NK8EOa

Using the required empirical outcomes (EO) presentation format, provide one example of an improved outcome in a care setting associated with clinical nurse(s) involvement in the adoption of technology.

Example a: Adoption of Rover® by Clinical Nurses Improves Patients' Understanding of Medications

Problem

Kellie Babson, MSN, RN, CCRN, Nurse Manager, WakeMed (WM) North Med/Surg, and Telissa Avila, BSN, RN, RN-BC, Supervisor/Educator, WM North Med/Surg, identified an issue in patient satisfaction with nurses explaining medications to them, as reported by patients in the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) survey.

Pre-Intervention

Babson and Avila reviewed the WakeMed North Med/Surg data and noted a downward trend. The "Always" score for the medication explanation question, "Before giving you any new medicine, how often did hospital staff tell you what the medicine was for?" was 62.50% for January 2023.

Goal Statement

To improve the percent "Always" HCAHPS score for patient satisfaction for the question, "Before giving you any new medicine, how often did hospital staff tell you what the medicine was for?" for WakeMed North Med/Surg.

Participants

Rover® Taskforce			
Name/Credentials	**Discipline**	**Title/Role**	**Department**
Kellie Babson, MSN, RN, CCRN	Nursing	Nurse Manager	WM North Med/Surg
Telissa Avila, BSN, RN, RN-BC	Nursing	Supervisor/Educator	WM North Med/Surg
Tish Brown, MSN, RN, RN-BC	Nursing	Clinical Nurse IV	WM North Med/Surg
Noel Hammond, BSN, NI-RN, RNC	Informatics	Clinical Informatics Specialist	Clinical Informatics
Chad Sickle, BSN, RN	Analyst	Epic Analyst	Information Services
Pete Marks, PhD	Information Services	Vice President, Chief Information Officer	Information Services
Neal Chawla, MD FACEP	Physician	Chief Medical Information Officer	Information Services
Amy Light, PMP, RDN	Dietitian	IS Project Manager II	Information Services

Kelly Johnson, BSN, RN, RN-BC	Nursing	Manager, Clinical Informatics/Training	Nursing Administration
Shannon Oliver, BSN, RN, CEN	Nursing	Nurse Manager	2W Intermediate Care
Labrita Denning, MSN, RN, CMSRN, CCM	Nursing	Supervisor/Educator	2E Medicine
Nicole Aune, BSN, RN	Nursing	Clinical Nurse IV	Neonatal Intensive Care Unit
Ji Kwon Hwang, MSN, RN, CMSRN	Nursing	Clinical Nurse IV	2W Intermediate Care
Jason Cain	Engineer	Team Leader Telecom Services	Telecommunication

Description of the Intervention

February 2023

- Babson requested that the Clinical Informatics team, led by Kelly Johnson, BSN, RN, RN-BC, Manager, Clinical Informatics/Training, investigate ways to use new or current technology to improve the HCPAPS scores for explaining new medications.
- Noel Hammond, BSN, NI-RN, RNC, Clinical Informatics Specialist, Clinical Informatics, reviewed various options for leveraging technology to support clinical nurses in increasing the medication metric. Hammond conducted a literature review that supported the use of mobile devices to efficiently access information related to patient care along with medication administration applications. Almost all healthcare providers have a mobile device, giving them mobility and functionality to easily coordinate aspects of patient care. Hammond identified the Rover® application as one that enables nurses to access information about medications during urgent and unsafe situations without having to go to a workstation or desktop.
- Hammond critically examined the benefits and drawbacks of all solutions and various forms of technology devices, determining that Rover® was the one that made the most sense and aligned with the organization's goals. Hammond completed the literature review as part of her normal process in her role when looking for new and better technological solutions. Hammond presented the recommendation to Johnson, who then got final approval from Information Technology leadership, Pete Marks, PhD, Vice President, Chief Information Officer, Information Services. Hammond spoke with Babson to get Nursing Operational approval.
- After Hammond recommended the use of Rover® to help with the workflow related to medication education, the Rover® Taskforce was created to assess whether Rover® was the appropriate tool to improve patient satisfaction with nurses explaining medications. The taskforce, which included nurse leaders, clinical nurses, IT leadership, Telecom, analysts, and Informatics personnel, confirmed the suitability of Rover® and began outlining a detailed implementation plan that would encompass timelines, resources required, and potential challenges. The Rover® Taskforce, along with Information Technology and

Nursing Operations, decided to move forward with the use of the electronic health record (EHR) application technology to be used on a Rover® handheld device.

- The Rover® Taskforce met frequently to determine build specifications and workflows. Clinical nurses were an important part of the discussion of the nurse workflow using the technology. Decisions made by clinical nurses included which flowsheets to add to the medication administration section and whether they would be required or optional, whether links would be added to the education information for the medications, and whether nurses would be able to document the education given to the patient within the Rover® application? After demonstrating the use of Rover® and role-playing scenarios, the Rover® Taskforce decided the workflow would mimic what the clinical nurses were already completing on the computer workstations. This would decrease the change effect the new Rover® devices would have on the clinical nurses, enabling them to adopt the new technology quickly.
- The Rover® application on the clinical nurses' handheld devices enables them to scan patients' armbands and medications where they are rather than having to be at a workstation, and it gives nurses medication education materials at their fingertips. Rover® gives nurses access to patient lists, communication, push notifications, chart review, and the ability to document vital signs. This enables the clinical nurse to be face to face with the patient, so they feel the nurse is more attentive, as they are able to take a conversational stance rather than standing away from the patient at the computer workstation. If the patient has questions about their medications, the nurse can open the education links in Rover® and answer their questions without walking away from them.

March 2023

- Hammond and Chad Sickle, BSN, RN, Epic Analyst, Information Services, completed testing of the Rover® devices and the application.
- Babson and Tish Brown, MSN, RN, RN-BC, Clinical Nurse IV, WM Med/Surg North Med/Surg, requested that education for the clinical nurses be provided in multiple forms, emphasizing the need for something physical for the clinical nurses to use to understand the new Rover® device. Hammond created educational videos, tipsheets, and physical poster boards. The Rover® Taskforce reviewed the educational material and gave unanimous approval. Hammond added the videos and tipsheets to the Nurse Learning Home Dashboard in the EHR, and she sent an email to all staff members in WM North Med/Surg with the links for quick easy access. WM North Med/Surg clinical nurses were encouraged to review the resources. Staff education also included a review of the policy on the use of handheld devices.
- Brown, Nicole Aune, BSN, RN, RNC, Clinical Nurse IV, Neonatal Intensive Care Unit; and Ji Kwon Hwang, MSN, RN, CMSRN, Clinical Nurse IV, 2W Intermediate Care, volunteered to serve as superusers for the new technology, Rover®. The superuser group met with Hammond and Sickle to train on the new EHR handheld devices. The training included an innovative approach in which each superuser had an EHR handheld device to role play with the clinical nurses

on how to use it when teaching patients about medications and side effects. Brown, Aune, and Hwang were excited to review patient medications on the handheld devices, as they provide a more face-to-face experience for the patient.

April 2023

- Brown and Aune requested that more applications be added to the handheld devices to benefit patients and nurses. For example, they asked that the interpreter services application be included on the handheld devices. The tablets currently being used for interpreter services were bulky and were often not charged or logged into. Having the interpreter application on the handheld devices that the nurses were already using would enable them to communicate more seamlessly with patients and families. The Rover® Taskforce agreed that this would help not only with general communication but would also make medication education clearer and more concise. Hammond gained approval for this request to place the interpreter services application on the handheld devices.

May 2023

- Hammond requested that the Rover® project be initiated first on the WM North Med/Surg since Babson had made the initial request.
- Hammond, Brown, and Sickle provided at-the-elbow support during WM North Med/Surg huddles, unit in-services, and one-on-one training at the bedside during the pilot phase. Brown and Babson provided support on the off-shifts and weekends.
- Hammond interviewed patients and found that they preferred the use of Rover®. One patient stated, “The nurse was looking at me while educating on the medications and not looking at the computer. It seemed more personal.”

Brown, Aune, and Hwang’s involvement in the adoption of Rover® was associated with an improved percent “Always” HCAHPS patient satisfaction score for the question, “Before giving you any new medicine, how often did hospital staff tell you what the medicine was for?” for WakeMed North Med/Surg.

The interventions were fully implemented by the end of May 2023.

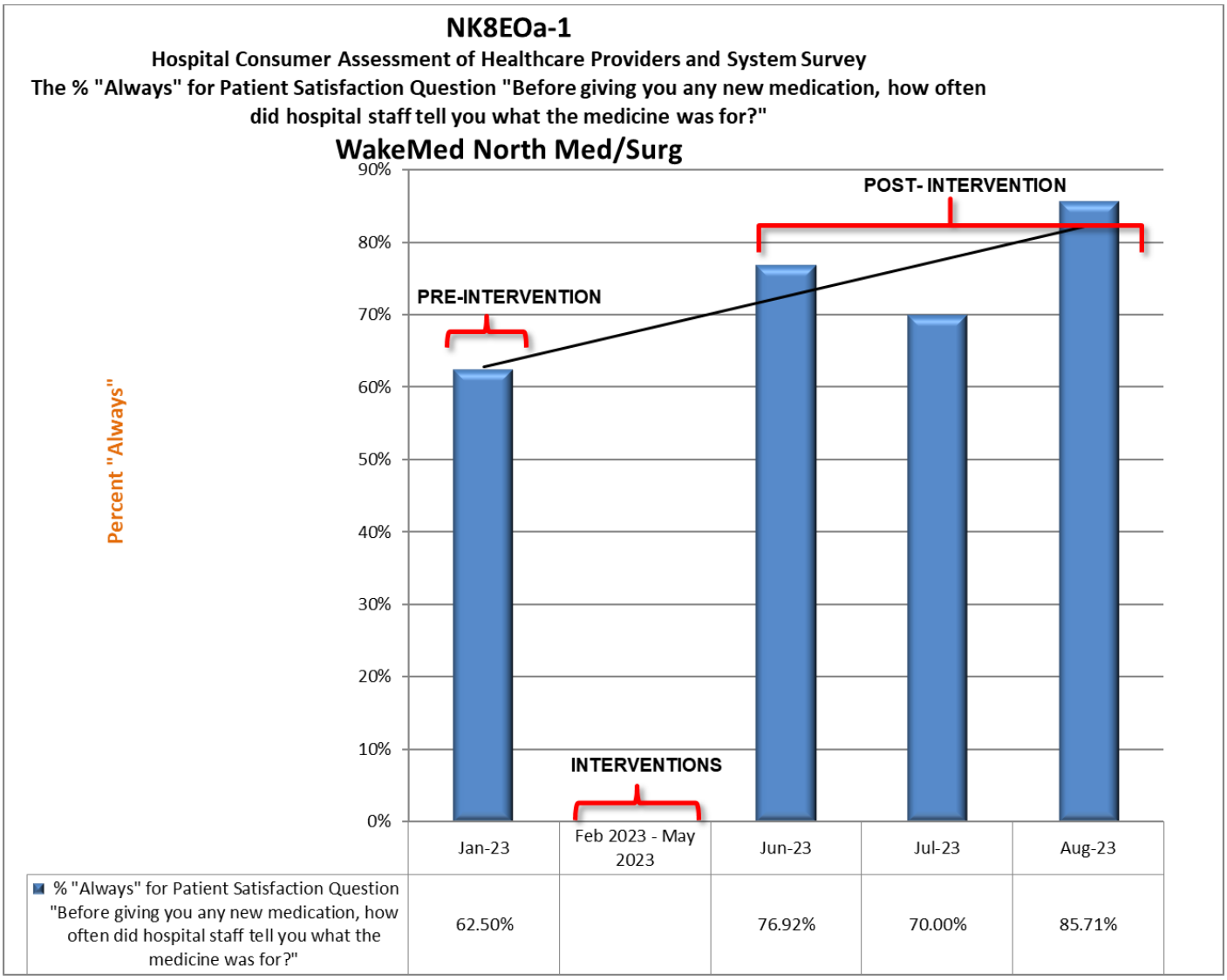
References:

Baptiste, D-L., Whalen, M., Gardner, H., Waweru, M., and Maliszewski, B. (2020). Implementation of the Epic Rover App® to improve barcode-assisted medication administration compliance among nurses in the adult emergency department. *Journal of Informatics Nursing*, 5(4), 22-25. https://doi.ania.org

Motulsky, A., Wong, J., Cordeau, J-P., Pomalaza, J., Barkun, J., and Tamblyn, R. (2017). Using mobile devices for inpatient rounding and handoffs: An innovative application developed and rapidly adopted by clinicians in a pediatric hospital. *Journal of the American Medical Informatics Association, 24*(e1), e69-e78. https://doi.10.1093/jamia/ocw107

Nerminathan, A., Harrison, A., Phelps, M., Scott, K., and Alexander, S. (2017). Doctors' use of mobile devices in the clinical setting: A mixed methods study. *Internal Medicine Journal, 47*(8), 978-987. https://doi.org/10.1111/imj.13349

Outcome



(Evidence NK8EOa-1, HCAHPS Survey, % "Always" for Patient Satisfaction Question "Before giving you any new medication, how often did hospital staff tell you what the medicine was for?", WakeMed North Med/Surg)