

Inpatient virtual nursing fundamentals, uses and benefits

Mitigate the nursing
shortage and enhance
patient care with
inpatient virtual nursing



89 days

Average time for a hospital
to hire experienced RNs,
regardless of specialty¹

The evolution and momentum of virtual nursing

Virtual nursing is gaining momentum to support inpatient care and is evolving beyond its traditional uses, such as pre-admission and post-discharge check-ins. The main adoption driver is the staffing shortage, with health systems being increasingly willing to innovate to try to avoid service suspensions and shutdowns. Virtual nursing is an important component that health systems can include in their transformation and care delivery redesign initiatives. Health systems that have created virtual nursing programs to augment their bedside nurses have found virtual nursing can extend nurses' careers and improve job satisfaction for floor nurses by taking away responsibility for many tasks that do not require physical touch. This allows the bedside nurse to focus on hands-on patient care and contributes to higher patient satisfaction because of the responsiveness and additional attentiveness it enables.

Data from the [Telehealth Benchmark Survey for Hospitals and Health Systems](#) suggests the number of hospitals and health systems with virtual nursing programs could double in 2022.² Many patients, hospitals and health systems alike gained experience with various forms of telehealth during the pandemic. That has led to increased comfort with using telehealth and for new use cases to be developed, factors that are also helping drive the surge in virtual nursing programs. This white paper provides an overview of inpatient virtual nursing for patient care, its benefits and emerging use cases, and guidance for introducing the practice in a way that will foster acceptance and complement the work done by bedside nurses.



Virtual nursing definition & key tenets of successful programs

For this white paper, “virtual nursing” refers to nursing support for inpatient care at a healthcare facility and/or other (remote) facilities in the health system. It does not refer to simulations and training. We do not use the term “telenursing” because it connotes audio-only workflows like telephone services. Virtual nurses are responsible for monitoring multiple patients while collaborating with the nurses, physicians, therapists and other staff who provide care at the patient's bedside. The virtual nursing unit can be centralized (e.g., nurses work from a command center in a healthcare facility), distributed (nurses can work from home or other remote locations) or hybrid.

In our experience, the following characteristics are essential for successful virtual nursing programs:

- The role of virtual nurses is to complement bedside nurses, not replace them
- Virtual and bedside nurses have the same access to patient information, including real-time access to patient monitors
- Virtual nurses have real-time, two-way audio and video connection to the patient room

Staffing models and how virtual-bedside nurse responsibilities are shared can be specific to each program.

In 2021, as many as 22% of new nurses were likely to leave their current position within the following year due to insufficient staffing levels, the intensity of the workload and the emotional toll of the job.³

1.2 million

The U.S. Bureau of Labor Statistics projects the need for 1.2 million new registered nurses for expansion and replacement of retirees.

Introduction

Many hospitals and health systems already have some experience with virtual nursing, although they may not call it that. Having nurses call patients after discharge to check on their conditions and give reminders about medications or care, virtual nurses completing discharges or admissions and hourly rounding on hospitalized patients via videoconferencing, or command centers where a single nurse may monitor vital signs and other data for multiple patients in the ICU are all examples of virtual nursing. These programs have been effective in extending care outside the hospital and in leveraging scarce staff.

The emerging use cases for virtual nursing are building on these benefits and experiences to expand the practice both in scope and scale. A key driver is to mitigate the nursing shortage. Adopting virtual nursing provides a way to mitigate potential staffing losses due to short-term injury or other conditions that require nurses to be off their feet. It is also a way to extend nurses' careers, for example, by offering nurses with developing or chronic physical limitations the option of working seated in a command center instead of providing physically challenging care on a nursing unit. Virtual nursing programs can also help attract nurses by providing different options for shifts and work styles. This model supports organizations by enabling them to have virtual nurses work from anywhere—allowing them to provide much-needed care and services without requiring nurses to relocate so that they live close enough to a hospital to be able to go on-site for their shift. Hospitals have reported their floor nurses' job satisfaction increased after virtual nursing programs were introduced.⁴ Removing the physical demands of going from room to room and providing hands-on care can extend careers, thus enabling the health system to retain valuable expertise.

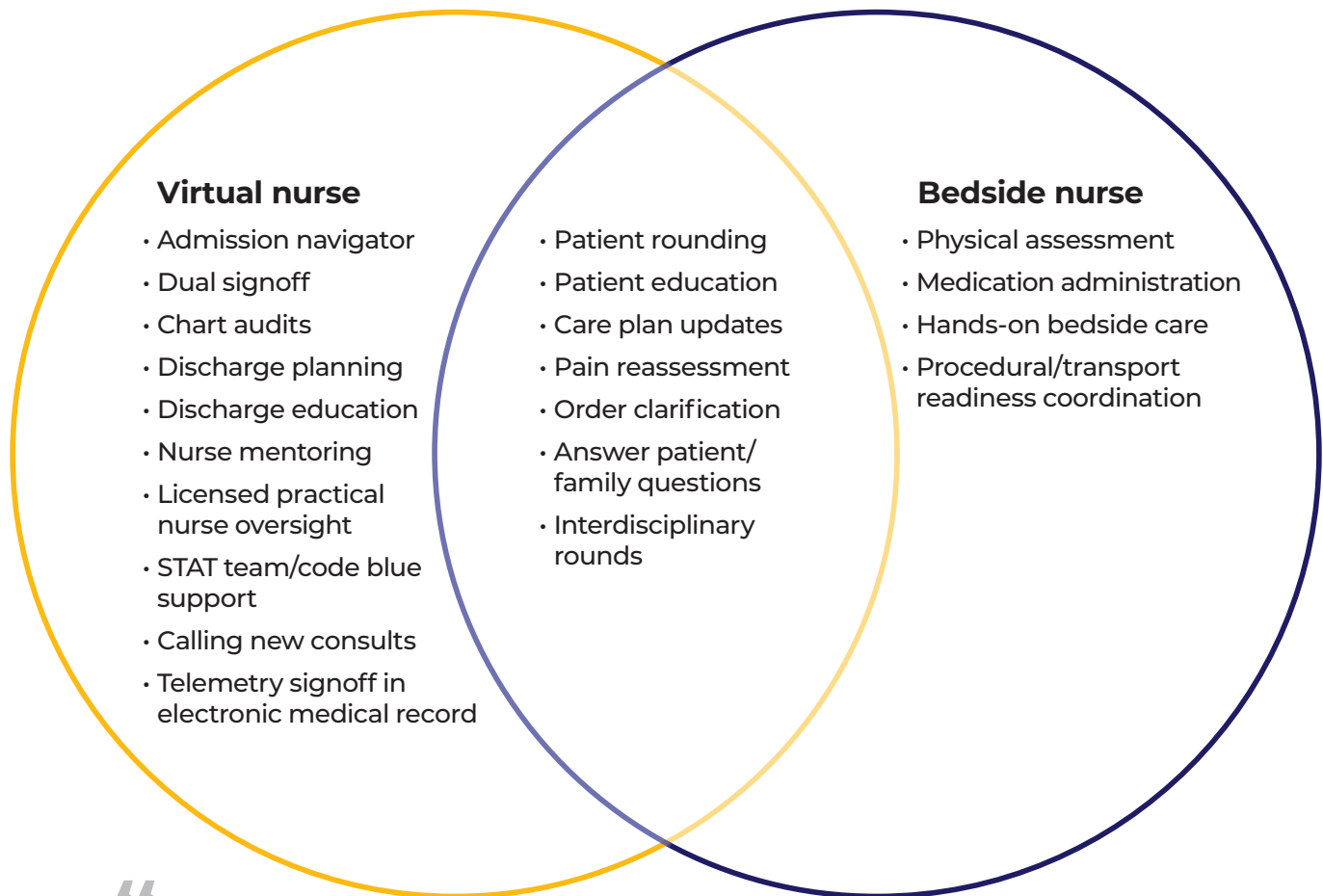
Some nurses do not want to give up physical contact with patients, and others may be uncomfortable with virtual collaboration. These issues are common, even in hospitals where virtual nursing eventually became highly successful. The keys to gaining acceptance are to get nurse input early in the program development and to divide bedside and nurse responsibilities in a way both roles are comfortable with—solving your most challenging problems.



Telemedicine has positively impacted our recruiting for providers by being able to offer them that work-life balance. They are able to know that when the clinic closes and they're not on call for obstetrics, there is a skilled and qualified provider who's caring for their patients who are in the hospital. It's been a great recruitment tool for us, and our providers are very happy with it."

**Nicole Thorell, Chief Nursing Officer and Director of Risk and Quality
Lexington Regional Health Center**

Sample division of responsibilities between virtual and bedside nurses



In a healthcare setting, sensitive healthcare information and interpretation are often analyzed via digital platforms that only require clinician intervention in extreme circumstances.... The goal of innovation is to improve patient engagement and outcomes while allowing nurses to focus their care on those who need their help most. Healthcare providers may consider enabling such change through digital, clinician, regulatory and labor union collaboration.”

McKinsey & Company

**Assessing the lingering effect
of COVID-19 on the nursing
workforce**

While hands-on care will always be needed, many duties can be fulfilled virtually, including coordinating procedures, getting signoffs from multiple care team members, reconciling medications, providing patient education, answering questions, initiating the discharge process and more.

In many successful virtual nursing programs, administrative tasks like discharge paperwork, medication reconciliation, etc., have been shifted from bedside to virtual nurses. For example, one midwestern, midsize health system reported it reduced the time of its discharge process by 20% by transferring some responsibilities from bedside to virtual nurses.⁵

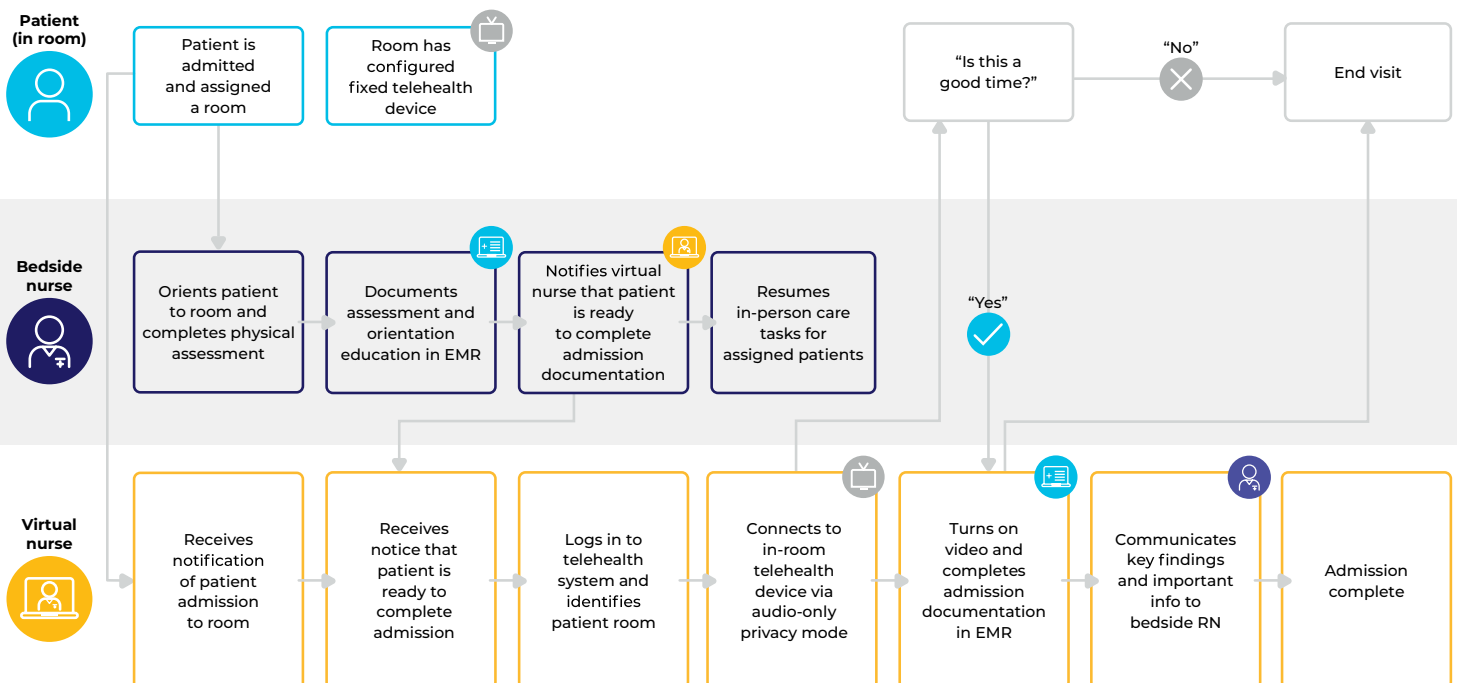
These examples should not suggest virtual nursing is an administrative position. Virtual nursing systems enable virtual nurses to monitor patients and communicate with them, their families and other visitors and care team members in real time, including responding to patient nurse calls. Several health systems with virtual nursing programs have reported high job satisfaction for their virtual nurses. Nurses say the virtual role enables them to spend more time with patients overall. The extra time, and the complementary nature of virtual and bedside nursing roles, contributes to improved job satisfaction for both bedside and virtual nurses, and positive experiences for patients.

Workforce implications

Virtual nursing appeals to administrators because it enables them to leverage available staff and provides more flexibility to put nurses into roles well-suited to their preferences and abilities. Ability includes availability—nurses who can't work on the floor are often able to work in a virtual role. Both bedside and virtual nurses typically report increased job satisfaction that comes from the collaboration and synergies realized with this innovative model.⁴ Some nurses are attracted to virtual positions because of their individual needs, and some nurses who do not care for patients virtually view the practice positively because of the support it provides them. As one administrator at a health system in the southeast told us: "We're seeing our more mature nursing staff take a step back from the bedside and join our virtual ICU program. We're keeping that experience and helping to train the next generation of nursing staff." Virtual nursing can be a powerful recruiting tool by enabling a health system to offer work options that others cannot.

As with any new workflow or technology introduction, a virtual nursing rollout should be supported with an organizational change management program. Education and communication are essential. As previously noted, nurses should be well-represented and have a meaningful voice in discussions about responsibilities, processes and how virtual and bedside nurses will interact.

Virtual nursing workflow example



Use cases

Advances in monitors, networking, security, audio/visual and telehealth solutions enable virtual and bedside nurses to access the same information and do many of the same things. Here is a brief summary of various activities that are well-suited to virtual nursing.

ICU monitoring—This may be the best-known and most widely used form of virtual nursing. More than 10% of ICU beds are now covered by an ICU telemedicine program.⁶ One ICU nurse can be leveraged to monitor multiple patients from a command center and can immediately alert care team members if an intervention or other bedside care is needed. The tele-ICU principles of monitoring patient vitals, checking/raising alerts and responding to patient calls can be extended to other units.

Virtual rounding—The two-way audio/video connectivity and real-time access to patient data enables virtual rounding for nurses to complete regularly scheduled check-ins on patients. Virtual rounding is a great way to identify patient needs and safety risks, monitor for changes in patient condition and reduce the frequency of bedside staff re-entering patient rooms. It can also reduce exposure risk for COVID and other patients who require isolation, further preserving personal protective equipment.

Mentoring and training support—Experienced nurses can guide new hires and novice nurses through procedures and conduct joint physical/virtual patient visits to improve quality, reduce the learning curve and provide an extra level of attention to patients.

Pain assessment—Virtual nurses can round on patients routinely to assess their pain level and follow up with reassessment and documentation of patient response to pain-relieving measures, such as medication administration and repositioning. Patients can also inform virtual nurses when they are experiencing pain.

Responding to calls/answering patient questions—Many nurse calls from patients can be resolved without requiring an in-room visit.

Care plan updates—Working collaboratively with the care team, a virtual nurse can serve as coordinator for updates to the care plan.

Provider consultation—Telehealth is frequently used to facilitate consults among providers. Virtual nursing makes nurses available for consultation with caregivers in the patient room, and the virtual nurse can also initiate contact with specialists or other providers outside the facility.

Dual signoff—Bedside and virtual nurses can work together in real time to verify medications and for other tasks that require dual signoff, eliminating delays to care.

Chart audits—Assigning chart audits to virtual nurses frees the floor nursing staff to spend more time with patients while promoting patient safety and quality.

Patient education—Nurses can use the audio/visual connection to patient rooms to educate patients and their visitors about their conditions, procedures and after-care, and be available to answer questions at any time.

Discharge navigation—Virtual nurses can take the lead on completing discharge paperwork and coordinating other aspects of the discharge process.

Post-procedural monitoring—Virtual nursing can provide enhanced monitoring for post-procedure patients and others who need close monitoring.

Order clarification—Virtual nurses can take questions from their bedside counterparts and follow up with physicians when orders are unclear.

Hospital-grade telehealth solutions support all these use cases and others. Virtual nursing programs backed by appropriate infrastructure provide the flexibility to tailor nursing roles and responsibilities from facility to facility and even ward to ward.

10%

Average nursing vacancy rate
in hospitals 2021¹

Inpatient virtual nursing benefits

Most of the benefits of enabling virtual nursing have already been referenced—staffing flexibility, potential retention and recruitment advantages, the ability to leverage staff resources, favorable nurse and patient satisfaction—but there are a few other issues to highlight. Many of the reported benefits and highlights of virtual nursing are for specific hospital or department programs. There have been few, if any, published studies on nurse satisfaction, patient outcomes or other success metrics across multiple health systems or practice areas. Many hospitals and health systems have implemented virtual nursing programs and report positive benefits like:

- Differentiated and improved patient experience, with potential associated improvements to patient satisfaction and Hospital Consumer Assessment of Healthcare Providers and Systems and NPS scores
- Shift and workflow flexibility that provides a potential retention and recruitment advantage
- Improved hours per patient day (HPPD) for nurses
- Increased adherence to best practices
- Faster response to alerts
- Improved efficiencies and fewer unnecessary in-room visits
- Reduced adverse events from the convenient availability of a second nurse for consultation and/or signoff
- More efficient consults by eliminating travel time to the patient room
- Reduced length of stay, resulting in improved throughput
- Reduced cost for traveling and temporary nurses and overtime
- Reduced transfers out/denials
- Improved training and onboarding effectiveness
- Time savings in the discharge process
- Improved nurse job satisfaction

Virtual nursing to support ICU patients is one of the most studied use cases and has some of the best-documented benefits, including reductions in mortality and average length of stay.⁷

20% faster

patient discharges compared to
traditional nursing units⁴

Case study: Virtual nursing unit helps with quality, staffing

One hospital in an 18 facility, not-for-profit system created an inpatient virtual nursing unit to meet the patient volume surge from COVID and to try to address the ongoing nursing shortage. The virtual unit provides full, real-time, two-way audio and video connection to the patient room and full access to the electronic health record. Virtual nurses supported bedside nurses with rounds, pain assessments, answering patient questions, dual signoffs and more, and took the lead on admission and discharge work, medication reconciliation and some other activities. Bedside nurses accepted the virtual unit and were able to increase their patient load from four to five.

The unit quickly grew to care for an average of 2,340 patients per month. Analysis found the hospital was discharging patients supported by its virtual unit 20% faster than those in traditional units, patients supported with virtual nursing were typically discharged two hours before patients in other units and the hospital's percentage of patients discharged before noon increased by 44%.

The hospital's director of virtual care credited the program with helping the health system improve on more than a dozen metrics related to quality, safety, workforce and patient experience, outlined below.

Quality: Falls, CAUTI, HAPI, CLABSI, C-diff, mortality

Safety: Adverse event reduction, improved oversight

Workforce: Hours per patient day (HPPD), salary cost/HPPD, engagement, turnover, vacancy

Patient experience: HCAHPS, responsiveness



Conclusion

Inpatient virtual nursing is a growing practice because of increased patient and provider comfort with virtual care, plus telehealth technology advances that have improved communication and responsiveness and made more remote care activities possible. The practice has its roots in ICU support, where its benefits are well-documented, and is now spreading to other inpatient care settings. Virtual nursing provides extra attention for patients, staffing flexibility for hospitals and career options for nurses. It also offers a lot of flexibility for how it can be applied, so thoughtful program planning and organizational change management efforts are essential.

Teladoc Health is a leader in developing telehealth solutions for inpatient care and has helped leading hospitals and health systems plan and implement virtual nursing programs. From clinical consultations for high-acuity care (e.g., stroke, hospitalist, critical care) to virtualizing non-physician use cases (e.g., nursing, social work, pharmacy), Teladoc Health offers whole-person virtual care solutions that enhance today's operations and anticipate the needs of hospitals and health systems of tomorrow. Visit our [Hospitals & Health Systems website](#) to learn more about how we can help your organization advance care and meet its strategic goals.

¹Nursing Solutions Inc. 2022. "2022 NSI National Health Care Retention & RN Staffing Report." March 2022.

²²Teladoc Health Data

³Berlin, G., LaPointe, M., Murphy, M. "Nursing in 2021: Retaining the healthcare workforce when we need it most." McKinsey & Company. May 11, 2021.

⁴Teladoc Health Data

⁵Kahn JM, Cicero BD, Wallace DJ, Iwashyna TJ. "Adoption of ICU telemedicine in the United States." Crit Care Med. 2014 Feb;42(2):362-8. doi: 10.1097/CCM.0b013e3182a6419f

⁶Lilly CM, McLaughlin JM, Zhao H, Baker SP, Cody S, Irwin RS; UMass Memorial Critical Care Operations Group. "A multicenter study of ICU telemedicine reengineering of adult critical care." Chest. 2014 Mar 1;145(3):500-507. doi: 10.1378/chest.13.1973.

⁷Craig M Lilly¹, John M McLaughlin², Huifang Zhao³, Stephen P Baker⁴, Shawn Cody⁵, Richard S Irwin⁶, UMass Memorial Critical Care Operations Group. A multicenter study of ICU telemedicine reengineering of adult critical care PMID: 24306581 DOI: 10.1378/chest.13.1973.

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