caregility
Connecting Care Everywhere
A Business Case for Virtual Nursing
Examining the impact and opportunity of the hybrid care model in inpatient settings.

What's fueling the rise of Virtual Nursing?

Health systems are looking for new ways to adapt and innovate as staffing challenges persist. Nursing vacancy rates remain high, leaving a diminished workforce to cover the patient care gap. Nurses are overwhelmed and hospitals are searching for sustainable solutions beyond reliance on high-cost travel nurses. Amid this, patient care hangs in the balance.

Virtual Nursing paves a promising way forward, offering solutions to workforce woes and notably improving patient safety and clinician experience in inpatient settings.

Virtual Nursing brings experienced remote nurses directly to the patient's bedside through interactive, two-way video engagement. This delivers significant benefits to patients and clinical staff while streamlining and standardizing care processes.

In 2023, 75% of hospitals reported a nurse vacancy rate of 10% or more.[1]

Research has consistently linked inadequate staffing to poorer patient outcomes.[2]

Hospitals are increasingly competing with retail health for patients and staff.

Key Adoption Drivers

Driver 1:

Offset Today's Nursing Workforce Challenges

- Introduce Virtual Nurse training and guidance to novice bedside teams
- Redistribute care tasks to reduce staff burnout
- Support nurse retention and career extension

Driver 2:

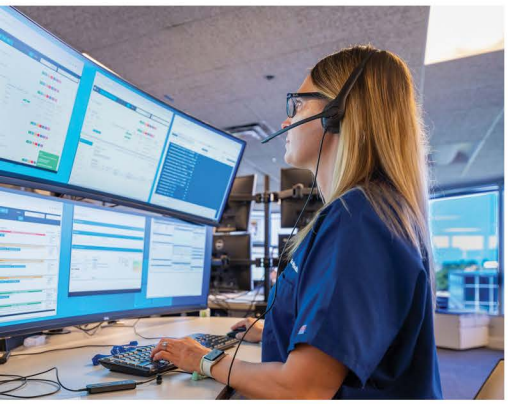
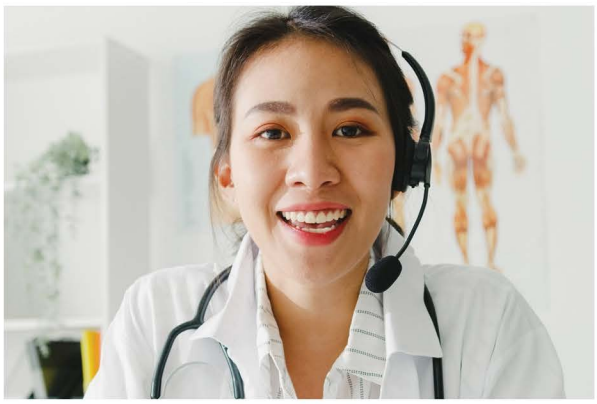
Meet Your Core Mission to Deliver High-Quality Patient Care

- Add a secondary line of patient safety support
- Improve patient communication and satisfaction
- Enhance patient access and clinical collaboration

Driver 3:

Reduce Costs and Set the Stage for Future Growth

- Improve quality and satisfaction metrics
- Drive workflow efficiency and patient throughput
- Establish a foundation for future hybrid care innovation

Augmenting Care Teams with a Virtual Nurse Component

Virtual Nursing complements bedside care by integrating a remote support component into your nursing team. Remote nurses engage with patients in real-time via two-way video communication, extending patient coverage and the reach of your healthcare team.

Virtual nurses field patient inquiries, aid bedside teams, and manage defined patient care tasks, freeing up bedside teams to focus on hands-on patient care. This hybrid care approach not only optimizes the utilization of healthcare resources but also enriches patient care and clinician experience by ensuring consistent, around-the-clock support.

> You can significantly improve patient, family, and staff satisfaction just by shifting clinical workload to someone who has time to devote to the specific activity.
>
> - Irene Goliash, RN, Clinical Program Manager

Common Workflows

- Admissions
- Discharges
- Patient Education
- Rounding & Consults
- Staff Mentoring & Precepting
- Patient Trending
- 2nd Signature Verification
- Rapid Response

Virtual Nursing's Reach

Beyond its applicability in workflows within general Med/Surg units, Virtual Nursing can also help healthcare organizations reinforce patient safety initiatives and specialty care.

Tele-ICU: Support around-the-clock monitoring, data analysis, and intervention for high-acuity patients.
Virtual Sitting: Continuously monitor high-acuity patients to prevent falls and other safety threats.
ED: Field remote triage, assessment, and decision-making when demand for emergency care is high.
Sepsis: Continuously assess clinical data for early warning signs and support sepsis bundle compliance.
Cardiology: Provide deterioration detection, medication adherence, and education for heart patients.
Neurology: Field more frequent reminders and interventions for patients who suffer brain impairments.
Oncology: Facilitate cancer specialist consults, prescription management, and treatment monitoring.

Virtual Nursing's Return on Value

The diverse landscape of use cases underscores the broad reach and adaptability of Virtual Nursing. Given the nascency of Virtual Nursing, envisioning what the care program might look like at your healthcare organization may seem challenging.

As you consider your business case for Virtual Nursing, start by identifying clinical performance areas that you would like to improve to help inform your program parameters and use cases. Looking at current performance baselines and associated costs, quantify the potential impact that addressing those pain points poses to your organization.

> The fact that there is no one universal approach is really the beauty of Virtual Nursing. Programs can and should be tailored depending on your health system's specific needs.
>
> – Wendy Deibert, EMBA, BSN, RN, Chief Nursing Officer

Partial Virtual Nursing ROI Example

Goal	Average Associated Costs	Current Performance Benchmark	Virtual Nursing Improvement Target	Anticipated Annual Savings
Reduce Patient Falls	$62,521[3] (avg. cost/patient fall)	358[4] (avg. patient falls/year)	2% reduction in patient falls	$437,647
Reduce Nurse Turnover	$52,350[1] (avg. cost/bedside RN)	22.5%[1] (avg. nurse turnover rate)	1% reduction in nurse turnover	$380,600[1]
Reduce Hospital-Acquired Sepsis	$70,146[5] (avg. cost/patient case)	100 cases/year	5% reduction in sepsis infection	$350,730
			Combined Annual Savings:	**$1,168,977**

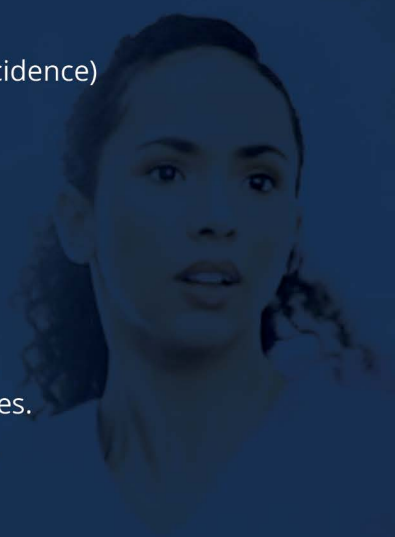
You will also want to consider qualitative or soft ROI factors such as patient and staff experience when assessing Virtual Nursing's potential return on value for your team. The following list offers a comprehensive look at many of the various KPIs that Virtual Nursing programs can impact.

What's at Stake: Virtual Nursing Key Performance Indicators

Clinical Outcomes

Target process standardization improvements aimed at reducing:

- **Patient Falls** ($64,526 avg. cost/case[3])
- **Hospital-Acquired Sepsis** ($70,146 avg. cost/case[5])
- **CAUTI**/Catheter-Associated Urinary Tract Infections ($13,793 avg. cost/case[6])
- **CLABSI**/Central Line-Associated Bloodstream Infections ($48,108 avg. cost/case6)
- **Pressure Injury** ($14,506 avg. cost/case[6])
- **Length of Stay,** or LOS (avg. 4.5 days per admission, $10,400 avg. cost per day[7])
- **Readmissions** ($15,200 avg. cost/case[8] and up to a 3% Medicare penalty for high incidence)
- **Clinical response times** for patient intervention
- **Medication errors**



Patient Experience

Empower your patients with virtual access to their care team to:

- **Improve health access and equity** via 24/7 virtual caregiver and interpreter access.
- **Drive patient satisfaction** with clinical communication, as reflected in HCAHPS scores.
- **Support patient education** to aid discharge readiness and readmission prevention.
- **Engage the patient family** in care planning throughout the patient's stay.

Staff Experience

Attract new staff and retain existing nurses with flexible work arrangements that:

- **Introduce virtual nurse support** for less experienced, new-hire nurses.
- **Reduce pressure on bedside nurses** by delegating tasks to virtual nurses.
- **Support career extension for nurses** who may otherwise leave due to burnout or limitations.
- **Decrease overall nurse turnover** ($52,350 avg. cost/case[1]).
- **Enhance clinical collaboration** to amplify care coordination and foster teamwork.

Operational Gains

Manage costs and set the stage for future success using Virtual Nursing to:

- **Reduce reliance on travel nurses** (saving ~$157,000 annually per hired RN vs travel RN[1])
- **Introduce a long-term patient surge solution** for seasonal and event-driven spikes.
- **Achieve time savings** and increase patient care tasks completed per shift.
- **Build on your Virtual Nursing program** to support home-based and AI-enhanced care models.
- **Attract new patients, workers, and partners** using Virtual Nursing as a key differentiator.

Lessons from Virtual Nursing Pioneers

As the buzz around Virtual Nursing builds, pilot programs are mounting. The following real-world examples from hospitals pioneering the new hybrid care model shed light on common workflows, the various ways leading health systems are approaching their programs, and early evidence of success.

Lee Health (Fort Myers, FL) | 1,700+ Acute Care Beds | 2M+ Patient Contacts Annually

Staffing Model: Insourced, including floor nurse rotations as virtual nurses; 1:10 ratio
Pilot Patient Population: Cardiac unit and high-acuity Med/Surg patients
Equipment: Caregility mobile cart endpoints in patient rooms for initial pilot, with Epic integration

Initial Workflows:
- Admissions
- Discharges
- Rounding
- Pre-procedure checklists
- Patient Education
- New Graduate Assistance

Results to Date:
- Order to Discharge times less than 2 hours
- 20+ catches due to virtual chart reviews
- 20% improvement in HCAHPS scores
- Able to retain experienced nursing staff

Expansion Plans:
- Hospital at Home
- Virtual Nursing for eICU
- Virtual Command Center
- Move to TV-integrated devices

During the pilot, we've gotten our discharge to out-the-door time under our goal of two hours. The throughput has been significant because we're able to turn those beds over.

Patients have formed better relationships with virtual nurses and our HCAHPS have increasingly gone up. All of the families are really receptive. They feel like it's an added layer of safety and another person checking on their family member. We've always had a second set of eyes for things like wound checks, and now we have two nurses every time. The wins have been substantial.

– Kimberly Gualt, MSN, RN, Business Systems Analyst, Lee Health

We have one virtual nurse coming in 7 a.m. to 7 p.m. and one coming in 11 a.m. to 11 p.m., shared across three hospitals. As admissions and discharges come up, we create a task list and bring the cart to the patient. We partnered with an agency for staff due to limited access to nurses here in Maine. We rely heavily on contract labor and this approach was less expensive.

- Kris Chaisson, RN, BSN, MS, NEA-BC, CCRN, CNO,
- Central Maine Healthcare

Dual-camera telehealth edge devices like the Caregility APS200 Duo support virtual patient engagement as well as AI capabilities.

These devices integrate with smart TVs and Interactive Patient Consoles in the patient room, maximizing resource allocation and offering health systems a cost-effective way to scale Virtual Nursing services.

OhioHealth (Columbus, OH)
2,000+ Beds | 15 Hospital Campuses

Staffing Model: New roles filled by FTEs hired from within and outside of the healthcare organization
Pilot Patient Population: 66 patient rooms at the health system's new Pickerington Methodist Hospital
Equipment: Caregility APS100 Pro telehealth edge devices integrated with an interactive patient console monitor in each patient room, with Epic integration

Co-Caring Model:
OhioHealth blends traditional and virtual nursing roles to create a hybrid care team for every patient. Virtual Nurses act as the quarterback for the bedside team, working collaboratively to field remote tasks, support patients, and coach novice nurses.

> When we think about a few of the nursing strategic goals at OhioHealth, having a flexible workforce and maximizing our use of technology, we envisioned how virtual nursing could assist us with those goals. We already have a virtual patient observation team and other various virtual teams and services, so adding virtual nursing was a natural next step.

-Christine Coriell,
-Director of Nursing Operations, OhioHealth

> A big early win was when nurses realized that, without having to do admissions, they now had time back in their day multiplied across each new patient. That really helped build bedside nurse receptivity to collaborating with the virtual nurse.

- Erika Braun, Advisor,
User Experience/Product Design, OhioHeath

> **The number one recommendation I would give to anybody who is thinking about starting a virtual nurse program is don't let perfection get in the way of progress. We went in on a shoestring to get it off the ground, using 400+ repurposed iPads on carts in patient rooms across our system. Our bedside nurses have raved about the program. At this point, if we tried to take it away there'd be an uprising.**

-Tracey Kopenhaver, MSN, RN, Nurse Director, VirtualCare+, Geisinger

Getting Started with Virtual Nursing

Like Tele-ICU and Virtual Sitting, Virtual Nursing builds on the clinical and operational benefits of remote support and continuous patient observation. Many health systems use existing Virtual Patient Observation resources as a jumping-off point to get started with Virtual Nursing. Health systems can future-proof operations by centralizing infrastructure on a single adaptable platform bearing the following considerations in mind.

Platform Play: Look for an enterprise virtual care platform that is versatile enough to grow with you as your needs change and your strategic roadmap evolves. This standardizes the experience for staff and will help you scale more easily over time.

Network & Security: Many network security standards can disrupt patient care in always-on virtual environments. Conduct a network assessment and confer with your security team early on to pinpoint and proactively address weaknesses that may impede clinical programs.

Administration: As operations expand, you'll want a solution that allows you to easily manage your programs, users, and growing device fleet. Web-based administration portals help centralize operations, reporting, and remote governance and support of telehealth endpoints.

Endpoints: When determining if hardwired, mobile, or TV-integrated telehealth endpoint options are best for your patient environments, consider your workflows. Do you need wide-angle room surveillance for patient safety monitoring or HD zoom options for more complex clinical workflows like procedure guidance?

Artificial Intelligence: Augmenting clinical insights through offerings like computer vision-based Autonomous Observation and radar-based Vitals Trending can allow Virtual Nurses to support more patients. Look for solutions that are purpose-built with responsible AI in mind.

Caregility Endpoint Features

- 1080P motorized Pan-Tilt-Zoom (PTZ) optical zoom
- Far-end camera and audio control (FECC)
- Beamforming mic array
- Noise suppression
- Bookmarked positions
- Night vision
- Multiple sensor feeds to simultaneously enable virtual sessions and AI capabilities
- vLert buttons to request virtual support from the bedside

> At some point, humans can't process enough so you need automation tools like AI that'll tell me these 19 patients are sleeping, and these are out of the room, so these are the four you need to focus on. Leverage AI to look at what's most important.
>
> – Jon Witenko, System Director of Virtual Health and Telemedicine, Lee Health

Integrations: Look for flexible API integrations that allow you to layer in current and emerging technologies so your units can tailor programs. EHR integration is essential, keeping care teams in a familiar work environment. Consider additional virtual care integrations that can help your organization further drive efficiency, such as clinical decision support (CDS), interpreter services, connected medical devices like digital stethoscopes, nurse call systems, and Interactive Patient Consoles (IPCs).

Future Considerations

Forward-thinking health systems are looking beyond the pain points Virtual Nursing can address today to consider the hybrid care model's long-term impact on elevating the standard of care. Hospital Room of the Future initiatives point to the more clearly defined space Virtual Nurses will have in the future landscape.

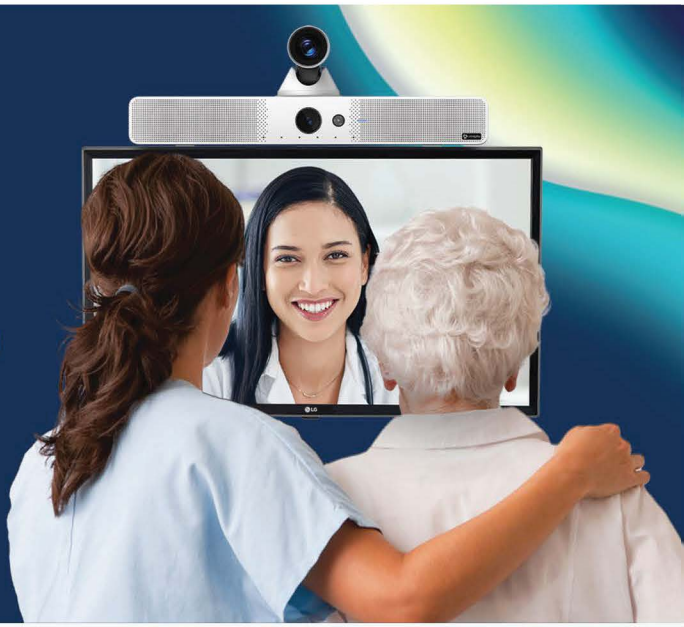
By embracing the care model now, healthcare organizations can create competitive differentiation to attract and retain patients and staff as market disruption amplifies. Virtual Nursing also sets the stage for care model innovation related to Hospital-at-Home and Chronic Care Management initiatives that seek to virtually engage with patients in the home setting.

> People are embracing technology in ways never thought possible and it's making hybrid care models not only plausible but also practical. It's the cost of doing business for healthcare systems that want to innovate and remain competitive.
>
> - David Smith, Senior Director, Digital Innovation, UMass Memorial Health System

Learn More About Virtual Nursing

Ready to take the next step? Connect with our team of nurse Clinical Program Managers and IT specialists with decades of real world experience pioneering virtual care programs.

Contact us today to find out if you qualify for a complimentary Virtual Nursing Assessment. **Learn More Here**



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