

# Using Integrated Technologies to Solve Today's Nursing Challenges: a How-to Guide for Nurse Leaders

## CNO Perspective

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### The Questions Nurse Leaders Aren't Asking

At a recent conference of nursing executives where I was a keynote speaker, I asked the audience, "How many of you are familiar with the term *digital transformation*?"

Not one person raised their hand.

I spoke about the subject for a few minutes. People took notes and shook their heads in acknowledgement of points I was making. But they did not ask a single question during the designated Q&A time.

#### Why?

I believe there are two reasons. The first is that nurse leaders don't know what to ask. The second is that they don't have an interest in something that doesn't seem relevant to solving the tough challenges they face today. Like how to attract and retain nurses in the face of a global nursing shortage. Or how to enable nurses to communicate more easily with physicians and other members of the care team.

#### A Simple Definition

Many definitions exist for this term digital transformation. I describe it very simply by saying it's the transformation that occurs in society or in business as a result of moving from doing things in traditional ways, to doing things by using digital technologies in integrated ways.

Digital transformation is disrupting all kinds of businesses. We all see what Uber did to taxi cabs. We see how Airbnb is having a similar disruptive impact on traditional hotels. We know that online merchants like Amazon have put many brick-and-mortar stores out of business.

### This Report Is about *What to Do*

Plenty of articles and reports have been written about how digital transformation is impacting and will continue to impact healthcare.

I'm pleased to say that this is not one of them.

This is a report about *what to do* about that change, and how to use technology in an integrated way to solve the toughest challenges you face, today. It's about how to claim your rightful seat at the table to lead and influence how technology is applied in the patient care environment.

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### Influencing the Direction of Integrated Technologies in the Care Environment

For the sake of this report, I would like to replace the term digital transformation with one that will have more meaning and relevance to my fellow nurse leaders: "integrated technologies in the care environment." Here, "integrated" is the operative word.

The impact of integrated technologies in the care environment on the discipline of nursing has already begun (the digitization of health records is a prime example) and will only accelerate. As nurse leaders, we are positioned to influence the direction these technologies will take in hospitals.

As a nurse executive, you lead 60 to 70 percent of the staff in the hospital. It is imperative that you be at the table helping to drive the selection and implementation of technology that affects the staff you oversee and the patients they care for.



Rhonda Collins, MSN, RN  
Chief Nursing Officer

## The Nursing Hierarchy of Resiliency

It's essential to create an environment where nurses can feel energized by their work, which leads to more focused patient care. Strengthening communication is fundamental to creating such an environment.

### Self-Actualization

Climate of respect; control and support

Self-fulfillment needs

### Esteem Needs

Quality patient outcomes; sense of accomplishment

### Belonging Needs

Power to make decisions affecting practice

Psychological needs

### Safety Needs

Access help immediately, reduce interruption fatigue

### Physiological Needs

Physical well-being, communication, workflow

Basic needs

### Stepping Away from the Siloed Past

When it comes to integrating technologies in the care environment, you need to address the challenges you're still trying to solve today while being mindful of the challenges of the future. As visionary leaders, we walk with one foot in today and one foot in tomorrow, stepping away from conventions that no longer serve us.

Nurse leaders have spent years talking about technology in the care environment. The trouble is that we've looked at bedside technology as individual systems because we may be focused on a single urgent problem or working within a limited budget allotment. However, these very real problems should not cause anyone to develop tunnel vision. You must remain focused on the strategy of integration.

Imagine if every day you came to work, sat down at your desk, and had to power up one computer for the Internet, a second computer to manage a financial workbook, a third to manage your email, and a fourth to manage any integrated businesses.

It sounds ridiculous, doesn't it? Yet this is exactly what we ask nurses to do every single day as they work tirelessly to care for their patients.

At every bedside is one system for physiologic monitoring, a different system to deliver IV medications, a system for the ventilator, and a system supporting communication and alert and alarm notifications.

At every bedside, nurses must know the sign-on credentials for each individual device. They must know what information consolidates and what information doesn't. They have to go to each device for isolated information and fill in the gaps with documentation to ensure all of this technology tells the story of the patient.

### Stepping into the Integrated Present and Scaling to the Future

Integrated technology in the care environment is about taking once-siloed technology parts and pieces and making them work together. It calls for taking a broader, more strategic approach to selecting and implementing technologies.

This approach begins with the patient at the center, with the workflows of the people using the technology orienting around the patient. It considers how the technology integrates holistically, and how it solves problems for one population of caregivers without creating problems for another population.

## Solving the Nurse Leader's Urgent Challenges, Today

I attended a nurse executive symposium recently where topics included issues related to communication discipline (S-BAR or SOAP) and surveying nurses to determine if they prefer nine- or 12-hour shifts. (No surprise, the 12-hour shift still wins.) As I listened, it struck me that we were having these same conversations 16 years ago when I was working in hospital administration.

It's time to embrace the reality that nurses prefer 12-hour shifts and that these long shifts are not the reason nurses are feeling burned out and tired. It's what happens during those 12 hours that contributes to fatigue, burnout, and exit from the profession. We need to re-evaluate staffing, meaningful participation, and the tools we provide to enable nurses to work more efficiently.

### Attracting and Retaining Nurses

A recent report from [Health Leaders Media](#) identified nurse retention as the top challenge nurse leaders face. It identified communication improvements as the second most effective strategy for retaining nurses, and retention bonuses as one of the least effective.

If we want to attract and retain nurses, we have to make communication improvements. We need to meet the digital expectations people bring from their personal lives, especially the upcoming generation that can't imagine a world without technology, social media, or mobility.

### Improving Communication

To improve communication, choose technology with the intelligence to deliver the right content to the right caregiver, at the right time, allowing nurses to practice to the highest level of their education.

As I discuss in my blog post [Nursing Communication and the Hierarchy of Resiliency](#), it's essential to create an environment where nurses can feel energized by their work, which leads to more focused patient care. Strengthening communication is fundamental to creating such an environment.



### Centering the Conversation on the Patient

The complexity of the hospital environment demands consistent conversations between caregivers. We have to talk to each other; we can make it hard or we can make it easy. Software like Vocera Collaboration Suite helps standardize the way caregivers communicate because it centers information on the patient, which causes the care team to center on the patient. Each care team member has the vital signs, the EKG strip, the labs, and visibility to the patient's monitors and the entire care team – all on their phone in near-real time. The patient context doesn't change from one person to the next just because one works in in the ICU and another works in the emergency department.

Each team member – physicians and nurses alike – has the same patient context and the same visibility to the ever-changing stream of variables.

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### A Real-World Example of Integrated Technologies

The neonatal intensive care unit (NICU) at [Sentara Princess Anne Hospital](#) switched in 2011 from an open, single-room layout to a 20-bed NICU with private and twin rooms.

With this change, the nurses could no longer directly see and hear the primary alarms from the patient monitors and instead would have to rely on secondary alerting sent to the phones they carried.

The secondary alarm management system worked as designed, but it often sent alarms from patient monitors and ventilators to a nurse's phone even when the nurse was standing right next to the sounding monitor or ventilator. The unnecessary noise was disruptive to nurses and overstimulated the infants.

Routine care activities would cause nuisance alarms, which contributed to interruption fatigue. Nuisance alarms often occurred while a nurse was caring for a baby and unable to acknowledge the alarm.

### Collaboration and Partnership Between Clinicians and IT

The clinical leadership worked in partnership with the IT team, and together they worked with Vocera to identify requirements for a next-generation solution that would send secondary patient monitor alarm

notifications only when nurses were outside the visual and audible range of the primary patient monitor.

The hospital had a real-time location system (RTLS) in place. They used that system to establish a continuous signal for nurses' locations on the NICU and to share that location information with the Vocera alarm and alert management system. This process would allow secondary notifications of patient monitor alarms to be sent to nurses only when they were outside the patient's room. This is called selective alarming.

To measure the success of the project, the hospital compared ancillary alarm notifications before and after implementing the next generation alarm and alert management system from Vocera. Data showed a 54 percent reduction in secondary NICU alarms within 30 days of integrating the alarm management technology with the RTLS system.

### Integrated Teams, Integrated Technology: A Recipe for Success

The success of Sentara Princess Anne Hospital's solution was possible for many reasons. Among them: The frontline nurses had a voice with the clinical leaders. The clinical leaders had not only a voice, but a partnership, with the IT leaders. The clinical and IT teams worked collaboratively with trusted vendors. And everybody involved thought of technology in a holistic, integrated way.

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### Point Solutions Miss the Point

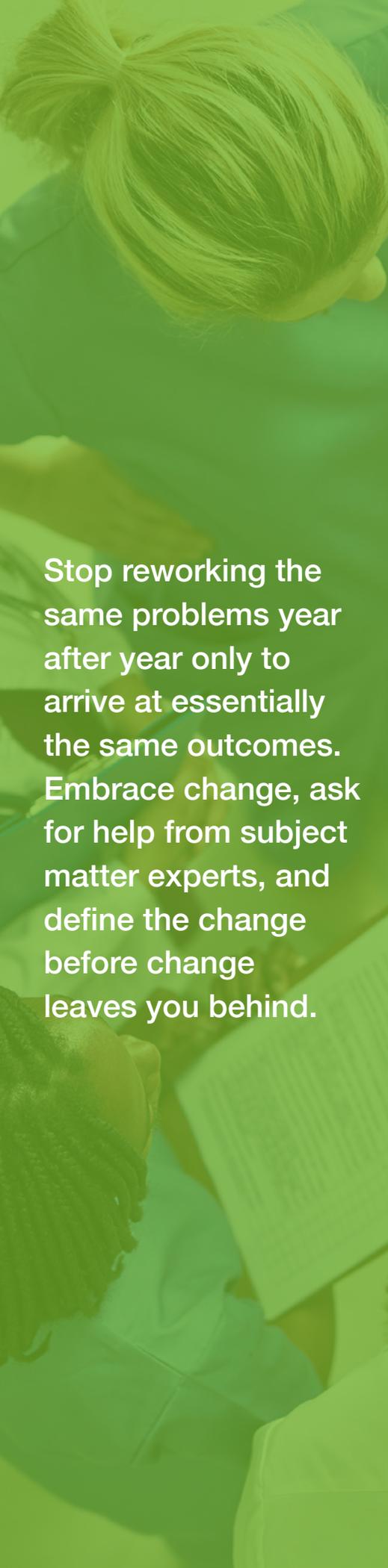
If I were to draw out one idea in this entire report to emphasize, it would be this: Having integrated technologies in the care environment cannot be achieved through a transactional approach to technology acquisition.

We have to move away from a technology transaction approach where we acquire a texting solution from one vendor, a phone solution from another vendor, an alert/alarm fix from another, and so on – and then hope that somewhere in the near future they all work together and can integrate with medical devices, EHRs, and clinical and operational systems.

We have to move away from cobbling disparate systems and toward functioning as a seamless entity. Functioning as a seamless entity means that medical devices work with a nurse's mobile communication tool on which the nurse can also talk and text and accomplish workflow tasks.

### Among the reasons for solution success at Sentara Princess Anne Hospital:

- The frontline nurses had a voice with the clinical leaders.
- The clinical leaders had a partnership with the IT leaders.
- The clinical and IT teams worked collaboratively with trusted vendors.
- Everybody involved thought of technology in a holistic, integrated way.



Stop reworking the same problems year after year only to arrive at essentially the same outcomes. Embrace change, ask for help from subject matter experts, and define the change before change leaves you behind.

We have to look at the complexity and the whole of the solution because solving a problem in isolation often creates other problems. For example, if a hospital has a problem involving unsecured texting among physicians, the hospital might try to solve it by buying a secure texting app. Then the hospital would likely realize that physicians aren't just texting each other; they're texting the entire care team. The outcome would be an impact on the nursing staff, who would get pulled into a dysfunctional system.

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## Own the Outcome

Change is here, happening now, and will only accelerate. Digital disruption and transformation in your hospital needs you, as a nurse leader, at the helm.

Work in partnership with your hospital's IT leaders – but don't abdicate decisions about technology to them. Clinical technology decisions need your expertise.

You have to define the future. You have to make decisions now for tomorrow. You will pay for decades if you don't actively engage.

When you make huge, sweeping investments, it's imperative that you are engaged in the "why."

Involve your nurses in the selection process, rather than just handing them something they have to retrofit into their work experience.

Go to industry leaders who can help guide your discussions to ensure nursing is involved. Value and validate the work done by your nursing teams to ensure long-term engagement with the integrated technology solutions you are putting in place.

And most of all, stop reworking the same problems year after year only to arrive at essentially the same outcomes. Embrace change, ask for help from subject matter experts, and define the change before change leaves you behind.

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## A How-to Checklist for Nurse Leaders

How can you as a nurse leader move from the transactional point-solution approach to the strategic integrated-technology approach?

Start with a vision of where you want to go, then work backward from that vision. This is how you ensure that the clinical perspective is always front and center. Then, keep this checklist of guidelines and questions in mind as you evaluate technology solutions:

- 1. Is a clinical expert at the table for every discussion about technology clinicians will use?** Don't allow others to make your decisions for you.
- 2. Have you begun with the end in mind?** Always lead with the patient. Make sure the technology enables the nurse to interact with the patient and focuses on the patient as the center to streamline the nurse's workflow. Your end result will be a better patient outcome and happier staff.
- 3. Are the solutions you're considering and the technology strategy you're building user friendly?** Make sure you're setting up a sustainable workflow that makes it easier for nurses to get their job done.
- 4. Does the solution solve more than one problem?** Make sure it doesn't solve one problem while creating three more.
- 5. Is the solution sustainable?** Make sure it will be able to grow and integrate throughout your organization over time. Do you have expansion or facility construction in mind? Can the solution scale to support all locations within the extended system? If you change clinical practice guidelines, will you be able to customize the solution to support the new protocols?
- 6. Have you incorporated the nurse perspective?** Nurses are experts on the care environment and need to be part of defining technology requirements. Include nurses in the process of making decisions from the bottom up to help ensure their buy-in and adoption.

**Rhonda Collins, MSN, RN**, has served as chief nursing officer at Vocera since January 2014. As CNO, she is responsible for working with nursing leadership groups globally to share clinical best practices, help them better understand the value of Vocera solutions, and bring their specific requirements to our product and solutions teams.

Prior to joining Vocera, Rhonda was vice president and business manager for Fresenius Kabi, USA, responsible for the launch of the company's intravenous infusion pump in the United States. She also led the American Nurse Project, elevating the voice of nurses across the country.

Through her previous experience at CareFusion (now BD), Masimo, and at Baylor University Medical Center as vice president of women and children's services, she gained deep experience maximizing market share and profitability while building on best clinical and business practices. She holds a Master of Science in Nursing Administration from the University of Texas at Arlington and is a registered nurse.

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## About Vocera

The mission of Vocera is to simplify and improve the lives of healthcare professionals and patients, while enabling hospitals to enhance quality of care and operational efficiency.

In 2000, when the company was founded, we began to forever change the way care teams communicate. Today, Vocera continues to offer the leading platform for clinical communication and workflow. Nearly 1,500 hospitals and health systems around the world have selected our solutions to enable care teams to text securely using smartphones or make calls with our hands-free, wearable Vocera Badge.

Interoperability between our platform and more than 140 clinical and operational systems helps reduce alarm fatigue and speed up staff response times to improve patient care, safety, and experience, and foster caregiver resiliency.

Vocera (NYSE: VCRA) is publicly traded with the resources and fortitude to help ensure your success with our solutions over the long term.

In 2017, Vocera made the list of Forbes 100 Most Trustworthy Companies in America.

Learn more at [www.vocera.com](http://www.vocera.com), and follow @VoceraComm on Twitter.