Akron Children's

Enhancing Efficiency and Quality in Pediatric Care with Virtual Nursing

A Virtual Nursing Pilot Project Case Study

Lisa L. Taafe, **MSN, RN, CNS, MBA**
Director of Nursing, Acute Care Pediatrics

Sherrie David, **MSML, BSN, RN**
Program Director of Digital Health

Christine Young, **MSN, MBA, RN, NEA-BC, DNP**
Chief of Hospital Based Services & Chief Nursing Officer

Overview

In pediatric care, hospitals face unique challenges, from staffing shortages and rising operational costs, to ensuring patient and parent support. Akron Children's sought to address these issues and improve care delivery through a Virtual Nursing Pilot Project that integrated virtual nursing to support bedside care teams. By leveraging AI-enabled technology from care.ai, now part of Stryker, this initiative explored how virtual nurses could assume crucial responsibilities and drive improved outcomes, enhance operational efficiency and increase nurse satisfaction. Virtual nurses performed key operational tasks traditionally handled by in-person staff, such as admissions, discharges, patient monitoring and education. The pilot started with one virtual nurse for a 27-bed pediatric MedSurg unit. The virtual nurse hours of operation were from 9 a.m. – 9 p.m. seven days a week.

Virtual Nursing to Solve Challenges in Pediatric Care

Helping Address Staffing Shortages and Burnout

Virtual nursing offers an innovative approach to patient care as hospital staffing shortages persist. At its core, virtual nursing shifts non-hands-on operational tasks from bedside nurses to remote nurses. With growing documentation requirements, virtual nurses can efficiently handle paperwork, allowing bedside nurses to concentrate on direct patient care.

In addition to administrative functions like admission and discharge, virtual nurses can also perform virtual monitoring, hourly virtual rounding and general patient education to better support the on-site care team.

Moreover, the assistance of a virtual nurse allows care teams to provide families and patients with more dedicated attention. This redistribution of responsibilities was associated with

improved nursing satisfaction and may reduce burnout, as demonstrated by internal metrics from Akron Children's, including **1,045 nursing hours saved** and increased nurse satisfaction scores. This technology also allows seasoned nurses a rewarding career path that leverages their expertise while minimizing physical demands, which may help to retain experienced professionals within the team.[1]

Enhancing Care Coordination and Communication

Clear communication between healthcare teams and families is critical in pediatric care. Virtual nurses offer a bridge, providing detailed patient education and facilitating coordination among all those involved in the care continuum.

Planning, Implementation and Integration

Technological Integration

The virtual nursing program integrated care.ai's platform into Akron Children's IT infrastructure. They embarked on a four-month preparation, design and build phase; aiming for the virtual nurse to not only complete admissions and discharges but also quickly monitor patient rooms for safety.

Initial challenges included determining the optimal workload for one virtual nurse and ensuring seamless monitoring and communication capabilities. Over time, care.ai enhanced its platform to support simultaneous virtual calls and room monitoring, an important capability for proactively identifying pediatric-specific safety risks such as unsafe sleep conditions and lowered side rails. During the pilot, this functionality helped staff **address 145 documented safety risks** and improve documentation practices. Additionally, being able to check a room before making a virtual call ensured it was an appropriate time for both the patient and their family, thereby safeguarding patient privacy.

Adoption and Engagement

As with any new technology, there are hurdles to achieving facility-wide adoption. While the pilot team was enthusiastic about being the first to implement the program, some staff had initial questions and hesitations. Key challenges included overcoming staff concerns about being monitored and adjusting to task delegation between virtual and bedside nurses.

To address these concerns, the pilot team prioritized transparent communication and the feedback of everyone involved. They employed tactics such as bi-weekly meetings among virtual nurses to ensure open communication and promote program discussion, and posters in huddle rooms to encourage anonymous feedback from bedside staff. Dedicated time during staff meetings was allocated for sharing updates and progress, while the leadership team

facilitated real-time communication between virtual and bedside nurses to build positive relationships and trust.

The pilot's success was evident in the acceptance of bedside RNs in delegating tasks to the virtual nurse and integrating them into the care team.

Onboarding the On-site Team

Akron Children's ensured seamless onboarding by engaging a multidisciplinary team and using multiple communication channels - hospital leadership meetings, newsletters, e-learning and clinical informatics training for virtual nurses. Continuous surveys and patient satisfaction data informed improvements during the pilot.

Key Use Cases

Initial use cases mirrored those seen in adult care but were adapted to fit the unique needs of pediatric care. Virtual nurses supported administrative functions such as admissions, discharges and safety monitoring, with emphasis on pediatric-specific risks like unsafe sleep conditions or lowered side rails. Akron Children's and care.ai worked closely to continuously advance and customize the platform for pediatric-specific needs, further promoting proactive patient care.

Outcomes

Key metrics included patient satisfaction, the quality of nurse-patient interactions and operational efficiency. Key outcomes from the pilot highlighted enhanced safety, efficiency and patient experience. The virtual nursing model successfully identified and addressed 145 safety risks, saved bedside nurses a total of 1,045 hours (over seven months) and enhanced documentation and patient education processes. The virtual nurses completed 60% of all admissions and 80% of all discharges, while also contributing to higher nurse satisfaction and streamlined workflows. Documentation improvements included:

Documentation Improvements	
☑ **29%** Resolution of Teaching Points ☑ **28%** Documentation of Restraint Education for Parents ☑ **23%** Documentation of Teaching Points ☑ **22%** Restraint Orders	☑ **18%** Learning Needs Assessment ☑ **18%** Care Plan Initiation ☑ **17%** Restraint Added to Care Plan ☑ **7%** Discharge Documentation Completion

Overall, the results indicate that virtual nursing serves as a promising complement to traditional care models, providing a scalable solution to meet the increasing demands on pediatric health care systems.

Expansion

Building on the successes of the pilot conducted from December 2023 to June 2024, Akron Children's is expanding virtual nursing to additional units. This expansion will include ambient monitoring, one-to-one video calls and integration with the hospital's electronic health records system. A key focus will be enhancing patient safety and supporting staff with virtual nursing companions.

Conclusion

Akron Children's experience demonstrates that virtual nursing can be a scalable, sustainable solution to some of the most pressing challenges in health care today. With Akron Children's pilot program's promising results in safety, efficiency and patient satisfaction, virtual nursing holds immense potential for broader adoption across pediatric and other hospital settings.

*Data on file with Akron Children's

References:

1. Inpatient virtual nursing fundamentals, uses and benefits. Teladoc Health. Accessed August 7, 2025. https://www.teladochealth.com/organizations/resources/inpatient-virtual-nursing-fundamentals-uses-and-benefits

This white paper reflects Akron Children's independent experience and assessment. Stryker supported the internal review and logistical publication process but provided no direct funding or financial compensation to Akron Children's or the authors.

01/2026
AC-GSNPS-WHPR-2151850_REV-1_en_us