EDITORIAL

Remote Visual Monitoring During a Pandemic

Remote visual monitoring (RVM) is an evolving technology that is trying to find its place in the struggle between cost versus benefit and competing priorities in today's healthcare space. It is commonly believed that RVM can assist in the prevention of patient falls (Dooley, 2019) by serving as providing an extra pair of eyes and ears for healthcare providers (Spear, 2016). However, prior to the (coronavirus disease 2019) COVID-19 pandemic, resistance to RVM in our facility was problematic and its acceptance into daily nursing practice was strikingly slow. Pre-COVID-19, it was a struggle for some clinical areas to adapt and integrate RVM technology into their workflow as a patient safety strategy. In 2018, American Organization for Nursing Leadership (AONL) funded clinical research to study this phenomenon further. Resistance to innovation, including technology, can be attributed to knowledge deficit, a fear of the new technology, and a lack of motivation to learn about the innovation among other influences (Grol & Wensing, 2020). With time, utilization of RVM by the nursing staff gradually improved, but it was a slow tenuous rise. Thus you can imagine the surprise when in the throes of the COVID-19 crisis, the use of RVM technology suddenly skyrocketed, even in the units where previously it could not find cursory acceptance.

The pandemic caused a significant increase in the utilization of RVM with positive patient and staff outcomes, both tangible and intangible. The advent of COVID-19 heralded a sustained period of time, since the launch of our RVM program at our hospital that our cameras were deployed 100% of the time. The telesitters even maintained a running waitlist. In the midst of this pandemic that brutally surprised healthcare and nearly brought the system to its knees, it became quickly evident to nurse leaders that flexible and easily scalable innovations were called for to address this scourge. RVM boasts both of these qualities. Nurses did what nurses excel at—improvising and making do with what we have at hand.

COVID-19 care calls for a high specificity including strict isolation, thus limiting nurses' time and connection with patients. RVM cameras were deployed as usual to monitor patients with at-risk safety behavior, which is their normal application. However, nurses deployed these cameras in other creative ways. For example, our teleICU deployed RVM cameras, quickly scaling up the number of critical care patients that could be monitored at one time. Elsewhere they were used to facilitate visualization of a wound by a physician who was consulting with the wound nurse in the room of a COVID-19 positive patient. RVM cameras were used in various creative ways to decrease team member exposure to COVID-19 during the height of the pandemic. Flexibility, ease of deployment, and ease of use were fundamental to the scalability as well as usefulness of this technology during the crisis.

Curiously, some of the positive impacts of RVM have been felt in subtle, less obvious, but perhaps more impactful ways. One of my most memorable applications of this transformative technology came in its use with one of our nonverbal COVID-19 patients. He was at the end of his life and blissfully unaware of the chaos wrought by the public health crisis raging all around him. As I tidied up my patient's room, I noticed a quiet humming

that had started just as I finished providing his care. As I tried to discern what song was being hummed, I noticed that Mr. B had joined in with a thin tremulous hum, barely above a whisper. I stopped moving to listen. I realized that the telesitter was the initiator of the humming. I watched with tears as the ghost of a smile played on Mr. B's lips. I later found out that the patient's daughter hummed that song whenever she visited, pre-COVID-19. Mr. B had no idea that his daughter had been restricted from visiting by the world's collective foe, COVID-19. This telesitter recalled listening to father and daughter sing this hymn during a visit and now she did the only thing she was able to do. This beautiful scene during a tough time was made possible by RVM technology and in a way that no one would have imagined.

RVM, though relatively new to the patient safety tool kit, had a positive impact on patient safety at the height of the pandemic. The system allowed us to maintain continuous observation on patients who may exhibit at-risk behavior while keeping the nurses protected from unnecessary COVID-19 exposure. This pandemic has taught us that even the most unexpected technologies can be repurposed when an unexpected crisis requires scalable, flexible, innovative solutions. COVID-19 highlighted a need for the kind of research study funded by AONL, which seeks to identify the factors influencing acceptance, adaptation, and integration into daily use of technology, specifically RVM technology in this case, by nurses.

A significant outcome of this important study thus far has been the development of the Remote Visual Monitoring Acceptance Tool—the RVMAT (Barnett et al., 2020). At the advent of our research into this implementation challenge, the RVMAT was developed to specifically delve into the factors that influence, not just acceptance, but also the adaptation and integration of RVM into daily nursing practice as a useful nursing assistive device.

REFERENCES

Barnett, S., Desai, D., Davis, T., Hawksworth, L., Keeling, E., Drake, J., & Cudjoe, J. (2020). Development and psychometric testing of the Remote Visual Monitoring Acceptance Tool (RVMAT). *Journal of Nursing Measurement*, *28*(3), 1–17. http://doi.org/10.1891

Dooley, J. Y. (2019). *Fall prevention through nursing fall risk and remote visual monitoring*. (Publication No. 13899035) [Doctoral dissertation, Grand Canyon University, Phoenix, Arizona]. ProQuest Dissertations Publishing.

Grol, R., & Wensing, M. (2020). Implementation of change in healthcare: A complex problem. In R. Grol, M. Wensing, M. Eccles, & D. Davis (Eds.), *Improving patient care: The implementation of change in health care* (pp. 1–20). Wiley.

Spear, N. (2016). *Using video monitoring to reduce patient falls*. Healthcare Facilities Today. www.heathcarefacilitiestoday.com/posts/using-videomonitoring-to-reduce-patient-falls-12426

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