EP20EO – Clinical nurses are involved in the review, action planning and evaluation of patient safety data at the unit level.

Provide two examples, with supporting evidence, of an improvement in patient safety that resulted from clinical nurses' involvement in the evaluation of patient safety data at the unit level. Supporting evidence must be submitted in the form of a graph with a data table that clearly displays the data.

Example 1: Operating Room Nurses Reduce Indwelling Urinary Catheter Operating Room Insertion-Related CAUTI

Background/Problem:

Clinical nurses in the operating room reviewed organizational performance data related to CAUTI. They specifically evaluated the available data indicating infections associated with insertion and those associated with maintenance of the indwelling urinary catheter (IUC) and its drainage system. Mikel Gray, PhD, APRN, FNP-BC, PNP-BC, CUNP, CCCN, FAANP, FAAN, is a national-level urologic and incontinence nursing specialist and is a Professor at UVA School of Nursing. He also leads the urodynamics program at UVA. According to his expert opinion, CAUTIs identified within two days of catheter insertion are most likely attributable to defects in insertion.

Cathy Jennings, BSN, RN, Clinician II, Operating Room, began serving as the lead CAUTI Champion for the OR in January 2012 and has been heavily involved in housewide nursing efforts to reduce CAUTI as a member of our Q17 CAUTI Team.

Jennings and Christie Piedmont, MSN, RN, CIC, Infection Preventionist in Hospital Epidemiology, reviewed and analyzed CAUTI data for inpatients who had surgery in our main OR and determined that an opportunity to reduce the number of OR insertion-related CAUTIs existed. This same data was brought by Jennings to the OR Nursing Practice and Quality committees and to OR nursing leadership, where action planning to improve the situation was vetted and launched.

Goal Statement:

Reduce the number of OR insertion-related CAUTI as measured by National Healthcare Safety Network (NHSN) definition and benchmarks.

Description of the Intervention/Initiative/Activity(ies):

April 2012: Initial practice evaluation by Jennings and the OR Practice Committee demonstrated that many clinical nurses in the OR were unclear about the supply components of the indwelling urinary catheter (IUC) insertion tray. This headlined the

need to provide a standardized nursing procedure and education for all OR RNs in this practice.

In April 2012, Jennings led the effort by the OR Practice Committee to develop an evidence-based OR procedure in their departmental manual entitled “Adult IUC insertion and care.” This change in practice marked a turning point in the infections related to OR insertions.

In May 2012, The OR Practice Committee identified the need for re-education and alignment with nursing practice across the hospital. All OR nurses completed demonstrated competency in IUC insertion in spring of both 2012 and 2013, mirroring a housewide nursing re-education requirement.

May 2012: Additional opportunities to strengthen OR Patient Care Technician (PCT) knowledge in best practices in moving patients with an IUC were identified. Jennings provided education sessions to this group emphasizing the need to keep the collection bag lower than the level of the bladder. She also communicated key points in CAUTI prevention to the entire CRNA group with a one-page handout on the proper maintenance of the catheter system. Finally, Jennings and her new co-CAUTI Champion Nancy Pierce, BA, RN, CNOR, Clinician III and OR Nursing Education Coordinator, instituted the teaching of all new OR orientees the ABCs of OR standards for urinary catheter insertion and maintenance using the core materials developed during this process.

May 2012: Jennings and CAUTI clinical nurse specialist lead Kathleen Rea, MSN, RN, CNL, PCCN, ACNS-BC, Advanced Practice Nurse 2-CNS, presented to the interprofessional OR Committee (governing body of the OR) the best practice recommendation of having only nurses insert IUCs. Energized discussion ensued, including physicians’ expression of concern for medical students’ need to learn the skill of catheter insertion. While Jennings and Rea acknowledged the need for medical students and graduate medical education trainee learning opportunities, they achieved support from the OR committee to have only nurses insert IUCs for several months to solidify practice knowledge and continue to track OR infection data. Subsequently, medical students and GME trainees would be allowed to insert IUCs, but only under the direct supervision of a nurse, to ensure correct coaching, supervision and patient safety. The nurses were supported in their plan. It was not until September 2012 that students were again allowed to insert Foley catheters under direct nursing supervision.

Beginning in October 2012, Jennings partnered with PACU CAUTI Champion Ann Stadelmaier, BSN, RN, CPAN, Clinician III, and the PACU Nursing Practice Committee to seek solutions to two specific problems:

- How to document IUC insertion in the main medical record (our intraoperative areas are not included in Epic at this time), including ensuring that appropriate orders for the IUC and its maintenance were in place; and
- How to ensure that IUC bags were kept below the bladder with no dependent loops during transit from OR to PACU.

Solutions included PACU nurses entering the IUC and maintenance bundle orders into Epic as the patient arrived and joint training for PCT staff in both areas regarding the need for strict adherence to bag / system maintenance in transport. These interventions enabled the patient to leave the perioperative area with an appropriately positioned catheter system that was documented appropriately in the medical record.

Jennings has also been a champion for the reduction in routine IUC use during surgery. As a new member of the OR Quality Committee, in January 2013, she pressed for the evolution in practice alternatives to routine IUC use. This synergized well with surgeons' increasing efforts to reduce IUC catheter use in accordance with national standards. As a result of an idea from the OR Nursing Practice Committee, volunteers who assist with escorting patients from the waiting area to the Surgical Admission Suite (SAS) offer a bathroom stop on the way. The SAS team prompts patients to void as soon as they are called back to the OR. These two simple steps have helped to reduce IUCs in selected cases.

Significant housewide focus on CAUTI reduction continued, and the CAUTI work group maintained focus on the data, with methodical action steps to continue improvement. Throughout 2013, Jennings faithfully attended CAUTI work group and Champion meetings and worked with OR nursing shared governance and interprofessional committees to assure continued knowledge of the data and reduction efforts.

In February 2013, the housewide CAUTI work group asked the OR to pilot an insertion checklist for adherence to IUC insertion steps. While the OR pilot demonstrated that a self-completed checklist had limited value in itself as quality improvement tool (as compared to an observer-completed tool for central line insertion), the checklist did have value in periodic review of practice adherence and raised staff consciousness of the standards. Jennings, OR nursing leadership and the OR Practice Committee decided that the optimal use of the checklist would be on "Friday Foley Day," to spot-check practice weekly. The checklist is used as an audit on all IUC insertions on Fridays by the same nurse assigned to perform the central line insertion checklist observations.

In April 2013, Jennings began reviewing all reports related to CAUTIs: issues related to catheter insertion or management. Her written review of the infection was sent to the assistant managers and team members involved, and then she followed up with each person to answer questions and offer guidance. As the housewide CAUTI Clinical Investigation Tool was developed, the OR was right in step, adapting the tool to the OR

environment and using it with staff to review all CAUTIs on OR patients. No-blame principles are used in this process. An atmosphere of individual learning about the circumstances behind the CAUTI and consequences for the patient makes this case review approach successful.

Jennings also teaches new staff to specifically question the surgeon about the need for an IUC in each case, and role models this behavior. She has recognized the need to quantify improvements in the reduction in use of IUCs intraoperatively through avoidance of IUC use and removal of the IUC at the end of the case. She is working on a data collection process for both. The commitment to share patient safety and quality data is strong in the OR.

Participants:

EP20EO Table 1: Participants, Operating Room CAUTI Reduction Initiative

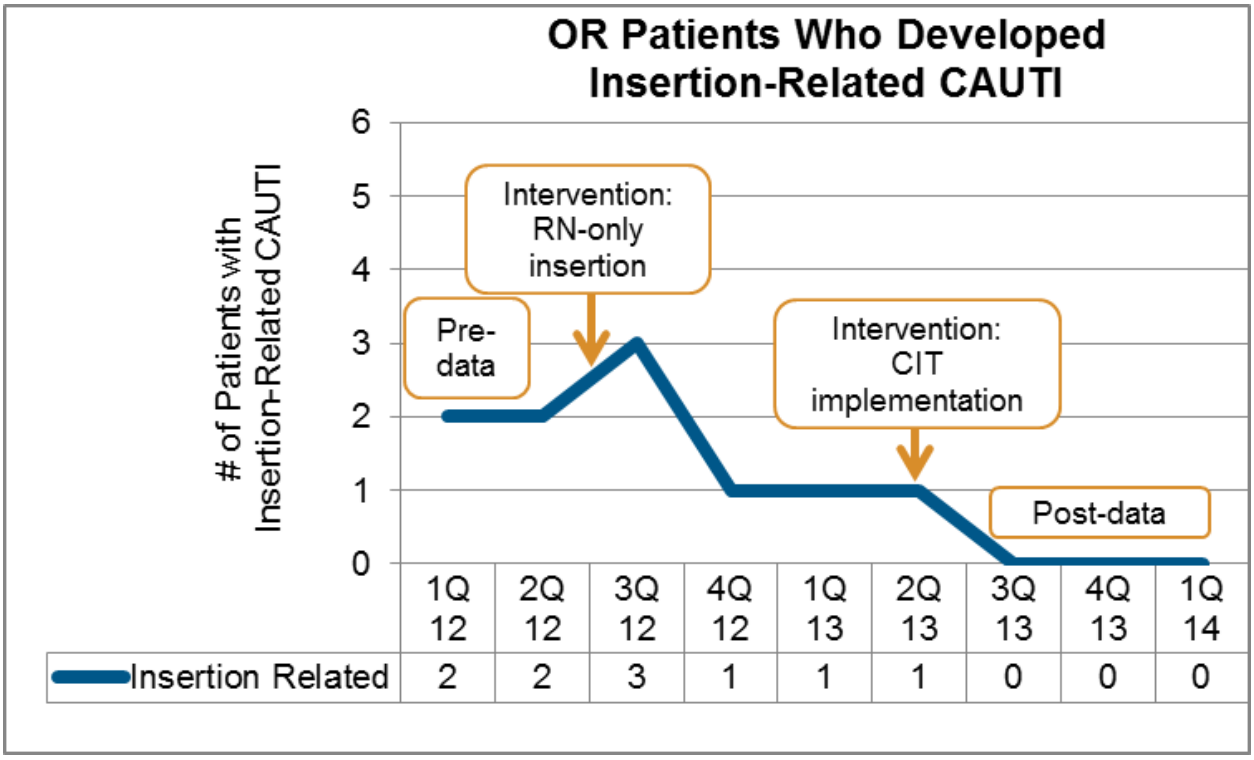
Name	Discipline	Title	Department
Kathleen Rea	Nursing	Advanced Practice Nurse 2-Clinical Nurse Specialist	5 West
Christie Piedmont	Nursing	Infection Preventionist	Hospital Epidemiology
Lindsay Staton	Nursing	RN Clinician III	OR
Stefanie Skipper	Nursing	RN Clinician III	OR
Gayle Coolidge	Nursing	Quality Improvement Coordinator	OR
Ambria Kirtley	Nursing	RN Clinician III	OR
Jamila Goodwin	Nursing	RN Clinician II	OR
Sue Boyer	Nursing	RN Clinician III	OR
Lora Carver	Nursing	Inpatient Case Manager	Case Management
Linda Watkins	Nursing	RN Clinician II	Endoscopy
Kim Sutphin	Nursing	Assistant Nurse Manager	OR
Cathy Jennings	Nursing	RN Clinician II	OR
Abby Archer	Clinical Support	Certified Surgical Technician	OR
Mae Veney	Patient Care	Patient Care	OR

	Technician	Technician	
Shawna Cochran	Nursing	RN Clinician III	OR
Mary Durham	Nursing	RN Clinician III	OR
Liz Yates	Nursing	RN Clinician III	OR
Irene Castelino	Nursing	Quality Improvement Coordinator	OR
Michele Ashbaugh	Nursing	RN Clinician II	OR
Rich May	Clinical Support	Certified Surgical Technician	OR
Sue Strack	Nursing	RN Clinician II	OR
Laurie Stemler	Nursing	RN Clinician II	OR
Mladen Krstic	Nursing	RN Clinician III	OR
Denise Allensworth	Nursing	RN Unit Based Pool	OR
Rebecca Kershisnik	Nursing	RN Clinician III	OR
Tara Peterson	Nursing	RN Clinician III	OR
Paula O'Buckley	Nursing	RN Clinician III	OR
Kari Miller-Delawder	Nursing	RN Clinician II	OR
Lynn Gallardo	Nursing	RN Unit Based Pool	OR
Nancy Pierce	Nursing	RN Clinician III	OR

Outcome(s):

As a result of hard work, persistent effort and education, OR insertion-related CAUTIs were significantly reduced. The OR clinical nursing staff demonstrated ownership of their part of this hospitalwide outcome and contributed to the overall organizational improvent by implementing strategies to address imperfections at the unit level.

EP20EO Figure 1: OR Patients Who Developed Insertion-Related CAUTI (1Q12-1Q14)



Example 2: Improvement in Patient Falls Due to Implementation of Validated Falls Risk Screening Tool for Home Health Patients

Background/Problem:

Continuum Home Health provides comprehensive home healthcare services to 11 counties surrounding our facility. Vigilant in monitoring outcomes, this team constantly reviews outcomes data and actively addresses opportunities for improvement.
As part of our continued efforts to improve patient safety, Continuum Home Health nursing staff recognized the need to strengthen their approach to falls risk assessment and care planning to improve outcomes.

In October 2012, the CMS Outcome and Assessment Information Set (OASIS) updated its requirements for falls risk assessment tools. This coincided with the validation of the Missouri Alliance for Home Care Fall Risk Assessment tool (MAHC10), which made this tool the sole validated instrument for accurately assessing falls risk in the home. This tool met OASIS requirements that such a tool be multifactorial, standardized and validated. Nursing leadership and staff at Continuum jumped at the chance to improve outcomes by implementing this tool in their practice.

Goal Statement:

Be at or below the national average for falls at home requiring emergent care or hospitalization, utilizing data reported through OASIS.

Description of the Intervention/Initiative/Activity(ies):

The adoption of the MAHC10 tool was authorized by the Continuum Falls Prevention Committee. Nursing staff on the committee and within the team gave positive feedback about replacing their "homegrown" tool with an evidence-based tool. Additionally, their assessment method was rooted in the physical therapy discipline's approach, and they welcomed the more holistic nature of the new tool. They viewed the tool as simple and easy to use.

Planning for implementation continued throughout the fall of 2012. Preparation included:

- Nursing and therapy team members were trained on the use of the MAHC10. Nursing also completed a demonstrated competency at their 2013 skills day.
- The home health EMR was updated to include relevant changes to existing falls risk assessment pathways with the new tool and associated factors.
- The Continuum patient handbook was updated with the new information.

In January 2013, the MAHC10 tool was implemented across the Continuum practice area. With this change, nurses were no longer required to perform the sit-to-stand test, which also streamlined their assessment process to just using the validated tool. Patient teaching once fall risk was identified remained the same.

In April 2013, Mary Crandall, MSN, RN, Director of Continuum Home Health, conducted an extensive literature review on the concept of "gait speed" and its correlation to patient longevity. She reviewed 142 articles; the selected citations below are a few of the largest studies reviewed:

- Peel NM, Kuys SS, Klein K. Gait speed as a measure in geriatric assessment in clinical settings: a systematic review. *J Gerontol A Biol Sci Med Sci.* 2012 Aug 24. [Epub ahead of print]
- Studenski S, et al. Gait speed and survival in older adults. *JAMA*. 2011 Jan 5;305(1):50-8.
- Abellan van Kan G, et al. Gait speed at usual pace as a predictor of adverse outcomes in community-dwelling older people: an International Academy on Nutrition and Aging (IANA) Task Force. *J Nutr Health Aging*. 2009 Dec;13(10):881-9.

- Cesari M, et al. Prognostic value of usual gait speed in well-functioning older people – results from the Health, Aging and Body Composition Study. *J Am Geriatr Soc.* 2005 Oct;53(10):1675-80.

The literature review provided valuable information about the patient population commonly seen in home health and could be used to facilitate discussions regarding earlier transitions where appropriate to hospice-level care. Crandall saw the value in the literature of the potential correlation of gait speed with fall risk, which had been demonstrated in settings other than home healthcare. Based on this literature, Crandall discussed the introduction of the gait speed measurement with the Continuum Falls Committee, and the decision was made to implement gait speed assessment with every home health patient. Nurses were equipped with stopwatches and were trained in the simple concept of having the patient stand and ambulate 3 meters while measuring the time it took to complete the task. By May 2013, all nurses were collecting gait speed data on their patients in addition to using the MAHC10 falls assessment tool. Crandall worked closely with staff, some of whom struggled with the change, but many of whom found great value in performing this test with their patients.

The act of assessing gait speed as one of the tasks of the visit assured that each nurse actually observed the patient ambulating, and this in turn enhanced his or her assessment of the fall risk the patient exhibited. The nurses became much more aware of the true falls risk of their patients and were therefore able to better individualize interventions from the Continuum Interdisciplinary Falls Risk Prevention Pathway. Crandall will be analyzing data in August 2014 to determine what correlations they are finding between the MAHC10 and gait speed data as accurate determinants of fall risk in the home. Continuum nurses assess their patients for falls risk 100% (as compared to 98% of benchmarks) of the time, according to OASIS data.

Crandall and Kim Garrison, BSN, RN, RN Administrative Coordinator, regularly share falls outcome data with nursing staff at their monthly team meetings. Seeing the results of their improved assessment and intervention processes has further engaged staff in this process to improve patient safety. Nursing orientation at Continuum has also strengthened focus on the falls prevention assessment for new nurses.

Participants:

EP20EO Table 2: Participants, Continuum Home Health Falls Committee

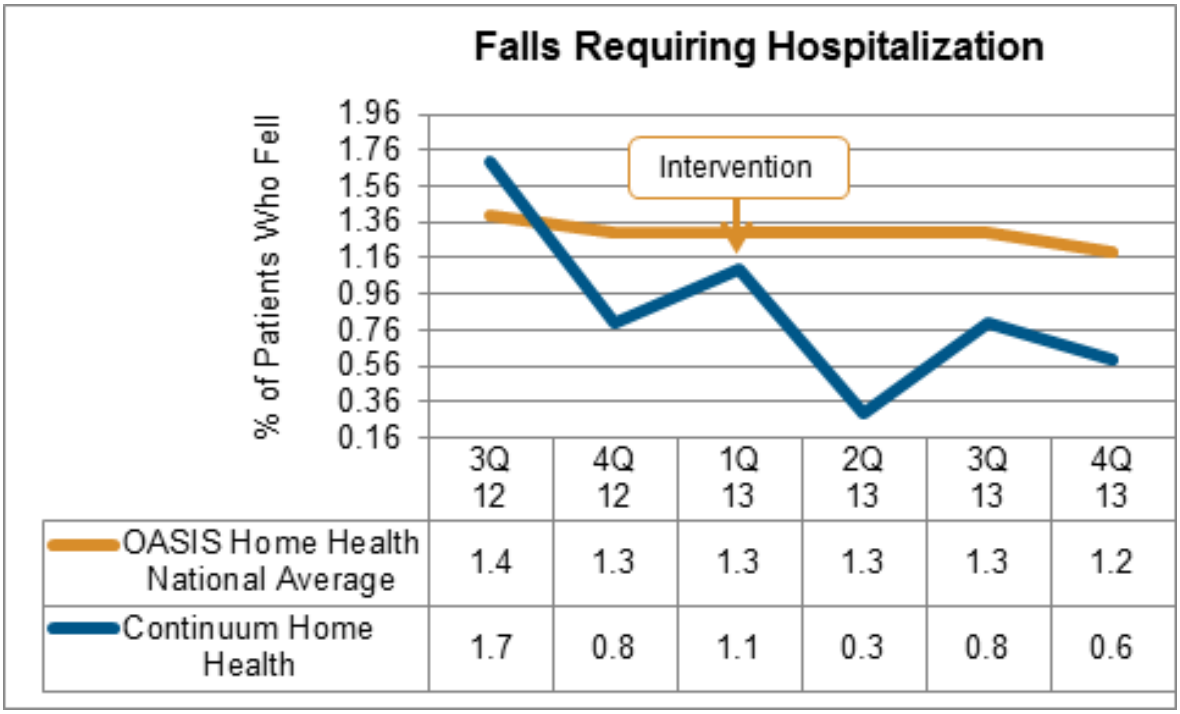
Name	Discipline	Title	Department
Mary Crandall	Nursing	Director, Continuum Home Health	Continuum
Kim Garrison	Nursing	RN Administrative Coordinator	Continuum

Jeff Riedel-Bicknell	Physical Therapy	Occupational Therapist	Continuum
Karen Graziano	Nursing	RN Administrative Coordinator	Continuum
Daisy Denham	Nursing	RN Administrative Coordinator	Continuum
Sandra Owens	Nursing	RN Administrative Coordinator	Continuum
Diane Huss	Physical Therapy	Physical Therapist, Neurological Clinical Specialist	Continuum
Sarah Powell	Pharmacist	Clinical Pharmacist	Continuum Home Infusion

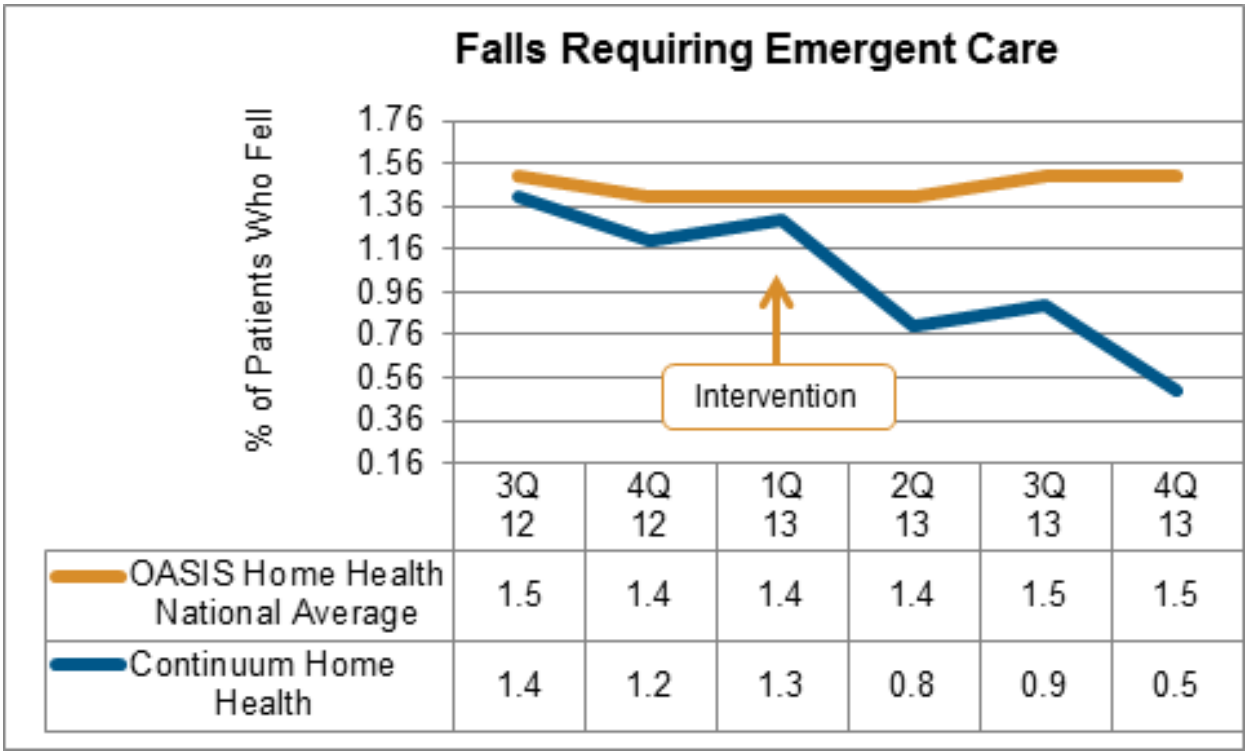
Outcome(s):

All of these factors taken together have enabled Continuum nurses to significantly reduce serious patient falls in the home for patients in their care.

EP20EO Figure 2. In-Home Falls Requiring Hospitalization (3Q12-4Q13)



EP20EO Figure 3: In-Home Falls Requiring Emergent Care (3Q12-4Q13)



	3Q 12	4Q 12	1Q 13	2Q 13	3Q 13	4Q 13
OASIS Home Health National Average	1.5	1.4	1.4	1.4	1.5	1.5
Continuum Home Health	1.4	1.2	1.3	0.8	0.9	0.5