



The Explosion of Virtual Nursing Care



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The call for care model innovation is clear, spearheaded by rising health-care costs, changing payer expectations, overall fiscal and workforce shortages, and an increasingly comorbid patient population requiring significant, long-term support. As part of care model innovation, the leveraging of technology is key.

With the use of telemedicine to support virtual ICU and home health-care already demonstrating strong results,¹ clinical leaders are introducing the use of telehealth into inpatient units. Chief nurse executives (CNEs) need to monitor this innovation and consider key questions to determine applicability and organizational and cultural readiness for virtual nursing care.

The Evolution of Telehealth

Broadly defined, telehealth is the use of electronic information and

telecommunication technologies to support long distance clinical healthcare. Used for decades, telehealth has provided access to primary and specialty services to geographically remote patient populations, extended the reach of specialists, and monitored chronically ill patients at home.¹ In these scenarios, cost-effective and clinically appropriate care is delivered. Nurses are playing prominent roles in collaboration with physicians and others, most recently in ICU settings.

Electronic ICU

Banner Health has dramatically reduced ICU mortality, length of stay (LOS), and cost through the integration of telehealth technology.² Using Philips electronic ICU (eICU) technology, remotely located Banner intensivists and ICU nurses provide service to on-site clinical teams 24/7. With 2-way high-definition audio/video, the remote clinicians support the on-site clinicians through consultation, the monitoring of adverse data trends to preempt a clinical event, and assurance that evidence-based practice is implemented consistently.

Mercy Health System (MHS) has published similar results through

the development of its eICU strategy. Mercy's Virtual Care Center (MVCC) offers a variety of telehealth support to clinicians and patients throughout the system. It houses more than 300 virtual care professionals providing telemonitoring services to 30 MHS ICUs spanning 5 states. Similar to Banner, remote clinicians use evidence-based protocols and monitoring technology to observe and trend ICU patients. The telehealth clinicians consult and coach on-site clinicians real time, demonstrating improved outcomes, including decreases in mortality, ICU readmissions, and ICU LOS.³

Innovating With Telehealth in Acute Care

Years ago, the Institute of Medicine recommended several redesign imperatives including reengineered processes, the effective use of information technology (IT), and the redesign of effective teams to support more efficient, effective, and coordinated care.⁴ In hopes of stimulating change and in light of compelling results in eICUs, nurse leaders are innovating with telehealth technology to support patient care in non-ICU acute care units.⁵

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Building on its success with its eICU, Banner Health has reported the expansion of its telehealth strategy into acute care, leveraging telehealth technology and specially trained RNs to monitor medical/surgical (M/S) patients. Through continuous monitoring by remote clinicians, both M/S populations included in the pilot site demonstrated decreased LOS.² The leaders of MVCC report virtual nurses providing e-sitting services for M/S patients who need to be observed but do not require physical intervention.² A review of online RN job openings includes increased numbers of virtual RN opportunities.

In reviewing the success of eICUs, the continuous data synthesis and trending of patient information by virtual nurses to inform, coach, and support on-site nurses is key. This “2nd set of eyes” supplements what the on-site nurse observes, and promotes team assurance that evidence-based care is reliably implemented. An increasing number of vendors are developing platforms to support other applications. Resources abound on the policy/regulatory/standard implications guiding these efforts, including but not limited to security and privacy considerations. From a practice standpoint, key questions to be raised by CNEs in expanding virtual nursing include the following:

1. What is the core function of the virtual acute care nurse?
2. What skills and competencies will be needed?
3. How does the virtual acute care nurse interact with the on-site care team?
4. Does the virtual acute care nurse interact with the patient and family, and if so, how?

5. With increased consumerism, how will this role and this type of care delivery be received by patients and families?
6. Will nurses derive professional fulfillment from a virtual role and therefore remain engaged?
7. How will we measure the impact of virtual nursing care?

Status Quo Challenged

Although core skills and competencies of virtually located versus onsite nurses are similar, critical thinking skills are of particular importance in the virtual nurse role, given the responsibility of both monitoring the patients’ status while the onsite nurse is actually delivering care and making recommendations to colleagues for care plan modification. One of the hallmarks of this role is the ability and dedicated time for the virtual nurse to be preemptive and get ahead of subtle signs and symptoms of clinical deterioration or status changes, whereas the on-site nurse is actually providing hands-on care. Professional experience matters; meaning, this role is not suited for a new graduate or someone with limited clinical experience and independent decision making.

As is the case with any technology, some degree of technical training is needed to ensure all clinicians are comfortable with the telehealth devices and reports. Communication skills and the ability to work as a team, even with those not physically present, are critical skills for the virtual nurse. In particular, synergy between the virtual nurse and the on-site nurse must be cultivated to ensure a holistic and therapeutic team approach.³

Learnings derived from organizations that have deployed this role in the ICU setting should provide guidance regarding the design of training programs to develop the skills and competencies needed by virtual nurses in the non-ICU environment, along with policy statements from professional associations.

Given the purpose, experience, and expertise of virtual nurses, this role can definitely support those practice environments where a greater number of novice or newer nurses are only beginning to practice. Mentorship between virtual and on-site nurses is a secondary benefit of a telehealth model, which is particularly valuable in nursing retention.³ This career path can be an option for experienced tenured nurses who verbalize concern with the physical challenges of direct patient care.³

What about the patient and family? Concern about heightened consumerism may initially dissuade executives from committing to virtual care in non-ICU environments. We must acknowledge the explosion of virtual visits in the primary care and the overwhelming data supporting consumer satisfaction. Healthcare consumers are already being exposed to virtual care in the home and outpatient care settings, let alone virtual “help” in their daily lives—case in point, the reliance of Siri in the average consumer’s iPhone to direct, coach, advise, and inform. Should not this consumer acceptance carry over into acute care?

Wider adoption of inpatient telehealth starts with processes redesigned that continue to support patient-centric or relationship-based care. For example, at MVCC, high-definition cameras are installed in each room. When the telehealth



clinician wants to “enter” the room, she/he enters much the same way as an on-site nurse would when they knock on the door, by seeking permission. With permission by the patient and/or family member granted, the telehealth encounter between the patient/family and virtual provider commences.³ A principled approach to key processes that the virtual nurse will support when interacting with the patient and family must be identified and designed from a patient-centric perspective to establish and sustain patient acceptance with this care technology innovation. Process changes are needed to integrate telehealth staff into on-site care team workflow. For example, with virtual nursing staff supporting M/S units, how should those staff be integrated into change of shift report, daily huddles, and even debriefs after an adverse event?

Perhaps, the bigger challenge is garnering frontline nursing support for this role. Nurses have historically provided direct care to patients, including acute care, with the point of nursing care defined by face-to-face or personal

interactions. For the virtual nurse supporting direct care provided by on-site nurses in M/S units, the point of care for the virtual nurse is redefined.⁴ Although this has been the case for the eICU nurse, one could surmise that the virtual nurse role for the ICU was more easily accepted by nurses, given the highly technical nature of ICU care. Leadership must appreciate this cultural shift in nursing practice and determine relevant options for ensuring that nurses remain satisfied and fulfilled in a virtual role as the point of care is redefined.

Disruptive Innovation

Disruptive innovation disregards status quo solutions to problems, organizational challenges, and cultural and professional beliefs.⁶ Rising costs, increasingly complex care, and workforce shortages elevate the need for healthcare innovation. Leveraging telehealth in non-ICU acute care units presents an opportunity and is poised to disrupt traditional care model design and nursing practice. The field of telehealth is dynamic and quickly evolving. Chief nurse ex-

ecutives are challenged to stay abreast of this technology, learn from early adopters, and partner with organizational colleagues in strategy, medicine, and IT to help shape the organization’s overall telehealth strategy. Clarity regarding the virtual nurse role in acute care is paramount, and measures to demonstrate clinical and financial impact, as well as staff and patient satisfaction, must be monitored.

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