Healthcare Leaders Turn to Tech to Address Clinical Workforce Challenges

Survey results identify current and future trends in reimagining care delivery

Over the years, emerging technologies within healthcare have garnered a reputation for overpromising and underdelivering. All too often the tools that promote transformative solutions become yet another cumbersome step in the patient care process while also failing to integrate properly with existing platforms, leaving providers and administrators frustrated.

Anna Kiger, Chief Nurse Officer at Sutter Health, echoes this sentiment in her extensive experience vetting technological innovations for the system: "In my 38 years [of experience], sales calls usually start out with 'We're going to leverage this technology to make the work for your staff easier.' Looking back, very little of it leveraged anything other than another burdensome piece of technology to carry around and keep track of."

As with most innovation, timing plays a key role as well. The advent of telehealth dates back to the 1920s, yet Vizient data from academic medical centers (AMCs) in 2019 shows virtual visits accounted for less than 1% of overall visits. With the COVID-19 pandemic, telehealth was thrust to the forefront of care delivery, peaking at 67% of overall visits in 2020 for AMCs and remains approximately 50% of behavioral health visits.

Just as COVID-19 accelerated telehealth's adoption across the industry, it also provided a tipping point for a looming workforce shortage. Nurse turnover has doubled since 2019, which has led to less time with patients and contributed to an increase in certain hospital-acquired conditions. Moreover, data from The Physician's Foundation shows 60% of physicians report feelings of burnout, with 57% feeling anger, tearfulness or anxiety due to the pandemic.

Recent numbers project a shortage of more than 100,000 physicians over the next 10 years and the need for at least 200,000 nurses per year to meet demand. As a result, health systems are facing **a new kind of 'triple aim'**: support a depleted workforce, drive operational efficiencies to balance staffing shortages and maintain a high standard for patient care.

Workforce Challenges Provide a Catalyst for Reimagining Care Delivery

According to a recent Vizient survey of more than 100 leaders representing 92 health systems across the country, workforce **retention** is their most pressing challenge, with **recruitment** and **burnout** closely behind. In addition to enhanced benefits and compensation, organizations are meeting this challenge with innovative digital care delivery solutions.

Which of these alternative staffing models are you implementing or currently have implemented?

Nearly 60% of respondents indicate they have implemented or are in the process of implementing remote monitoring and tele-sitting programs.
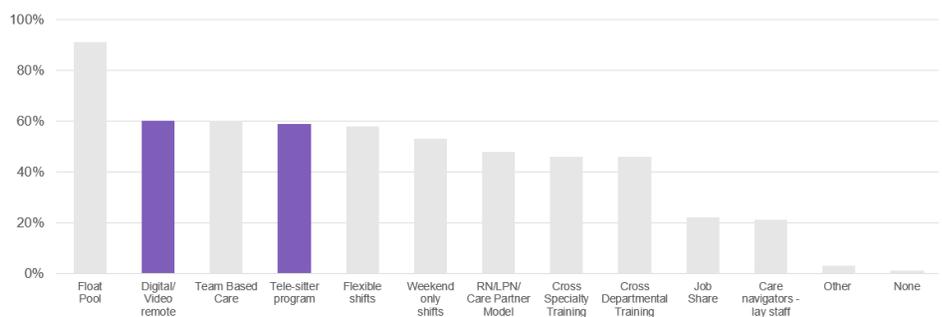
Remote Monitoring in the Form of Virtual Nursing

During a recent Vizient Member Network session, members shared their expertise around implementing remote monitoring programs in the form of **virtual inpatient nursing**. This entails registered nurses (RN) leveraging video and voice technology to help manage a patient load. With electronic medical records (EMRs), telemetry and other remote monitoring systems, the virtual nurse provides an added layer of staffing support and quality management and is a critical member of the care team. The virtual nurse provides **24-hour virtual assistance to the bedside RN** and manages responsibilities from answering call lights to IV site monitoring to calling other members of the care team. Sites that implemented this model explained that it allowed for monitoring and early detection of deterioration so that patients were able to receive appropriate care in a timely manner.

Virtual nurses can…

- Monitor AI alerts
- Monitor sepsis alerts
- Monitoring for early deterioration
- Perform documentation
- Collaborate with bedside staff
- Focus on education

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- Monitor sepsis alerts
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Roles and Responsibilities of the Virtual and Bedside RN

Virtual RN	Shared Responsibility	Bedside RN
Medication reconciliation	Educate and round on patients	Direct patient care, conduct physical assessments
Admission of new patients	Documentation	Bedside handoffs
Review trends and alerts	Collaborate with interprofessional team	Hourly rounds
Proactive rounding	Dual sign off on skin checks, medication, blood administration and PCA pump (not waste)	Manage discharge process
Documentation (code, rapid response, admission, discharge, transfer)	Provide mentorship for new RNs	Document end-of-shift note

Virtual Nurse Program in Action

Ochsner Health launched a hospital-based virtual inpatient nursing model at its Kenner location almost five years ago. Ochsner Health utilized internal resources to implement this model and ensured that the program would be a key member of the care team on the unit — this is considered a **decentralized** model.

Saint Luke's Health System in Kansas City has implemented a virtual nursing model at one hospital utilizing a centralized, offsite virtual center. While improved outcomes cannot be solely attributed to remote monitoring, staff and patients can glean a variety of benefits.

Watch: Ochsner-Kenner River Region's virtual nurse program serves the needs of both its patients and its workforce.

Workforce Benefits

- Higher engagement due to increased collaboration among team members
- Lower burnout rates as transactional time is traded for relational time with the patient
- Ability to operate at top of license at the bedside
- Additional training opportunities for new nurses

Patient Care Benefits

- Safety (Modified Early Warning System [MEWS] and AI alerts, proactive rounding, timeout documentation)
- Higher standardized quality
- Lower mortality due to early intervention for patient deterioration
- Higher patient satisfaction due to more individualized care and attention

"The power in this model is merely limited by the boundaries we place on it. Opportunity exists to support our hospital caregivers differently. Additionally, nursing is only one arena from which patients, teams and organizations can benefit from virtual care delivery."
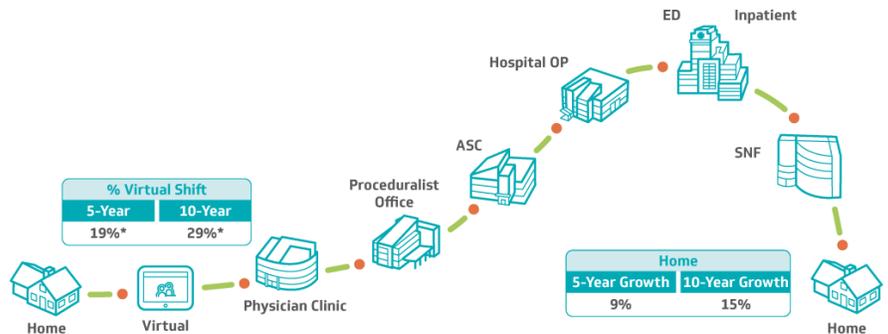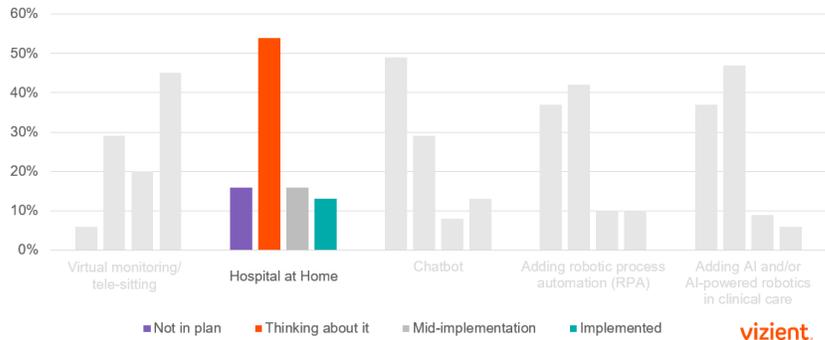
Nicole Gruebling, DNP, RN, NEA-BC, Vice President, Vizient Member Networks

The Future of Care Delivery Goes Beyond Hospital Walls

Virtual monitoring programs help optimize the care delivery process within the four walls of the hospital, but the site of care is rapidly shifting. Sg2's Impact of Change Forecast shows **14% growth in outpatient care** over the next 10 years. Virtual consultations are poised for close to 20% growth over the next five years, and home care shows nearly 10% growth over the same time period. This aligns with the majority of leaders in Vizient's survey who are considering a shift to **hospital at home** as they redesign their workforce for the future.

As a result, opportunity exists to extend inpatient virtual monitoring systems to outpatient and home-based settings. For example, home health professionals can reap similar benefits as bedside nurses with the help of a virtual provider monitoring a patient's condition and executing documentation, thereby allowing more time for patient interaction.

Select the stage that most aligns with how you're thinking about redesigning your workforce

Legend: ■ Not in plan ■ Thinking about it ■ Mid-implementation ■ Implemented

Categories: Virtual monitoring/tele-sitting, Hospital at Home, Chatbot, Adding robotic process automation (RPA), Adding AI and/or AI-powered robotics in clinical care

% Virtual Shift	
5-Year	10-Year
19%*	29%*

Home	
5-Year Growth	10-Year Growth
9%	15%

*Indicates percentage of

Source: Sg2 Impact of Change Forecast, 2021

Redesigning Takes Planning

Necessity is the mother of invention. But as hospitals and health systems look to technology to address their workforce challenges, necessity also seems to be the mother of *adoption*. The ripple effects from COVID-19 have highlighted the need for reimagining *who* delivers care and *how* they deliver it. Thanks to the resiliency of administrators and clinicians, opportunity is now turning into action with programs like virtual nursing.

While Vizient's survey indicates virtual monitoring programs may be pioneering a new path forward, technology is only as good as the clinician it serves. Organizations must carefully consider their operational structure, culture and current capabilities before, during and after the implementation process.

Discover more about Vizient's workforce optimization and engagement solutions here. Vizient members can also join the upcoming Performance Improvement (PI) Collaborative in June to gain knowledge and share experiences around workforce support and development, digital transformation of care delivery and personalization of patient care. Learn more about becoming a Vizient member and participating in our valuable collaborative programs with like-minded peers here.

"Not all technology will work everywhere, but a little technology will often work really well."

Anna Kiger DNP, DSc, MBA, RN, NEA-BC, FAONL, System Chief Nurse Officer, Sutter Health