

DELIVERING SYSTEMNESS:

The Critical Impact of Systemness on Cost, Quality and Outcomes
The Story of Riverside Healthcare



What is Systemness?

Across all industries, organizations large and small strive to deliver a consistent consumer experience.

In a 2012 analysis of what healthcare organizations can learn from the business processes of The Cheesecake Factory® restaurant chain, Dr. Atul Gawande marveled in *The New Yorker* at the idea of applying this “systemness” of streamlined processes and coordinated outcomes to healthcare. Citing the governance philosophies of America’s founding fathers, Gawande said such a transformation would involve “moving from a Jeffersonian ideal of small guilds and independent craftsmen to a Hamiltonian recognition of the advantages that size and centralized control can bring.”

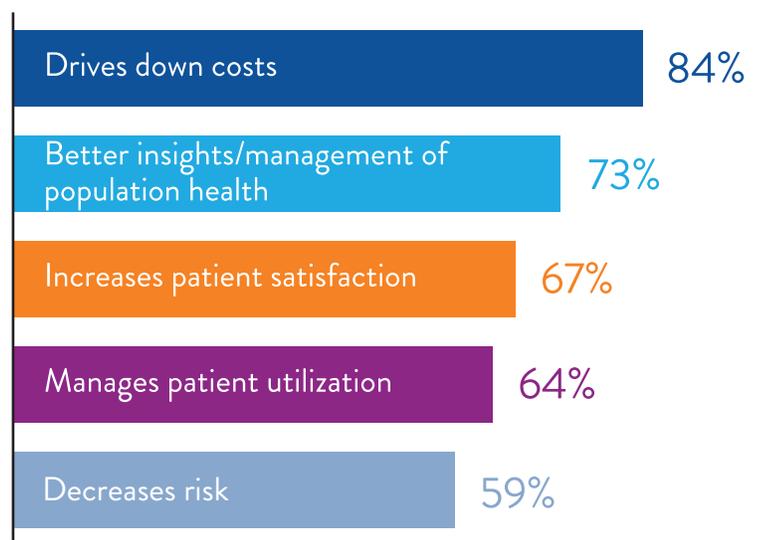
Since then, the concept has gained considerable steam as the nation’s health systems further commit to value-based care, higher patient satisfaction and the highest-quality medical outcomes. To better manage these risks, health systems are expanding their services to follow patients across the continuum of care, adding physician groups, hospitals, home care, skilled nursing facilities, rehabilitation services and more. The ultimate aspiration is to demonstrate a seamless, cohesive patient experience with predictable outcomes and standardized practices.

In other words, systemness is the new goal. But what does it mean for hospitals?

- Providing the same experience and quality for all patients and employees
- All components of an organization working toward the same goals
- Consistency and standardization of processes, protocols and outcomes
- Alignment of reimbursement and financial incentives across the organization

Systemness is an organizational priority for 96% of health system executives, according to a 2016 Medline/Modern Healthcare Custom Media Survey of 306 leaders across the country. Among the top five factors driving organizations toward systemness are:

What is driving organizations to prioritize systemness?



Source: Medline/Modern Healthcare Custom Media Survey, 2016

Why Systemness Matters

Many healthcare consumers face great uncertainty today in almost every aspect of the patient experience, such as determining out-of-pocket expenses, finding information about care quality at certain hospitals and navigating a provider's bureaucracy. Achieving systemness can eliminate some of these uncertainties by creating a uniform patient experience. Delivering a consistent experience fosters patient loyalty that can result in retaining patients over the long term, while increasing patient satisfaction.

Furthermore, systemness provides direct financial benefits to healthcare organizations, by:

- **Reducing costs of care** due to scale, familiarity and predictability
- **Maximizing reimbursements** through improved outcomes across the continuum
- **Avoiding financial penalties** from rehospitalizations and failure to meet quality benchmarks

A health system that improves its systemness doesn't just save money – it also improves its care, said Bill Douglas, CFO of Riverside Healthcare, a Kankakee, Ill.-based health system that recently worked with Medline to improve systemness in wound care across its organization. "That is when things start to turn," he said.

"For the first time in my 30 years, we have a wound care program that actually improves quality and outcomes," Douglas said. "When you do that, everything takes care of itself, including that thing called 'cost.' Quality always trumps cost, every day, every time."

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Gauging Systemness

Understanding the benefits of systemness is easy, but achieving it is no simple feat. In a Medline/Modern Healthcare Custom Media Survey, only 5% of executives said their health systems have fully achieved systemness. A vast majority, 92%, said they are somewhere in the middle of the process, with 3% saying they haven't started at all.

Riverside Healthcare, a Level II Trauma Center and a seven-time Truven Health 100 Top Hospital with Magnet designation from the American Nurses Credentialing Center, recently decided to take a closer look at its operations in its efforts to become a more cohesive health system. Riverside functions as an Integrated Delivery Network, treating patients throughout the continuum at its 318-bed community hospital as well as through home care, assisted living, rehabilitation, a skilled nursing home, wound center, medical group and a durable medical equipment company. Riverside operates its own nursing home in addition to admitting patients from 12 neighboring long-term care facilities.

Phillip Kambic, president and CEO, is a forward thinking leader who understands that quality drives healthcare today. He is an advocate of continuous improvement and embraces new ideas

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and innovations that will continue to make his organization thrive. Although Riverside Healthcare is an award-winning organization with strong quality metrics, Kambic enlisted Medline to assist in its efforts to bolster his organization's systemness.

Medline, the nation's largest privately held manufacturer and distributor of medical

supplies, worked with Riverside's leadership team to design a strategic partnership project that aligned goals and demonstrated the value of a collaboration between providers and vendors.

Michael Mutterer, senior vice president and chief nursing officer at Riverside, believed the key to the system's cohesiveness lied in the behavior of its clinicians. Mutterer, who was previously responsible for the system's post-acute services, had recently taken on responsibility for all Riverside clinicians. Mutterer's unique position leading both acute and post-acute clinicians gives him a global outlook of the care process, regardless of setting. He wanted to work on standardizing the behavior of Riverside providers across the continuum as a part of an effort to provide improved, consistent care.

“As we started looking at what areas we wanted to focus on, one question we asked was, ‘Where do we find opportunities for improvement that span our continuum?’” he said. “And then we looked at which ones were the largest cost savers or cost avoidance.”



After their first meeting with the Medline team, Riverside leaders realized they had found a strong partner to help the system through this standardization process.

“As we started looking at possible partners and had been introduced to some members of the Medline team, what I found unique about them that I had not seen in other companies was that they span the continuum, with real expertise in all segments,” Mutterer said. “Their organization was able to provide products, services and support for not just acute or post-acute care, but for the entire continuum.”

As Medline and Riverside took a closer look at the health system’s various services, the companies identified wound care as a significant opportunity for

standardization across the system. The service line was a “logical area to focus on” given a serious lack of standardization in products, Mutterer said, noting that hospital patients were being treated with one product line, but encountered different products if they were transferred to treatment through a skilled nursing facility or home health service.

Product variation made it difficult to educate patients on their wound care and to maintain consistent processes and outcomes throughout the continuum, Mutterer said. “As I sat back and looked at it as a consumer, not as CNO, I realized how confusing that must be for our patients.”

But products weren’t the only problem. In a detailed study following patients throughout the system receiving treatment for wounds, Medline and Riverside identified inconsistencies in assessment, assessment tools, diagnosis, practice and outcomes.

Medline performed a deep-rooted assessment that further revealed the stark differences in how Riverside units were approaching wounds, even in how caregivers and clinicians were bathing patients. “That’s not to say anyone was doing it wrong, but it can create differences in care,” said Rebecca Schiltz, director of rehabilitation services at Riverside.

The array of differences in wound care were traced back to provider education, which proved to be just as inconsistent as the products used, Schiltz said. This was frustrating for management who strived to train clinicians in evidence-based practice. For example, the skilled nursing facility used different electronic education programs than the hospital and the home care division. Staff were participating in online educational programs but they were not being educated the same way throughout the system. And, the education did not include how to select or use a formulary product.

“We wanted to hit the reset button,” Schiltz said. “We know what the research looks like. We realized we needed to educate nurses on how to best provide wound care, the same way at each level of care.”

Creating Systemness in Wound and Skin Care

Consolidating Riverside’s Wound Care Toolbox

Medline and Riverside came to the conclusion that the system’s problems revolved around products, clinical education and protocols. The Medline team devised a plan to standardize wound care products used in every unit and reeducate providers on a consistent curriculum based on uniform treatment protocols to be used throughout the system.

“Education is a means for us to teach patients to care for themselves once they leave our four walls. Poor patient education can lead to poor outcomes.”

***-Michael Mutterer, Senior VP and CNO
Riverside Healthcare, Kankakee, Ill.***

One component of the assessment project was a closer look at the system's current usage patterns of wound and skincare products. The results were telling: in a one-year study, Medline and Riverside discovered the system used 113 different items and only 10 of those products were used at every Riverside facility. This included 25 different foam dressings, 14 different silver dressings and nine different gelling fiber dressings, among other products.

"When we looked at the number of products we were using, it was mind-blowing," Mutterer said. "To be honest, I didn't have any idea the variation was to that extent."

The use of different products at different levels of care confused patients. "Patients said they did not like the products being switched," Schiltz said. "There was lots of anecdotal information. The more we dug in, we discovered nurses had over 100 products they could order, from 15 different suppliers."

Riverside management realized that improving product consistency across the system would not only create a better patient experience, but also a better experience for nurses. Standardization would make nurses feel more comfortable in working across the continuum of care, and increase their confidence in the patient's treatment success as they advance through the continuum.

So, Medline and Riverside set out to create a product formulary to be used across the system. After reviewing all wound and skincare products used at each facility across Riverside, Medline determined it was able to reduce the number of unique products used across the system by more than 50%, offering a significant opportunity to reduce product costs and standardize treatments and outcomes.

The in-depth assessment established a baseline to move forward. Mutterer, the Riverside CNO, is also pushing for the health system's 12 skilled nursing facility partners to adopt the same practices. Even though these providers are not a part of the Riverside Healthcare organization, they make a significant contribution to the care continuum, he noted.

"Why not ask our partners to be part of the program?" Mutterer said. "We can work with them to hopefully improve wound care at their facilities as well. We want to ensure our partners can keep patients and not fall into a situation where they're readmitted to our hospital."

Teaching Systemness in Wound Care

Education would be key not just in ensuring clinicians knew how to properly make use of the system's new product formulary, but also to ensure all clinicians were treating patients properly and consistently.

"In general, most nurses are not certified in wound care," Mutterer said. "Their training for basic wound care can vary from A to Z. Standardizing training on a standardized product line helps them feel more confident and comfortable in assessing and treating wounds."

Implementation of a formulary created a substantial "learning curve," Schiltz said, as the system had to convince clinicians that transitioning to a standard line of products was good for both staff and patients.

"It was rough because we were taking away products that people knew," Schiltz said. "At first, the teams did not understand all the new products. We had to get the teams to embrace them."

As a part of the education program, registered nurses and certified nursing assistants from select units learned a standardized method for preventing skin damage such as pressure injuries, moisture-associated skin issues and skin tears. RNs received further training on wound care and the system's new formulary of products.

The Plan

- 01 Develop a product formulary that would be consistent throughout the health system
- 02 Develop a strong education program
- 03 Develop guidelines that could be used by all care locations

“The fact that, from the top down, all staff got trained—even aides—shows a real commitment from Riverside,” said Sue MacInnes, Medline’s Chief Market Solutions Officer. “Changing a protocol or a formulary is a process. At the core of this process is the staff. Changing the behaviors of people means those people want to know why: What do I get out of this and how does it help my patients? The leadership of the organization has to demonstrate both commitment and a passion for better patient care. Riverside never took their eye off the greater good for the patient and that filtered down to every staff member.”

The new training had a noticeable impact on patient satisfaction, in part because it improved treatment efficiency. For Schiltz, a major “aha moment” came when, through education and changes in protocol, bedside rehabilitation nurses were empowered to triage wounds upon admission in the rehabilitation unit, instead of waiting for a specialty nurse to do so.

Medline and Riverside also devised a new, more consistent education platform for wound care patients. This was a crucial part of ensuring outcomes remained consistent even once patients leave the hospital, Mutterer noted.

“Education is a means for us to teach patients to care for themselves once they leave our four walls,” Mutterer said. “Poor patient education can lead to poor outcomes.”

Measuring Success

Reduction in Days to Heal

The biggest win for Schiltz came in the rehabilitation unit, where she was able to watch bedside nurses treat wounds on “Day One”, greatly expediting the healing process. Because patients often come to the rehabilitation unit after major surgery, it’s a frequent provider of wound care.

“To see people go home from rehab with their wounds fully healed is amazing,” Schiltz said. “We never tried to heal before. We tried to stop them from getting worse.”

In 2015, Riverside’s wound center ranked just below the national average of 78 days to fully heal arterial ulcers. That number dropped consistently throughout 2016, and today those wounds take just 30 days to heal when treated at Riverside. Nationally, diabetic foot ulcers take an average of 86 days to heal, but Riverside’s wound center has lowered that number to 40 days. Meanwhile, Riverside is also healing venous leg ulcers faster than the national average.



Heightened Awareness of Skin Assessment on Admission-Data Showing Improved Ability to Identify Skin Issues at Admission, Preventing Reportable HAPUs

Early attention to wound issues has also helped Riverside avoid Hospital Acquired Pressure Ulcers/Injury (HAPU). In one notable case, nurses immediately identified two patients that were discovered to have a Deep Tissue Pressure Injury (DTPI) upon admission to the rehabilitation unit.

Many of these DTPI wounds develop into full thickness pressure injuries while a patient is in the hospital, and must be reported to state authorities as a HAPU. But, because the newly-trained nurses identified these wounds early on in the admissions process and addressed them accordingly, they were able to prevent a reportable HAPU.

“The keen eye and awareness of the rehab staff has proven to be beneficial for Riverside,” MacInnes, the Medline executive, said. “The staff indicated that those types of wounds, prior to their training and focus on skin health, would certainly have been missed.”

Increased Volume of Wound Center Patients

By improving care, Riverside’s wound center was able to open its doors to more patients: the system’s wound care volume rose by 32% to 451 patients in fiscal year 2016, and visits to the wound center increased 17%. The clinic closed 57% more wounds in 2016 than the year before, demonstrating its value within the health system and the entire community as a care resource and a revenue driver.

Lowering Costs

Riverside’s success can also be seen in avoided costs.

Healthcare costs related to HAPUs increase annually and are estimated to be between \$44,000 and \$128,000 per pressure ulcer, according to the AORN Journal. HAPUs have been reduced at Riverside as the result of provider training on proper skin assessments and early identification of skin issues during the Medline program.

Pharmaceutical costs for debriding wounds is almost a hidden cost. The new product formulary and provider education helped bring those costs down.

Riverside was able to reduce the annual cost for an enzymatic debriding agent by 71%, by training staff on alternatives treatments that produce similar care goals.

“This is just one example of the staff’s knowledge and the ability to apply it to practice. Using the patient assessment skills combined with product knowledge, the staff was able to look for the best option for their patient. The staff demonstrated time and time again the value of empowerment,” said Margaret Falconio-West, Medline’s senior VP of clinical and a member of the project team.



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Nurse Satisfaction

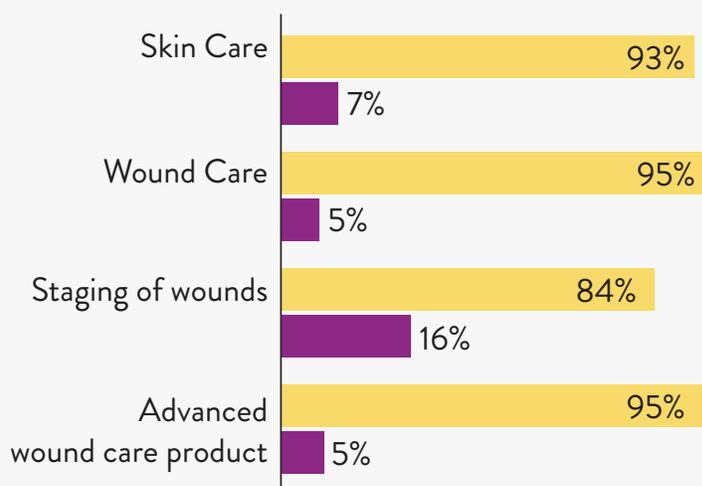
Nurses gave an overwhelming thumbs-up to the transformation process. In a survey of nursing staff, 74% said they were “very satisfied” and 19% said they were “satisfied” with the education provided by Medline. Ninety-three percent said they were either very satisfied or satisfied with the Medline Remedy Skin Care product line included in the system’s new formulary, followed by 92% who were either very satisfied or satisfied with Medline’s advanced wound care products.

Perhaps most importantly, 87% of nurses rated their comfort with staging a wound at three or higher on a five-point scale.

Falconio-West further commented on the nursing satisfaction survey, noting that, “it is rewarding to see that after the educational programs two out of three staff members wanted more.”

“Bedside nurses used to hate wounds,” Schiltz, the director of rehabilitation services, said. “They would be very quick to put in for a consult from a specialty nurse. Now they enjoy changing the dressing and treating them. They are empowered. They were very excited.”

Medline Education Improved Nurses’ Knowledge in Four Key areas



Yes No

Source: Medline Survey

Lessons Learned

It took time, persistence and patience to implement these changes and measure their impact, Schiltz said, but the experience was necessary in order for the system to improve.

“It was a lot of work,” she said. “We needed to upgrade policies, education, products. We needed to get everybody reset.”

Although product variation was a major factor in Riverside’s lack of systemness, it wasn’t the only one, Mutterer pointed out. The system couldn’t have accomplished its multi-faceted standardization plan without a partner that could also improve the care process.

“Medline is truly not just a product or education company,” Mutterer said. “We believe our partnership is deeper than that. They offer a partnership with the ability to advance our ability to treat our patients. A product-only company just sends you the products.”

Standardization of any complex system is not easy, Mutterer noted, but it teaches executives a lot about the organization they think they know so well.

“Coming into the project, I believed that because we are a healthcare system we were more standardized than we actually were,” Mutterer said. “It was eye-opening to me as a CNO to see how different all areas of our organization were. None were right or wrong. They were just different.”

Addressing those disparities was clearly possible, but very challenging, Mutterer said.

“The span of control was all within my reach,” he said. “The difficulty we had was getting people to see and understand why we were doing it. We had to help people across the care process understand we were doing this for the better of our patients, for quality and for the continuum of healthcare in our system.”

Bill Douglas, CFO of Riverside, said measuring the success of the project wasn’t difficult because he predicts the system’s financial results based on its quality indicators, which improved. Nonetheless, the return on investment for standardization can’t necessarily be measured on cost or quality indicators alone, he said.

“My common sense tells me that a well-run wound care program will improve quality indicators, reduce intake, improve quality of life for the community and make physicians happier,” Douglas said. “My ROI is all of those things coming out in a positive fashion. I’m a happy CFO. I can’t put an exact dollar figure on it, but I can tell you intuitively it is huge. It’s bigger than we even believe.”





Patient Success Stories in Transitions of Care

Riverside Healthcare's success in achieving systemness is best observed in the improved health of its patients. Newfound consistency in wound assessment and care products allowed for smoother transitions in care from acute rehab to post-acute care in skilled nursing or homecare.

"No matter where in the system, everybody involved in this project is working with the same processes and products now. This is a true demonstration of a healthcare system integrating and acting as one in the true spirit of systemness," said Sue MacInnes, Medline's chief market solutions officer.

Real Stories of Riverside Nurses and Their Patients

A patient with a diabetic foot ulcer was being followed in the outpatient wound center and showed strong progress toward wound healing. Due to underlying health issues, she was admitted to the Riverside Rehabilitation Unit and was treated appropriately from the day of admission. Prior to the Riverside transformation project with Medline, bedside nurses did not have access to advanced wound care dressings and were instructed to wait for the specialty nurse for wound care orders. Now, equipped with the new wound care knowledge, the patient's nurse was able to assess and provide the appropriate treatment. Her wound was completely healed in 30 days.

Another patient was admitted to the rehabilitation unit at the beginning of December 2016, with a large open chest wound that contained necrotic tissue and had a significant amount of drainage. Wound treatment was a challenge – one option was the use of negative pressure wound therapy. However, due to the

location of the wound, it was not appropriate. Another option would have been surgical debridement and possible closure, but not in this case as the patient was not a good surgical candidate and the type of surgery would be very extensive. Conservative wound healing measures were taken. The wound was treated with Medline's TheraHoney® wound gel and secondary dressings. When the patient was later discharged to the Miller Rehabilitation center, the staff was able to maintain the same treatment. Thanks to their newfound training and access to products, the wound closed substantially in about 30 days. Full healing was eventually achieved with treatment at home.

The third case involved a patient with venous stasis ulcers who was treated in the outpatient wound center with a two-layer compression protocol and Medline's Optifoam® dressings for drainage management. Several months later, the patient was admitted to Riverside's telemetry unit, which was not part of the transformation project and had not received the wound care education or access to the wound care formulary products including compression therapy. After seven days in the telemetry unit, the patient was admitted to the rehabilitation unit, where the team was able to assess his wounds and immediately recognized that he needed the two-layer compression protocol. When the patient was discharged from the rehab unit, he resumed outpatient treatment at the wound center. While this patient's treatment was ultimately a success, the weeklong hiatus of wound compression delayed the patient's healing process," MacInnes pointed out.

"Had the telemetry unit been exposed to the same training as the rehab unit, there possibly would have been no lapse in the compression therapy, and the patient would have healed quicker," MacInnes said.



Since 1964, Riverside has been building healthier communities by delivering the highest quality care with great compassion and unwavering attention to safety and patient satisfaction. As a fully integrated healthcare system, Riverside serves the needs of individuals and communities in the heartland of Illinois and western Indiana - just south of Chicago's south suburbs. Riverside Medical Center, a nationally-recognized 318-bed Level II Trauma hospital, provides a full scope of inpatient and outpatient care including award-winning programs in heart care, cancer care, neurosurgery and orthopedics. Riverside operates several community, primary and specialty health campuses throughout the region and has over 140 Riverside Medical Group providers to help put "Well Within Reach" for everyone. At Riverside Healthcare, we offer our highest thinking, our kindest touch, and our strongest commitment to excellence, every day.



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