Organization: MedStar Franklin Square Medical Center

Solution Title: Sustaining Hand Hygiene and Patient Equipment Cleaning with a Staff Accountability Model

Program/Project Description including Goals:
Our innovative program sought to improve hand hygiene and patient equipment cleaning practices in our busy Ambulatory Surgical Care (ASC) unit. We used a two-pronged model consisting of a World Café™, a research based process to engage teams in creating practice change, and engagement of leadership and interdisciplinary teams. In this case, the World Café™ was used to help staff identify facilitators and barriers to hand hygiene and equipment cleaning practices. The interdisciplinary and leadership teams provided support by addressing the barriers identified through the World Café™ process. Since implementation of these processes, hand hygiene adherence has ranged from 90-100% for the past 12 months compared to 45-60% prior to implementation. Germ counts on blood pressure cuffs dropped to 112 relative light units (RLUs) in August 2014 from 558-1434 RLUs prior to implementation in Oct 2013. Germ counts on stethoscopes were dramatically reduced from as high as 2090 RLUs to 26 RLUs following implementation. The combined use of the World Café and leadership and interdisciplinary team engagement created a culture change which has resulted in sustainable practice changes. Components of our program have been used by our Environmental Service Department and the entire program can be easily transferred to other health care settings.

Process:
Our ASC provided care for approximately 17,400 inpatient and outpatient surgical procedures during FY14 resulting in 1,339,000 minutes of OR time. Two direct care nurses identified that hand hygiene and patient equipment cleaning practices in the ASC were less than optimal and were concerned because of the high volume of patients under their care. After working independently to improve rates of hand hygiene and patient equipment cleaning practices with moderate results, the nurses established an interdisciplinary and leadership team to further embed hand hygiene and patient equipment cleaning practices in the ASC. The interdisciplinary team, including a PhD prepared nurse researcher, a doctorally prepared nurse (DNP) in evidence-based practice, the Nurse Infection Preventionist and ASC nursing leadership, identified that staff accountability was critical to ensuring hand hygiene and equipment cleaning compliance. Three unique outcomes from these meetings were the use of the World Cafe™, a research-based facilitator moderated conversation that has been used extensively to effect organizational change, the use of education techniques focused on visualization of germs in the work environment including plating cultures of patient care equipment demonstrating germ growth and use of the GloGerm™ hand washing activity and finally, staff holding each other accountable for proper hand hygiene and patient equipment cleaning practices.

Solution:
Using the World Cafe™ framework, the DNP prepared evidence-based practice expert facilitated conversations involving 22 ASC staff who participated in one of the four lunchtime World Cafe™ sessions offered in November 2013 to address facilitators and barriers to hand-hygiene and patient care equipment cleaning. During the first two sessions, staff identified 7 facilitators (correct location of supplies, teamwork, education reinforcement, secret shopper program,
nursing leadership positive reinforcement, compliance metrics reviewed at unit meetings and frequent reminders re compliance) and 18 barriers for equipment cleaning (very busy unit, need to re-prioritize patients frequently, staff have bad habits, lack of housekeeping support, too many types of cleaners to choose from, concern re wiping down dressing room, not using gloves when using a cleaning agent, documentation of isolation amongst other issues). They identified 6 facilitators to hand hygiene (location of hand sanitizers, reminding each other, computer screen home page scrolling reminder regarding hand hygiene and 9 barriers (education, staff have bad habits, time, lack of awareness, lack of seriousness of situation, too many interruptions among other issues). They identified 6 facilitators to hand hygiene (location of hand sanitizers, reminding each other, computer screen home page scrolling reminder regarding hand hygiene and 9 barriers (education, staff have bad habits, time, lack of awareness, lack of seriousness of situation, too many interruptions among other issues).

The final two sessions of the World Café™ program focused on staff determining solutions to the barriers and facilitators they had identified. For example, for hand hygiene, staff decided to incorporate “CHAAT”, into their practice. This acronym stands for ‘clean hands at all times’, and is used in front of patients if a staff member observes less than adequate hand hygiene. Staff also recommended that hand hygiene and patient equipment cleaning reminders be made during mid-shift huddles, and that compliance metrics from secret shopper programs be reviewed during unit meetings. Regarding patient equipment cleaning, staff recommended that OR techs clean the entire stretcher and not just the mattress, place MRSA patient in a space designated for MRSA patients only, placement of an isolation cart in ASC, narrow selection of products on the unit, use of disposable cuffs for isolation patients, enhanced collaboration with environmental services for consistent cleaning at the end of the day among other recommendations.

Leadership moved decisively to eliminate barriers such as purchasing supplies, re-directed patient flow from nursing home admissions and introducing interdisciplinary unit huddles. The interdisciplinary team, especially the Infection Preventionist, provided immediate education and clarification of policies and procedures and monitored germ growth on equipment in the ASC. Because the leadership and interdisciplinary team were available during the facilitator led discussions, many of these barriers were addressed immediately during the meetings. Follow-up meetings and conversations were scheduled immediately to reduce implementation time. Examples of barriers eliminated by leadership include the placement of an isolation cart in ASC, review of placement of hand sanitizers and regularly scheduled meetings with Environmental Services for ASC cleaning at end of day.

Counseling of staff non-compliant with hand hygiene and equipment cleaning was an important part of the leadership outcomes of this project. Staff agreed with and supported the current practice that the nurse manager first give a verbal warning and progress to a written warning as needed for non-compliance. A unique outcome of this program was that nursing staff who fail to address or report non-compliance will also receive a verbal warning. In other words, staff who observe non-compliance are held equally accountable as the staff who were non-compliant. This is a hallmark of the program featured on staff accountability.

It was the perception of staff that they had heard a lot about infection control issues over the years. However, it was clear that the education was not resulting in changes in behavior. Therefore, the Infection Preventionist identified various strategies to provide a visual component to the education sessions. The strategies implemented were: 1) use of GloGerm™, a hand washing educational tool which uses a black light and special lotion to identify areas of poor
hand hygiene technique; 2) plating of cultures obtained on patient equipment in the ASC and showing pictures of the growth to staff; 3) measuring germ counts on patient equipment using a 3M device called a luminometer. According to proprietary information provided by 3M, results of 500 relative light units (RLUs) or less is acceptable, levels higher than this need to be addressed. The Infection Preventionist measured the blood pressure cuff, Doppler, pulse oximeter, stethoscope and scanner thermometer on a monthly basis and shared the results with staff.

**Measureable Outcomes:**
The outcomes of this two pronged program include the following: hand hygiene results improved from 40-60% prior to implementation to 90-100% post implementation. Luminometer results all improved dramatically. Results reported as pre/post implementation from 8/25/14 are: blood pressure cuff from 1824 to 112 RLUs, doppler from 82 to 9 RLUs, pulse oximetry from 1735 to 26 RLUs and scanner thermometer from 597 to 32 RLUs. All results are well within the normal limits based on proprietary information provided by 3M, the manufacturer.

**Sustainability:**
Changing the organization culture within the ASC through use of the World Café and leadership and interdisciplinary teams has resulted in sustainable hand hygiene and equipment cleaning practice changes. For sustainability of the program, nursing staff and leadership have instituted clear and consistent communication centered on staff accountability to proactively address issues related to hand hygiene and equipment cleaning practices. Ongoing data collection and review of metrics for hand hygiene and equipment cleaning practices at unit meetings ensure that staff are aware of its importance and their need to sustain continued high levels of infection prevention practices in the ASC. Our project has been presented at regional conferences with favorable feedback. The role of staff accountability cannot be emphasized enough in improving and sustaining the results of this project for the past year.

**Role of Collaboration and Leadership:**
Interdisciplinary team and leadership support were crucial to sustenance of hand washing and equipment cleaning outcomes in our organization. Although all members of the team knew each other, the unique framework of this project encouraged team members to step more fully into their roles and communicate and collaborate as professionals to ensure patient safety. Staff collaborated with leadership in unique ways to foster individual accountability. As a team, the nursing staff, leadership and interdisciplinary team created and embraced highly reliable practice changes to reduce infection rates. These new standards reflect the high level of commitment within the team to ensure a culture of safety for patients in the ASC.

**Innovation:**
This project was unique in that a two pronged model including the World Café™, and an engaged interdisciplinary and leadership team was used to facilitate sustained change in hand hygiene and equipment cleaning practices in a busy ASC. This model enhanced the culture of safety, fostered teamwork, and improved quality of patient care on the unit.
Related Tools and Resources:

The World Café offers free online resources [http://www.theworldcafe.com/toolstore.html](http://www.theworldcafe.com/toolstore.html)


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Results are measured in Relative Light Units (RLU). Minimum acceptable level is 500 RLU.