EP12 – Nurses assume leadership roles in collaborative interprofessional activities to improve the quality of care.

Provide one example, with supporting evidence, of a nurse-led (or nurse co-led) collaborative interprofessional quality improvement activity.

Example: Hospital-Acquired Pressure Ulcer (HAPU) Improvement Led by Wound Ostomy Continence (WOC) Team Nurses

Background/Problem:

The Institute for Healthcare Improvement estimates that pressure ulcer treatment costs the United States healthcare system $11 billion per year. Hospitals are under pressure to improve quality, save money and prevent foreseeable injuries such as pressure ulcers. Consequently, pressure ulcer improvement programs are becoming institutional priorities across the nation.

Prior to 2012, hospital-acquired pressure ulcer (HAPU) prevalence rates at UVA Health System, as measured and reported to the NDNQI, were unacceptably high. Variability among units suggested inconsistencies in both clinical practice and process implementation as it pertains to pressure ulcer prevention. Recognizing that it needed to not only meet but exceed NDNQI HAPU benchmarks, UVA Health System initiated a quality improvement project. As the WOC team leader, David Mercer, MSN, RN, CFCN, CWOCN, ACNP-BC, Advanced Practice Nurse 2, was appointed by Lorna Facteau, Chief Nursing Officer, as the institutional leader in the pressure ulcer prevention quality improvement initiative to drive excellence in the reduction of HAPUs.

Framework for Improvement:

The UVA Quality / Safety Plan outlines several methodologies available for performance improvement. One of these is Plan-Do-Study-Act (PDSA). The interprofessional quality improvement efforts are broadly framed by this approach.

- **Plan** – Led by the WOC nurses, the organization collected data and identified gaps in evidence-based practice at the point of care and within systems and processes.
- **Do** – An interprofessional approach led to a bundled approach addressing many aspects of assessment, supply and equipment use and clinical practice changes.
- **Study** – Constant re-evaluation of data validated the actions taken.
- **Act** – WOC nurses, in partnership with interprofessional colleagues, worked to standardize the solutions and cement the improved practices through a sustained structure and process of awareness and accountability.

The Role of the WOC Team Defined:

Using the Plan-Do-Study-Act framework, Mercer met with Brian Zwoyer, MSN, RN, Nurse Manager, to discuss the current state of pressure ulcer prevention. As a component of their plan, they discussed the Wound Ostomy Continence (WOC) team structure. The team of six Wound Ostomy Continence certified nurses (WOCN) did not have a consistent method of covering existing patients and responding to new consults. In June 2012, the team was reorganized with a new coverage model and renewed clinical accountability. The WOC team was emphasized as a resource to nursing staff, as clinical experts and as internal consultants. Each WOC team member was assigned to a unit as lead in that practice area's skin care program. During the evaluation of this change, both the WOC nurse and the unit clinicians noted that the continuity allows the WOC nurses to build relationships with the nurses in each area and with the interprofessional team that cares for those patient populations. The staff on each nursing unit voiced a renewed investment in maintaining skin integrity for their patients. As a cohesive group with renewed focus and energy, they were able to lead patient population-based efforts to address the multifaceted practices to prevent HAPU.

Richard Schneider, RN, David Mercer, NP, Toni Plummer, RN, Elizabeth Gochenour, RN, Carol Coleman, PCT and Karie Wilson, RN, are part of the Wound Ostomy Continence team.

Skin Champions:

As the Plan-Do-Study-Act framework was employed, the assignment of WOC nurses to specific practice settings was evaluated. In addition to the many positive outcomes that were discussed, the WOC nurses shared that the new relationships were resulting in a large increase in referrals from unit clinicians. Extending the expertise of the WOC team

was leading to an increased reliance on the nurse specialists for a multitude of skin-related issues.

As a result, a network of unit-based Skin Champions was developed in fall 2012 to promote point-of-care clinical excellence. This created an opportunity to elevate the role of unit-based clinicians as skin care resources. The Skin Champions are instrumental in implementing practice changes related to skin care and serve as a source of intelligence on the successes of or barriers to optimal skin care in the clinical environment, both for their peers and the WOC team.

The WOC nurses meet with the unit Skin Champions in an ongoing fashion to collaborate on clinical management of complex patients, offer education and network with each other, with the common goal of establishing a culture of skin safety. Skin Champions collaborated with WOC nurses to introduce new products to the staff to facilitate the use of HAPU prophylactic dressings, creams and supplies. One example is the conversion from plastic-backed and cloth-based incontinence pads to high-absorbency pads. The practice of placing multiple pads beneath patients was specifically targeted in education and coaching. Longstanding practices needed to change to maximize the effectiveness of the new high-tech pads while keeping costs in check. Skin Care Champions communicated the campaign of use just one pad under each patient and confining wicking pad use to incontinent patients only instead of routinely using them with all patients.

All Skin Champions across the institution also meet quarterly with the WOC team to discuss broad-reaching issues and develop solutions. Off-site educational dinners are one of the venues by which these goals are met. (Exhibit EP12.a: Education Invite to Skin Care Champions)

Mercer also coordinates the WOC team and Skin Champions in conducting quarterly pressure ulcer prevalence studies using the NDNQI tool. During each study, Skin Champions directly assess the skin of all patients on their unit and provide an initial assessment of all skin damage. Any patient identified as having a pressure ulcer (PU) is then re-evaluated and the pressure ulcer validated by the WOC nurse assigned to that unit. The Skin Champion and WOC nurse complete the NDNQI form by documenting the location, number and stage of all PUs identified. Pressure ulcer staging is based on the modified staging system endorsed by the National PU Advisory Panel in 2007.

In addition to describing and staging PUs, the WOC nurse and Skin Champion also review the patient's electronic medical record to determine whether the PU is hospital- or community-acquired. Peer review using a structured tool is conducted for nurses who are assigned to patients identified as having a hospital-acquired pressure ulcer. (Exhibit EP12.b: HAPU Peer Review Redacted) A debriefing lunch is held on the day of the survey with all Skin Champions, during which findings are discussed and action plans are developed. This networking enriches everyone's understanding of current

challenges and successful practices in neighboring units and is a timely source of consultation between WOC nurses and Skin Champions.

Interprofessional Approach:

After the success of the initial Skin Champion rollout and the resulting decrease in HAPU rates, Mercer employed another round of Plan-Do-Study-Act. With the nursing team better established with supplies, resources and knowledge to prevent HAPU, the interprofessional team was incorporated. Various interprofessional team members were identified and incorporated into the HAPU prevention team.

Nutrition Services:

Skin Champions teach staff to readily consult the Nutrition team when wounds are identified. Under the leadership of Kate Willcutts, MS, RD, CNSC, Clinical Dietician Manager, dieticians work closely with the Skin Champions and WOC team to address the nutritional needs of patients identified as at risk using the Braden scale. Unit dieticians, medicine nutrition support team members and surgical nutrition support team members are directed to promptly respond to nurse requests for consultation when patients at risk for pressure ulcers are identified. Similarly, all dieticians are trained to consult the WOC team if a nutrition consult is requested for a patient with a pressure ulcer concern.

Respiratory Therapy:

James Shuke, RT, Lead Respiratory Therapist, assisted with strategies to address device-related HAPU. During prevalence survey debriefings, Skin Champions were noting occasional HAPU over ears from oxygen tubing and on the lips and tongue of intubated patients. The inclusion of the lead RT in the HAPU discussion enabled us to identify an alternative padded oxygen cannula tubing in all areas of the medical center, as well as to emphasize the role of RTs in daily endotracheal tube position changes. RT leadership promoted education among their peers on the importance of these practices in keeping our patients' skin safe. As a result, our device-related HAPU in the ears, lips and tongue have been reduced.

Physicians:

Physicians are essential HAPU prevention team members. Collaboration with the Emergency Department (ED) and Surgery physicians was essential to reducing HAPU numbers. In October and November of 2012, WOC nurses met with Emergency Medicine physicians and surgeons to build relationships and explore the challenges of readily identifying "present on admission" pressure ulcers and addressing the needs of patients at high risk for pressure ulcers. One intervention that supported communication between all members of the team was the Perioperative Communication Tool for Skin

Integrity (Exhibit EP12.c). This is a hard copy form attached to the patient's chart to alert the OR staff to take preventative and protective measures, such as placement of prophylactic silicone-based dressings.

Physicians are also integrated into HAPU prevention through an "open door" policy with the WOC team whereby physician colleagues routinely round with the WOC team to learn basic, fundamental preventative care.

Prosthetics and Orthotics:

In the fall of 2013, prevalence data referenced by Skin Champions revealed a concern about heel protection. Mercer consulted Ed Hicks in the Prosthetics and Orthotics Department to assist. Ed assisted with the development of a self-directed process for ICU staff to obtain heel suspension devices. (Exhibit EP12.d: ICU Heel PU Prevention Algorithm) He also established a consultation process for acute care staff in order to provide heel suspension boots or other appropriate footwear for complex patients in need of heel protection. As a result of Ed's contributions, heel-related HAPUs have diminished.

Supply Chain and the Nurse Supply Advisory Council Collaboration:

In addition to the identification of supplies, interprofessional teammates are also integral to the provision of needed items. In the fall of 2012, Mercer joined the Nurse Supply Advisory Council. This group is co-chaired by Holly Hintz, MSN, RN, NE-BC, Director of Nursing Practice and Research in the Office of Nursing Governance Programs, and Barbara Strain, MA, SM(ASCP) the Director of Supply Chain Value Management and Analysis, and provides oversight related to product selection, process, education, cost and standardization. Supply chain team members work alongside nurses to conduct value analysis of return on supply investment in terms of clinical outcomes and help to make supply decisions. Prior to our quality improvement efforts, there was no wound team representation on this committee. Mercer's participation on this committee prompted the introduction of multiple evidence-based reviews and various products related to skin care, incontinence care and linen practices.

Exhibit EP12.e is a summary of cost analysis of related supplies for the Skin Care Bundle, among other nurse-sensitive quality indicator improvement initiatives. (Exhibit EP12.e: Cost Overview of Nursing Quality Supply Initiatives FY11-FY14)

Clinical Engineering and Equipment:

Capital resources were optimized over this time period, and the WOC team participated in all high-level discussions on matters pertaining to skin care. For example, support surfaces for the prevention of pressure ulcers commenced in June 2012. The WOC team partnered with Clinical Engineering to understand how we could contribute to

continuous quality improvement. As bed replacements were planned in 2013, WOC team input was used to make the decision to upgrade all of the ICU bed surfaces to include state-of-the-art pressure relief technology.

Linen:

The linen department vendor changed during this time frame, and an opportunity arose to consider linen impact on HAPU. The PNSO Clinical Practice Committee engaged the expertise of WOC team members to develop new bed-making standards. This change included an emphasis on placing as few layers of sheets or pads beneath the patient as possible, to minimize the potential of wrinkle-based skin injury.

Outcomes:

Under Mercer's leadership, best practices in HAPU prevention are being introduced. The commitment from interprofessional partners is resulting in high skin care standards for our patients. These collaborative efforts reduced institutional HAPU point prevalence rates from a high of 8% in 2Q 2010 to 0.9% in 1Q 2013. We maintain rates that outperform the NDNQI benchmarks for academic medical centers and are extremely proud of this work.

Participants:

EP12 Table 1: Participants, HAPU Improvement Initiative

Name	Discipline	Title	Department
David M. Mercer	Nursing	Advanced Practice Nurse 2-Nurse Practitioner	Wound, Ostomy, Continence Team
Richard Schneider	Nursing	RN Clinician III	Wound, Ostomy, Continence Team
Karie Wilson	Nursing	RN Clinician IV	Wound, Ostomy, Continence Team
Liz Gochenour	Nursing	Advanced Practice Nurse 1- Nurse Practitioner	Wound, Ostomy, Continence Team
Carol Coleman	Patient Care Technician	Patient Care Technician	Wound, Ostomy, Continence Team
Toni Plummer	Nursing	RN Clinician III	Wound, Ostomy, Continence Team
Brian Zwoyer	Nursing	Nurse Manager	5 West and WOC Team

Barbara Strain	Supply Chain	Director of Value Management and Analysis	Supply Chain Value Management
Holly Hintz	Nursing	Director, Nursing Practice and Research	Nursing Governance Programs
James Schuch	Respiratory Therapy	Manager, Respiratory Therapy and Pulmonary Diagnostics	Respiratory Therapy
Kate Willcutts	Nutrition Support	Manager, Nutrition Support	Nutrition Services
Edward Hicks	Prosthetics and Orthotics	Certified Assistant	Orthopedic Surgery
73 Clinical Nurse Skin Champions			All inpatient and procedural areas