigan State University- College of Human Medicine in 1985, completed his residency in Internal Medicine at the University of Virginia in 1992 and his Fellowship in Medical Oncology at the Fred Hutchinson Cancer Research Center in Seattle, Washington in 1997. He joined Virginia Mason Medical Center in 1998 and was Section Head of Hematology/Oncology from 2002-2008. During his 6 years in this role, he participated and oversaw the successful implementation of Toyota Production System concepts to the Cancer Institute.

Dr. Otero completed his Lean certification in 2006 and the prestigious Kaizen Fellowship (advanced training in applying Toyota Production System methods to health care) in 2007. He has led multiple process improvement events at Virginia Mason and participated in both clinic and hospital facility redesign applying TPS methods.

He joined the Virginia Mason Institute in 2009 as part of the Physician Faculty and is a Clinical Assistant Professor at the University of Washington School of Public Health. He has developed and leads workshops in creating flow in the ambulatory setting and mistake proofing health care. His provider perspective recognizes the challenges and solutions when implementing VMPS amongst provider groups.

As of January 1, Dr. Otero is now full time in the Virginia Mason Institute. As a cancer survivor, I wish he were still in clinical practice, but I know how much passion he has for the Lean work.

I know that many of our callers today are very experienced with Lean in Healthcare, and others may be less familiar. So, Henry, give us some background about the Virginia Mason Production System, and some examples of how these concepts
change the way you deliver patient care. And maybe you will start by telling us how you got started in this work.

Henry: I was there at the beginning in 2001. And I have to say that this seemed like a strange and foreign concept. As I learned more about it, I could see that this was a method that would change healthcare. Over time, I’ve taken more of a leadership role in the organization. I’ll share more about the journey here, both my own and the organization’s as we learned about developing a methodology for process improvement. There have been a lot of challenges from a leadership standpoint.

My training was as a medical oncologist; I came to Virginia Mason in 2001. Up until that time, I had not been very conscious of the patient experience. Doing this work, I became conscious of the patient experience and the provider experience, and the principle of removing waste. I became aware of how much we’ve left the patient out of the design process.

It has been a slow cultural journey. I discovered how very important it was to have very engaged, very senior executives. At Virginia Mason, we say that the leaders connect the dots, make the connections. The process of engaging leaders had its difficulties. We took the executives and physician leaders to Japan for three weeks for immersion (some called it drowning) in the Toyota Production System.

At this time, we had two cultural beliefs: we make mistakes—we’re all human, and a long wait [for the patient to see you] means you’re good.

After intense learning in Japan and considering how to adapt the concepts to healthcare, our President declared that the Virginia Mason Production System would be the way we do business. Being a leader in this organization means putting yourself out there. We worked with several teachers; one of our sensei had worked directly with Taichi Ohno. He taught that our destiny was to be a leader.

In 2001, the healthcare industry was in upheaval. Virginia Mason was in serious financial trouble and was considering merging with one of our competitors. The Institute of Medicine report was just out; there were around 100,000 deaths a year by medical errors. We needed to find a new methodology, We were starting to develop services centered on patient care. We wanted to become a leader in quality.

We decided that the Virginia Mason Production System will be the way we manage our business. We heard a lot of complaints: “people are not cars.” Healthcare is a set of processes, and the Toyota Production System is a methodology for managing processes. The biggest thing: at Toyota, if there is an error, it produces a defect. In healthcare, defects can compromise patients’ lives. In the first five years, many were afraid we would put patients on an assembly line. But processes are to serve patients, not dehumanize them.
We rallied our physician group, and developed a Physician Compact laying out expectations, “gives and gets.” We are achieving “patient first” and quality measures. Today we don’t hear much about “patients are not cars.”

In the Cancer Institute, we used the “3 Ps” production process with three goals: work more efficiently, better communication, and centered around the patient. Patients, services and supplies flow. We wanted everything to flow to the patient. We delivered services to the patient, with quality.

In designing healthcare and healthcare delivery systems, we come to understand what people actually do, understand the flows. The Cancer Center design process set an example for the future. In facility design, we now design the flow of providers and staff to be separate from the flow of patients.

We came to see the importance of leadership being clear and aligned. To support that, we now have a structure, a Tuesday Stand-Up with reports on 12 chief value streams, led by CEO Gary Kaplan. Thirty minutes for Heads of Services to report and the process for the next week. For example, the structure of leadership.

We are adapting methodologies from Toyota. One thing we saw that surprised us is that workers can stop the line if they see anything abnormal or defective. There is a cord at each work station; one tug slows the line, turns on the yellow andon light, and brings a supervisor. If the supervisor is unable to solve the problem, a second tug on the cord stops the line—the whole assembly line stops. We began to think about how if we were able to do that in healthcare, how if anyone could stop the process.

Today we have a Patient Safety Alert system. Anyone who observes anything that could have an impact on patient safety can call an alert that brings a patient safety specialist. The alerts are coded yellow, orange or red. Red must be responded to with action within 24 hours. For a Code Red, the Head of Service must respond: for example, for an alert in Surgery, the Head of Surgery.

If the problem cannot be corrected in 24 hours, they must make a plan of action and present it to the Board. The Board can approve the plan or send it back for more work. We are seeing more accountability.

This is a change in culture. In 2002, our concern was that healthcare is broken. After the first introduction of Patient Safety Alerts, there were few calls. People were used to a culture of blame. In time, they learned that reporting is safe. The person who calls a PSA is always thanked. We have moved from blame to reporting. One sign of our success is a significant reduction in liability claims and in the cost of our malpractice insurance. This is our return on investment in safety.

In 2004 we had a tragic event that was devastating to the entire staff. We killed a woman, Mary McClinton, as a result of a radiological event. In the course of the
procedure she was injected with what should have been saline solution. The solution was actually a colorless antiseptic solution from an unmarked stainless steel bowl. The hospital did not go to secret negotiations. An e-mail went out to all employees stating what had happened, and that it was a process fault, not an employee’s fault. Processes were changed so this error could not happen again.

Today the Mary McClinton Safety Award is our most prestigious honor, and the award presentation is the hospital’s most well-attended event. The recipient receive high attention and recognition. We learned from Toyota the power of engaging frontline staff.

One of our values is that the patient is always first. We want to know what patients are thinking. We have a patient on a process improvement team, seeing the problems within the system. We use experience-based questionnaires to learn from patients.

Our mistake-proofing has included 25,000 Patient Safety Alerts, an average of 600 per month. We celebrate the reporting of concerns.

We engage all employees in improvement work. We are inviting the people who do the work to improve the work, and frontline staff often find the best solutions. An example was the issue of flu shots for employees, and there was a lot of controversy. Finally one of our employees said, “According to the research, many with flu are asymptomatic, especially in the first days. We need all employees to get flu shots. Why not put in a policy that mandates them?”

At the high point of the controversy, one of our GI specialists said, “I came to this country for freedom, to escape persecution, and now you are ordering me to do this. I won’t do it.” A pulmonologist stood up and said, “I work in the ICU. My patients are very vulnerable. If you don’t have a flu shot, don’t come into the ICU again.” Today we have a 99% vaccination rate, very unusual. Now the first day shots are offered, people line up right away, hoping their unit will be the first to reach 100%. We are always thinking about the process, thinking about the patient.

In the beginning, there was a fear that if you give people standard work, they won’t be innovative. Today people like it: “I know what to expect from any provider, I know what my job is.” We have better scores on Press-Gainey for the last four years.

We are removing waste from work. We look at waste in healthcare vs. throughput in healthcare. We are removing wasteful work of the provider. We also work on skill-task aligning. One of the primary care physicians told me, “We can bill a dollar and get 40 cents. If we can save a dollar, we get a hundred per cent.” Primary Care has become a profitable service line by removing waste from the process.

How do we support this improvement activity? One of the supporting structures is the Kaizen Promotion Office. They hold us to rigor, do teaching, organize
improvement events, track progress, develop clear measurements. They rotate people in, they spend 2 years learning and return to their operation with increased skills and leadership abilities. We have 25 FTEs. We support structures to keep us going.

We have a sense of urgency to get people to change. Our vision for the future is “patient first” and to be a quality leader. We have a Compact with Physicians to clarify the relationship. Leadership is visible out on the floor. We work with both technical and human dimensions. TPS/VMPS is our complete management system.

What questions do you have?

Caller: Have process improvements been budget neutral, or do you have to invest a lot of money up front?
Henry: Inefficient processes led us to need more space. By improving flow and set-up reduction, we have avoided adding new space. It is hard to put a value on the space you didn’t develop, but it is considerable. Most improvements are budget neutral or save us money.

Robb, Louisville: I am currently an academic, but in the past have been involved in hospitals. If I understand you correctly, TPS relies on quantitative issues, process issues. What about the qualitative, interpersonal issues?
Henry: We keep a close eye on patient satisfaction and staff satisfaction. We haven’t seen a negative response. In our clinics, 5 providers used to do things 5 ways. The patients were uncomfortable seeing a different provider—maybe they were not doing it the right way. Consistency builds confidence in care.
Robb: Are you saying their best solution, another group might find a different solution?
Henry: Elements of a process need to occur within that process. It is important that key elements are done.
Robb: You are talking about the content of the process. And there is room for the emergent.
Henry: We highly believe in innovation. They have to show what is better. We continue to improve processes.
Joelle: I’d like to comment from my experience as a patient. With a standard process so nothing important is overlooked, when I meet with my doctor, the doctor’s full attention is on me and on what I need in my current situation. It improves the relationship.
Robb: Thank you.

Gene, Mayo Clinic: Have you seen benefits by pushing this into the community?
Henry: We use these principles in working with our contractors, suppliers, vendors. Two other large Seattle hospitals, Group Health and Children’s, use these methods, so we are able to be collaborative. You can see its application too any process in life.
Gene: With the Affordable Care Act and Medicare, we are hearing a lot about opportunities to give better care and easier access. Keeping patients out of the ER, getting them into Primary Care, techniques inside our walls, getting people healthy...
Henry: We had a project recently with Boeing, looking at patients who were the biggest users of healthcare. Diabetic care was standardized, using multiple providers, providing evidence-based care. We achieved a 20% reduction in costs, mostly by avoiding emergency room visits and hospitalizations. We call this our Intensive Outpatient Care program. In October we will be doing a large project on Primary Care.
Gene: It’s great to have a payer like Boeing. I’d like to see this extended to patients without insurance.

Joelle: We’re over our time this morning, but I’d like to thank Henry for sharing his experience, and all you for participating. For our callers, our August 15 Health Quality Call will feature Dr. Mark Neumann, of Gunderson Lutheran, talking about how they are improving the service they offer to children with complex medical conditions—chronic illness and disabilities—and their families.

Henry: Thanks for inviting me!