Culture of Safety

Source of Evidence 30

Describe and demonstrate the structure(s) and process(es) used by the organization to improve workplace safety for nurses, based on recommendations such as the ANA's *Safe Patient Handling and Movement*

Overview

ANA has taken the position that "*The primary dictum for registered nurses, as healthcare professionals, is First, Do No Harm*." In the increasingly complex environment in which health care is delivered today, registered nurses are the premier advocates for:

- The safety and quality of patient care
- The health and safety of registered nurses and other healthcare professionals and healthcare workers
- Healthcare practices which do no harm to the public health environment outside the settings in which healthcare is delivered

Workplace safety for nurses and all staff is a priority at Vanderbilt Hospitals and Clinics. We have established and implemented specific means for preventing, reporting and investigating injuries, illnesses, problems and deficiencies associated with the various components of the environment of care. Organizational Overview Question 24 provides data on nurse related injuries. Partnerships among the following departments/committees/ groups provides the strength for our structures, processes and outcomes related to improving workplace safety and preventing injuries.

- Nursing
- Occupational Health
- Emergency Operations
- Vanderbilt University Police Department (VUPD)
- Plant Services
- Environmental Health and Safety
- Insurance/Risk Management
- Nurse Wellness Committee

- VUMC Safety Committee
- Infection Control Committee

Investigative activities and follow-up are provided through collaborative activities of Risk Management (Worker's Compensation), Occupational Health, Environmental Health and Safety, and Infection Control.

Table EP 30 – 1: Selected Policies that Support Workplace Safety for Nurses

Policies	Purpose
Faculty/Staff Work-Related Injury & Illness Reporting, OP 10-30.01 (Policy in OO20, EOC folder)	• Occupational illnesses and injuries are reported according to protocol outlined in this policy • Protocol includes provision for emergent and non-emergent medical care (24 hr/365days), notification of appropriate individuals within and outside the organization (as appropriate), and workers' compensation (as appropriate).
Handling of Cytotoxic Drugs, SA 20-10.04 (Policy in OO20, EOC folder)	• Provides guidelines for the handling and administration of cytotoxic drugs • Provides process for staff to opt out based on pregnancy/lactation issues
Hazardous Material Spill SA 20-10.02 (Policy in OO20, EOC folder)	• Provides guidelines for the appropriate management of hazardous materials spills
Hazardous Waste Handling and Disposal SA 20-10.05 (Policy in OO20, EOC folder)	• Guidelines for handling and/or disposing of hazardous waste including infectious, radioactive, Chemical and chemotherapeutic agents.
Exposure to Communicable Disease Protocol IC 10-10.02 (Policy in OO20, EOC folder)	• Outlines processes that serve to limit, to the greatest extent possible, staff exposure to communicable diseases
Exposure Control Plan (Book on site)	• Medical Center Plan for all possible exposures

VUMC Emergency Quick Reference Guide (Book on site)	• Emergency response information for all potential scenarios
VUMC Safety and Disaster Manual (Book on site)	• All plans and responses

Table EP 30 – 2: Structures/Processes

Structure	Purpose	Processes
Occupational Health Clinic	Evaluates & trends high-frequency/high-risk injuries, illnesses & exposures http://occupationalhealth.vanderbilt.edu/	• Report information on a scheduled basis to appropriate committees, including Safety, Infection Control, and Nursing Executive Board • Works in close conjunction with VUMC Environmental Health and Safety Department for the prevention, monitoring and reporting of staff injuries, illnesses and exposures • Representation on various committees, including Nurse Wellness, Safety and Infection Control
Vanderbilt University Policy Department (VUPD)	Professional law enforcement agency that provides comprehensive law enforcement and security services to all components of VUMC and responds to and documents all security incidents involving patients, staff or others on Vanderbilt's facilities or property. VUPD provides investigative	• VUPD provides information on security alerts and a summary of crime statistics for the campus on their website and as email alerts. • VUPD has representation on appropriate Medical Center safety committees and subcommittees, including Nurse Wellness. • High-risk, high-frequency security

	activities and collaborates with other law enforcement agencies. http://police.vanderbilt.edu/	incidents are reported to the appropriate safety-related committee or sub-committee on a routine basis.
Plant Services	Through management, technical, and support staffs maintains all Medical Center Facilities within full code compliance to create an environment which supports the delivery of quality patient care, education and research by providing timely, reliable and cost effective service. https://plantservices.vanderbilt.edu/	• Involved with reporting and investigating incidents involving hazardous materials and waste spills, exposures and other related incidents. • Provides reports to appropriate groups and committees as appropriate and has representation on the VUMC Safety Committee.
Vanderbilt Environmental Health and Safety Department	Provides a full spectrum of safety services and information to partner with the Vanderbilt community to facilitate and promote safety, health and environmental management. Serves as the coordinating/oversight body and stewards for all health and safety initiatives, training, responses, and committees. http://www.safety.vanderbilt.edu/	• Coordinates Safety Committee • Responsible education/training regarding safety initiatives • Monitors safety • Coordinates investigation of incidents involving hazardous materials and waste spills, exposures and other related incidents • Reports to appropriate groups and committees. • Works in conjunction with Occupational Health Clinic
Insurance/Risk Management Department	Serves as the accepting body for all work related injuries reports	• Involved with the reporting and investigations of work related injuries • Reports to appropriate groups and

	(password protected website)	committees • Representation on Safety Committee
Nurse Wellness Committee	Uniquely charged with promoting the health and wellness of nurses at Vanderbilt with safety serving as the cornerstone of any health/wellness initiative *(Activity also reported in EP 29)*	https://www.mc.vanderbilt.edu/root/vumc.php?site=nursewellness • Interdisciplinary Committee (reference OO 15) that evaluates, supports and creates programs that deal specifically with Nurse Wellness • Collaborates/partners with other departments and initiatives on campus to promote Nurse Wellness • See examples of activities below • Reports directly to the Nursing Advisory and Nursing Executive Boards
VUMC Safety Committee	Interdisciplinary committee (including Nursing) appointed biannually by the Executive Director. Members include individuals qualified by training and/or experience.	http://www.safety.vanderbilt.edu/resources/committee_med.htm#committee (See membership in OO 15) • Carry out analysis of and to seek resolution of safety management issues. • Charged with the responsibility for maintaining a comprehensive safety program through appropriate policies and procedures, and for conducting ongoing monitoring and evaluation of all aspects of the program.
Department of Infection Control and Infection Control	Responsible for investigating & controlling outbreaks or infection clusters among health care personnel.	http://www.mc.vanderbilt.edu/root/vumc.php?site=infectioncontrol (See membership in OO 15) • Evaluate new & existing products & examine the latest innovations in

Committee		personal protective equipment and safe needle devices • Report to appropriate groups

Occupational Health Clinic

Mission - Protecting faculty and staff health at work

Services

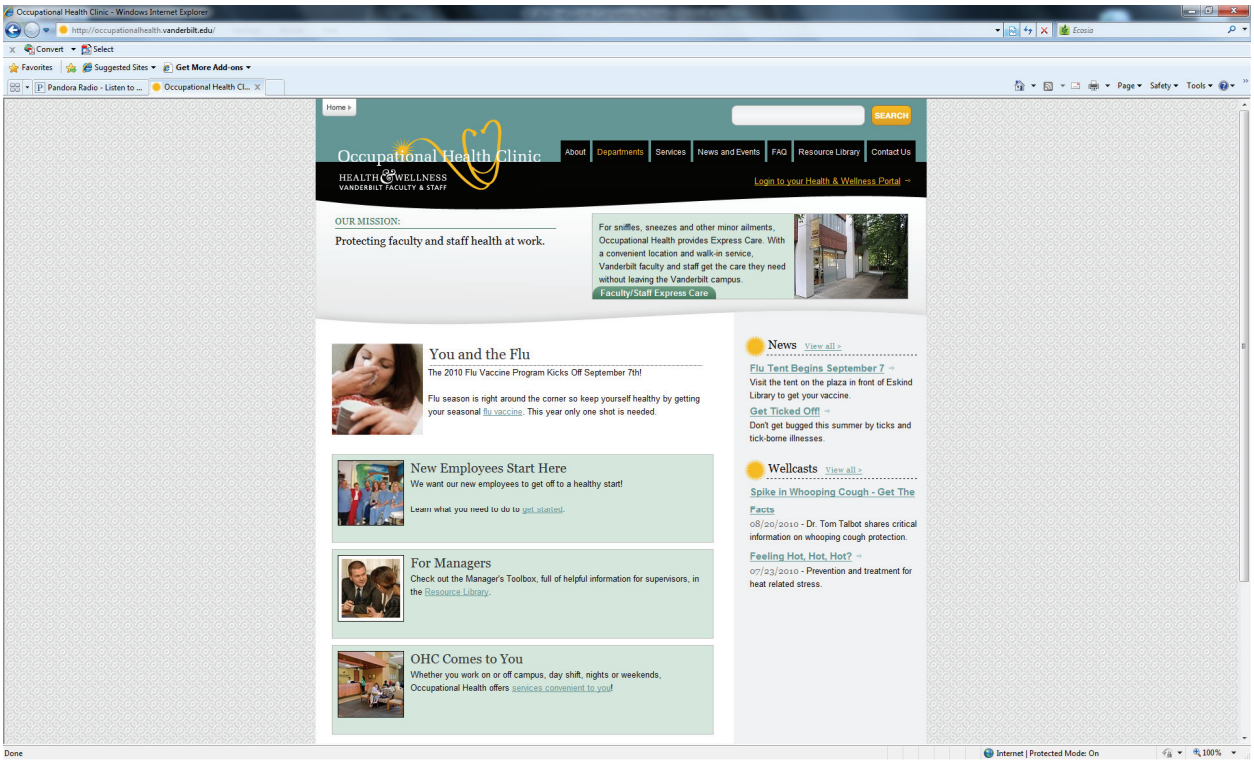
The Occupational Health Clinic provides prevention and medical surveillance for work-related hazards, treatment for work-related injury/illness, programs to assist employees in early Return to Work following injury, evaluation of medical reports such as FMLA provider certifications for the University, and acute care for Vanderbilt faculty and staff.

Table EP 30 – 3: Occupational Health at a Glance

Occupational Health Services Provided	
• Ergonomics Services • Vaccines and other Injections • Job-Specific Exams • Medical Care • Occupational Exposures • Classes	• Online resources Library • Health Advice for current issues (such as influenza, May 2010 Flood Recovery, etc.) • New Employee START guidelines • Manager's Toolbox • OHC come to you – offsite, nights and weekend services
Occupational Health Clinic Staff	
Medical Director Assistant Medical Director Medical Director Health and Wellness Programs	• Melanie Swift, MD, FACOEM • Lori Rolando, MD, MPH • Mary Yarbrough, MD, MPH
Advanced Practice Nurses	• Alice Warren, RN, MSN, Med, ANP • Mark Young, RN, MSN, FNP-BC • Patricia Kinman, RN, MSN, FNP, CS • Elaine Dauwalder, RN, MSN, FNP-BC • Paula McGowan, RN, CFNP, CPA
Occupational Health Specialists	• Valerie Thayer, RN, CIC

	• Sherry, Spray, RN, COHN • Michele Bruer, RN, MSN, MTS
Ergonomist	• Wilma Traughber, RN, MSN
Health Promotions Coordinator	• Stacey Kendrick, MS, ACE
Numerous Support Staff	

Table EP 30 – 4: Screen Shot Occupational Health Website



Initiatives

Nurse Wellness Committee

Staff Safety Walks

The Nurse Wellness Committee proposed and has participated in an annual VUMC Exterior Security Risk/Hazard Assessment since 2003. The purpose of the "Safety Walk" – "Light the Night" is to identify safety and security enhancement opportunities based upon the actual or perceived safety and security conditions of walking pathways used by Vanderbilt employees to the multiple employee parking areas. Particular attention is given to the assessment of lighting, and etc, during the night walks. The walk participants are members of the Nurse

Wellness Committee, Vanderbilt Police Department, Plant Services, and Vanderbilt Environmental Health and Safety.

Teams walk designated routes making note of observations related to safety and security which are presented to the Vanderbilt University Medical Center Safety Committee for action. Typical findings are opportunities for improved lighting, improved line of sight, issues surrounding pedestrian safety, accessibility of emergency phones and identification of trip hazards. The next "Safety Walk" is scheduled for September 2010. In addition to re-lamping and tree trimming, recommendations were made that included installation of additional lighting, yellow caution paint to specific trip hazards, removal of vegetation that was screening a particular emergency phone, relocation of an ambulance that was blocking access to another emergency phone, and rerouting of a shuttle route. [*EP30-Exhibit A-1-Exterior Lighting Safety Survey October 2008, EP30-Exhibit A-2-Security Risk Assessment Walk Route May 2009, EP30-Exhibit A-3-VMC Exterior Security Risk Assessment May 2009, EP30-Exhibit A-4-Exterior Security Risk Assessment-email]*

Rape Aggression Program

The Nurse Wellness Committee has focused in 2008 and 2009 on two programs that nurses can use provided by the Vanderbilt Police Department. The Rape Aggression Defense system was highlighted in the 2008 Nurse Wellness Fair by a live webcast demonstration by one of the Police Department instructors and one of the Nurse Wellness Committee co-chairs. Rape Aggression Defense (RAD) is taught by certified instructors in the Vanderbilt Police Department and teaches practical self-defense options emphasizing awareness, prevention and risk reduction. Classes are offered at a variety of times and locations to make accessible to shift workers. During this period of time, 98 participants attended the Rape Aggression Program. http://police.vanderbilt.edu/services/rape_aggression_defense [*EP30-Exhibit B-1-RAD Program*]

Victims Services

During the 2009 Traveling Nurse Wellness Fairs, the Nurse Wellness Committee has highlighted the availability of the Victim Services Coordinator with an eye-catching poster and brochures. The Victim Services Coordinator is a civilian support person available with free and confidential services to any member of the Vanderbilt community who may become a victim of a crime. The Victim Services Coordinator ensures that victims of crime receive fair treatment in accordance with the State of Tennessee Bill of Victim's Rights, accompanies and supports victims of crime throughout the legal process, and serves as a liaison between the victims of a crime and any legal, medical, and/or counseling needed to address the needs of the victim. The

Nurse Wellness Committee determined that with a nursing workforce as large as exists at Vanderbilt, this was a service that unfortunately was needed but probably had not been communicated well to our nurses. http://police.vanderbilt.edu/services/victims

[*EP30-Exhibit C-1-Job Description Victim Services Coordinator*]

Examples

Smooth Moves

(Further information on Smooth Moves Program provided in EP 30 EO)

Smooth Moves in the Children's Periop areas

An OR nurse sustained a moderately severe cervical spine injury--which resulted in surgery--while transferring an anesthetized child from the OR table to the stretcher following surgery. Nurses in the OR saw this as a continued possible risk and determined the need to have a transfer device available in each OR in order to help prevent future injuries.

Although Smooth Moves Safe Patient Handling had been initiated Medical Center wide, the program had not been fully implemented in Children's. There was still discussion around the program and its benefits because most of the patients are smaller. The OR had always had transfer devices available for staff to use but they were cumbersome and not available in every room. Staff frequently did not take the time to get the transfer devices and since the devices were seldom returned to their designated storage location, it was time consuming to go room to room searching.

Volunteer Smooth Moves Champions were designated and received the Smooth Moves Training. After the training and discussion with unit staff, a transfer device was selected for the OR based on the recommendations of the Smooth Moves team. One transfer device, with a few spares, was ordered for each OR room. The champions marked each "blue tube" as belonging to Children's hospital and included the OR room number.

The champions trained the staff on the use of the "tube" and competencies for tube use were included in safety fairs for all staff. Tubes were place in each OR, out of the way but easily available. Because the tubes are designed to be wiped off with hospital approved disinfectant after each use, just as the OR tables are, it was easy for the staff to clean them and put them

back where they belonged. If a tube became visibly soiled it was placed in a designated linen bag and sent to the laundry.

The champions still round frequently on the OR rooms to make sure there is a tube in each room. When several tubes could not be found, a champion contacted the laundry and went to the linen distribution area to help look for tubes that might belong to our OR. Some were found but we still needed to order a few extra which the champions marked and put in a secure area. The laundry now keeps a special lookout for the OR tubes because there is a personal relationship with the champions and the laundry staff understands how important the tubes are to patient and staff safety.

We have not had a workplace injury related to transferring anesthetized patients since we put a tube in every OR. Because we can reuse the tubes, the cost to the OR has been minimal and it has not increased our cost per unit of service. Our Surgery suite has 16 operating rooms and to date (2 years of use) our outlay for the tubes has been less than $2000.

All OR staff have expressed satisfaction with the tubes and there have been no injuries resulting in time lost from work. The staff appreciates the immediate availability of the devices and the fact that they are easy to use and care for.

Smooth Moves Champions:

- Carmen Bobbitt, RN staff nurse
- Jennifer Law, RN staff nurse
- Judy Huckaby, LPN/Surgical Technologist

Graph EP 30 – 1: VCH Periop

Smooth Moves in VPH

VPH is an acute care psychiatric facility. Since milieu-based (out of room/group) programming is provided, patients are evaluated prior to admission to determine if the program is appropriate to the patient's needs and abilities. VPH does not have a geriatric or medical psychiatric unit, where most bed-ridden patients would be treated. During an initial Smooth Moves assessment, based on the typical treatment plan for patients at VPH and the scope of services available, the probability of admitting a patient needing significant mobility assistance was determined to be very low.

However, in February of '09, staff expressed concerns that there were patient lifting and transfer issues that needed to be addressed, since VPH did not have access to transfer devices. There had been recent problems with patients who did require lifting or transfer who sometimes weighed in excess of 250lbs.

A task force completed an investigation and made recommendations for a plan to optimize staff safety, given the concerns expressed.

Table EP 30 – 4: Team Members

Johnny Woodard RN, BSN	Manager of Infection Control, Safety, Staff Development, Patient Advocacy for VPH
Mary Lou Farinaro MSSW	Director of Administrative Services for VPH
Lori Harris RN, BSN	Program Coordinator and Interim Nursing Leader for VPH
Wilma Traughber RN, MSN	Smooth Moves Facilitator and Occupational

	Health Specialist
Susan Johnson , MS, MT(ASCP), CSP	Assistant Director/Medical Center Safety Officer, Vanderbilt Environmental Health & Safety

Data review for VPH from Occupational Health showed three patient handling issues reported from 1/1/06 to 2/1/09:

- One minor injury was reported on 8/9/06 with no lost time or workers compensation
- One minor back strain reported on 1/22/07
- One minor incident reported on 4/12/08 that aggravated a pre-existing condition

The task force evaluated the lifting expectations for VPH staff and reviewed the current training that was provided. They also evaluated the lifting aids available for staff. Given the patient population and the observed injury rate, the task force determined that VPH staff continued to be at low risk for ergonomic injuries from lifting or moving patients. However, based on the staff concerns, ergonomic training continues to be offered and the potential for or actual injuries are continuously assessed.

The task force implemented the following measures to continue to optimize staff safety:

- Acquired slippery sheets as a lateral transfer device and trained all staff on proper use
- Continue to provide training to new staff, and annually for existing staff (Annual universal training is required for all staff and includes a focus on general back safety and safe patient handling)
- Make VPH staff aware and train on how to access the existing bariatric lifts that are available through the Service Center

The ergonomic evaluation was completed on 2/23/09 and staff training was completed by 3/27/09 with 100% compliance. To date, there have been no injuries related to patient handling, reported to Occupational Health.

VHVI Access Center

The Vanderbilt Heart and Vascular Institute (VHVI) Access Center is staffed with one critical care RN from 7pm to 7am daily and from Friday night until Monday morning – so essentially there is one person in a suite of offices at night and on weekends. The issue of safety was raised by a nurse who experienced the following incident:

On evening, Bonnie Cook, RN Access Coordinator was on the phone w/ an outside facility, turned to fax something and suddenly a woman appeared in the doorway. The individual was not in hospital attire (no ID Badge) and indicated she was looking for a patient. She had a large suitcase, and appeared stressed. The woman would not identify herself by name and said "he" was in room 5024. Bonnie was able to affirm that he was a patient.

The woman had gone up & down the hallway because she said there was no one in room 5024 (a surgeons office). The Access Center Office is 5026 and Bonnie was the first person she saw in her search. Bonnie told her she was in the physicians' office building & she wanted to be in the hospital. Bonnie asked how she got in- she said she got off the elevator, thought it "looked kind of strange" w/ no one around, but kept looking till she found 5024. Bonnie helped her find her way to the hospital. This incident demonstrated in startling reality the ease with which any individual could intrude this suite of offices during off hours.

Issues related to this situation:

- Since the renovation of the Access Center area by the inner elevators, there is a door near the snack machines & waiting room that is left open at night. Anyone getting off the public elevators can turn into the hallway. That allows them to come around the other elevators & come into this part of the building.

- There are elevators that come directly up from the parking garage off 21st Avenue.

- The stranger approached Bonnie while she was busy on the phone, faxing, etc.

- Environmental Services staffs come in and out several times at night, but it could be anyone.

A team was created to address this important issue.

Table EP 30 – 5: Team Members

Bonnie Cook, RN	Access Coordinator VHVI
Nola Brown	Lieutenant VUPD
Todd Griner, RN, MSN, NEA, BC	Nurse Manager
Jan Powers, RN	Access Center Charge Nurse
Cathy Cornell	Access Center Admin Assistant I
Lisa Dorton	Telecommunications Supervisor
Plant Operations Staff	

First Step:

A security assessment was completed by Vanderbilt University Police Department (VUPD) Officer Nola Brown. She made the following recommendations.

- Keep office door locked at all times. (There is also a window directly beside the door that the staff member will be able to look and see when someone knocks on the door before opening it. If they do not know the person, do not open the door.)

- If the staff member feels threatened in any way, call 911 from a house phone or 421-1911 from a cell phone. That number rings directly to VUPD and an officer will be sent to their location

- If they become aware of people on the floor that they do not know or someone acting in a suspicious manner call VUPD at 2-2745 and give a description and direction the person went. An officer will investigate

- Be aware of their surroundings. If they leave the area, lock the office door.

- Take a self defense class

In addition, Bonnie Cook, RN recommended a panic button. Cathy Cornell, AA1 VHVI and Lisa Dorthothe, Telecommunications investigated the options. The staff, via Bonnie, was asked to decide where the button would be placed.

Staff began to feel safer and other realizations occurred – what if someone choked while working alone. That may be even more likely than an intruder with evil intentions. Now with a panic button the employee could call for immediate assistance without needing to talk or dial any numbers. Once the button is pressed VUPD Officers will respond immediately.

New Dermatology Clinic at off-site area – One Hundred Oaks

Dermatology moved their consolidated practices to One Hundred Oaks in August 2009. This new space was designed with input from faculty, direct care staff, and leadership. The new suite covers approximately 28,000 square feet of clinic and MOHS surgery space. Two rooms were designated as Laser rooms. A review of this space by the Laser Safety Officer identified elements for patient and staff safety that were missing.

A team worked together to identify what was needed to bring the rooms to optimal safety conditions. Laser curtains were ordered for both rooms which provide a barrier should someone inadvertently open the doors while a laser is in use. The curtains have a sign on either side indicating a laser is in use. Signage (static) was placed on each door alerting all to the use of lasers within the rooms. Electrical signage was placed beside the door which is illuminated when lasers are in use. Prior to laser use, a nurse or faculty member need only flip a dedicated switch inside the room to illuminate the sign in the hallway. This will alert anyone who might need to enter the room that a laser is in use and proper eyewear is required.

Table EP 30 – 6: Team Members

Steve Stenhouse	Vanderbilt Medical Group space and equipment manager
Moeseval E. Moralde	Laser Safety Officer
John Miller	Vanderbilt Plant Services – Electrical
Mary Lou Gudelis, RN	Manager, Dermatology
Janice Smith, RN, M Ed	Chief Administrator One Hundred Oaks

(Further information provided on Laser Safety in EP 30 EO)

Trauma Center – Violence issues

(Please refer to EP 28 for this complete story)

Off-campus site One Hundred Oaks – Security

When Vanderbilt decided to open a second campus at the One Hundred Oaks Mall, there was trepidation regarding safety in the workplace. The mall suffered from neglect/abandonment over the past few years and community perception was that it was a high crime area. Many staff and faculty were reluctant to move their clinics/work place to this location.

C. Wright Pinson, MD, MBA Deputy Vice Chancellor for Health Affairs and CEO of the Hospitals and Clinics, Janice Smith, RN, M Ed, Chief Administrator of 100 Oaks and Diane Seloff, MBA, Director Clinical Enterprise Executive Operations (project manager) launched a campaign to bring the Vanderbilt University Police Department (VUPD) force to the new location. While an expensive alternative, this step would provide staff/faculty/patients with the sense of safety/security they have at the 21st Avenue campus.

Multiple discussions with the landlord revealed they (site developers/owners) were unwilling to fund the additional expense. The campaign began to convince the University Chancellor that this expense was warranted for the overall safety. Additionally, discussions with the City of Nashville were initiated to allow VUPD to take over jurisdiction of the entire property. In addition to these discussions, work was initiated to install cameras on the mall façade, blue lights (posts with blue strobe and an emergency telephone directly linked to VUPD dispatch – like on the main campus) throughout the parking spaces, and build out a precinct office for VUPD.

Efforts were successful and VUPD currently has a memorandum of understanding with the City of Nashville to provide police coverage to the entire 56 acres at One Hundred Oaks. There are blue lights (cameras/phones) throughout the parking areas, cameras scanning the parking lots and entrances, and police presence 24/7/365. There is a VUPD officer within the Vanderbilt complex each day. VUPD patrols the parking areas and works with the retail establishments. Staff/faculty all comment on the sense of security they feel with VUPD on site. The retail establishments have seen a surge in business, in large part due to the increased police presence, and the entire community speaks of the transformation of the mall with pride. The total stats reported for 2009 was 202 and for 2010 (year to date August) the number is 91. [*EP30-Exhibit D-1-100 Oaks Crime Stats Comparison Metro Police*]

LifeFlight Transport Safety Concern Addressed

Staff concern was expressed regarding the safe transport of patients with intra- aortic balloon pumps in the ambulance and fixed wing vehicles. There is no standard for securing the

pump in the different transport vehicles that are used locally and abroad. The movement of a balloon pump would be a safety issue for the patient and the entire transport team. The LifeFlight Safety Committee sought a solution.

Initially, the group contacted other air medical services to get ideas and to get their "best practice". After lengthy discussion with other programs they found that everyone was just making it up as they went along. No one had a better way of securing the pump when they were in a ground unit.

One potential solution identified was the idea of using a long spine board (LSB) and spider straps. Every ground ambulance has a LSB and LifeFlight could provide spider straps. The pump could be strapped to the LSB and transferred from vehicle to aircraft and back to the next vehicle without ever having to remove the balloon pump. A couple of committee members worked on implementing this solution. We spoke with several medical supply companies looking for the straps we needed but were ultimately unable to find them.

They made their own pattern and found an individual to make the straps to their measurements and needs. The strap was tested and did hold the pump securely to the LSB. The LSB could then be secured to any bench, in any ambulance using the standard seat belts that are used to transport patients. No other equipment would be needed. As the last safety test, the pilots evaluated the straps and approved. Two sets of straps were made and are now available at the Skyport and at our fixed wing base for any balloon pump transport need.

Table EP 30 – 7: LifeFlight Safety Committee Members

Jason Huffman, EMT-IV, RN, BSN, ATCN, CCRN	Chair
Angela Kik, EMT-IV, RN, CEN, ENPC	Flight RN -assisted with template for strap
Keela Dement, EMT-IV, RN, BSN, ATCN, CEN	Flight RN -assisted with template for strap
Dylan Wilson, EMT-Paramedic, ATCN, TNCC	Flight Paramedic- assisted with template for strap

New Goggles Light the Night for LifeFlight

Vanderbilt LifeFlight is now using technology once reserved for military operations or secret spy missions. With the ability to enhance light 10,000 times, the air ambulance service's new night vision goggles essentially turn night into day.

"*You can see a lit cigarette 10 miles away*," said Wilson Matthews, R.N., E.M.T., chief flight nurse for LifeFlight's base in Lebanon, Tenn., who is part of the night vision transition. "You go from seeing nothing to seeing the texture of tree leaves. Matthews said night vision will be most useful when making scene landings because pilots and nurses will be able to see the trees, power lines, rising terrain and other hazards on the ground. "Night vision is absolutely amazing. I have been at LifeFlight since 1997, and this is the single best thing we have done to enhance safety," he said.

Because military demand had dropped, this is the first time that the goggles are available to civilian aviation operations. Three of LifeFlight's four bases are already using night vision, and the final base should be trained by early 2010. A five-hour training program is required for pilots and nurses, and pilots have additional required hours of use in the sky, including take-off, landing, emergency procedures and transitioning between night vision and regular vision.

Night vision works by gathering ambient light from the moon, stars or distant light sources into a special tube. The tube enhances the energy level of the light and hurls the particles at a phosphorus screen that creates the amplified image seen through the eyepiece. Night vision is known for its eerie green hue. That color was chosen because the eye can differentiate more shades of green than any other color.

Pilot Mike Cobb dons the new night vision goggles. (Photo by Joe Howell)

The goggles look like binoculars and are mounted on the front of the helmet. Matthews said one disadvantage is the loss of peripheral vision. "*It's like looking through two tubes*," he said. "*Pilots also have to transition from looking through night vision to looking down at the instrument panel with regular vision. They are also heavy on the helmet and can give you a sore neck the next day*."

Matthews cautioned that night vision will not allow LifeFlight to make flights that were deemed too risky in the past, but it will greatly enhance the safety of their current capabilities. "*LifeFlight will still have to say no when the weather is bad or we can't land safely, but night*

vision is a huge step forward for us. We can be more confident in our landings and put more focus on great patient care," he said.

Culture of Safety

Source of Evidence 30 Empirical Outcome

Describe and demonstrate two (2) workplace safety improvements for nurses that resulted from the structure(s) and process(es) in EP 30.

Blood/Body Fluid Exposure Rates (Pharmacy Prefill Syringes and Butterfly Devices)

Purpose/Background

Vanderbilt Occupational Health Clinic routinely tracks, trends and analyzes all types of employee injury data. They also have routine reporting forums to share the data and facilitate solutions. If there is an urgent issue, they would handle as such with the appropriate group or unit/clinic/department. [*EP30EO-Exhibit A-1-Tracking and Trending Data Occupational Health*]

Detailed analysis of the blood/body fluid exposure rates revealed two areas of concern:

- All prefilled pharmacy medications were not in safety syringes
- Frequent incomplete activation of the safety device on butterfly needles

The exposure/injury rates for these two areas of concern were starting to go up and these were issues that could probably be addressed. Our approach to needle safety is to have all safe-lock and needless systems.

Approach

Prefilled pharmacy medication syringes

Occupational Health took this information to the Safety Committee and to the Medical Economic Outcomes Committee (MEOC). *(Committee membership in OO 15)*

Determination from discussion and follow-up:

- Injectible pre-fill syringes sometimes did not have safety devices depending on the manufacturer of the medication
- Worked with the pharmacy to investigate and determine what manufacturers were sending medications with non-safe needles. Requested safe alternatives

- Worked with pharmacy and put in place a process so that each new medication is assessed for safety syringe before being approved for use.

Butterfly Needles Safety Activation Device

Occupational Health presented this injury data to MEOC.

Determination from discussion and follow-up:

- Resultant discussion that this issue could possibly be due to user misuse and could be amenable to user training

- Implemented educational outreach effort, with continued close outcome monitoring in case product change was also indicated

- Training for butterfly needles was also included in annual Safety Fair

- Initiated individual unit-based training by the company representative

- Added additional training on Butterfly needles to the annual 'Blood Body Fluid Precautions' web-based training

Participants

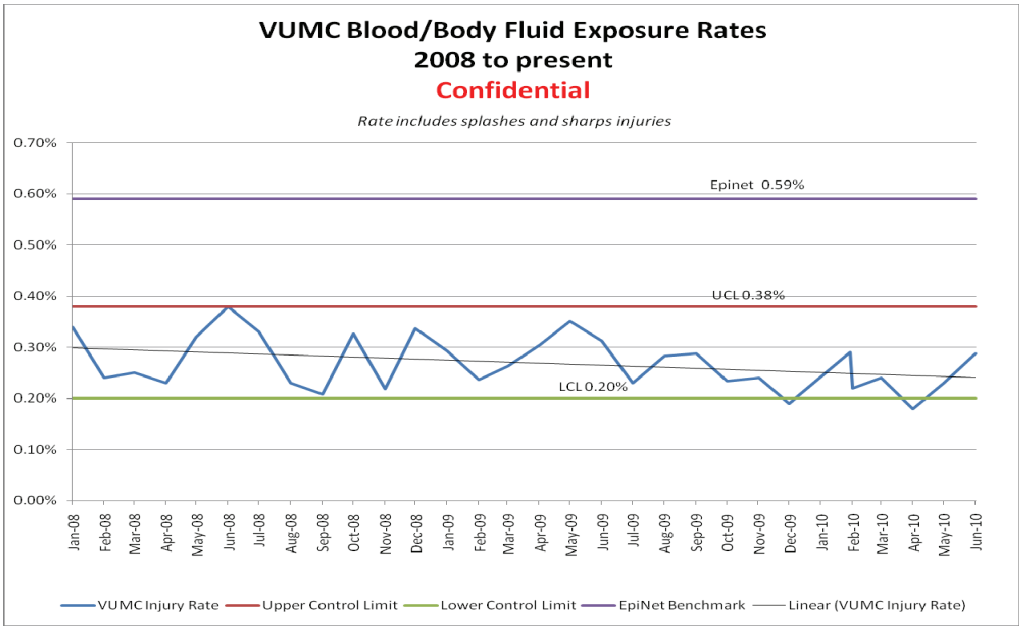
- Occupational Health
- Safety Committee
- Medical/Surgical Economic Outcome Committee
- Pharmacy
- Nursing Education and Professional Development Department

Outcomes/Impact

- Injuries from pharmacy-generated prefilled syringes dropped from 11 (FY 08) to 4 (FY 09), a decrease of 64%.

- Butterfly needle injuries dropped from 42 in FY 09 to 26 in FY 2010, a decrease of 38%. This issue remains on the MEOC agenda because there may be additional improvements that could be made from a possible product change.

Graph EP 32 EO – 1: VUMC Blood/Body Fluid Exposure Rates 2008 – June 2010



This graph shows that our Blood/Body Fluid Exposure Rates have stayed well below the Employee Health Benchmark (EpiNet). You can also see where the rates were drifting up and now in the last year have consistently kept well below the upper control limit and are continuing to trend downward.

Smooth Moves

Purpose/Background

The initial roll-out of our safe patient handling initiative "Smooth Moves" was proposed as a 3 phase, 2 year implementation. After the first phase of 6 pilot units showed overwhelming success, a decision was made and supported to accelerate the roll-out. Our CNO advocated for year-end capital dollars to purchase "Smooth Moves" equipment for our patient care areas. In addition, new policies were adopted and implemented. Staff training and implementation of the new equipment began January 2006. In the initial roll-out of the program during the first year, nursing injuries went from 118 to 83 and a conservative estimate

of dollars saved was approximately half a million. Dollars, of course cannot account for the potential of a nurse losing their ability to practice. Since the initial purchase of hospital wide "Smooth Moves" equipment, there has been an expansion of the program from the adult hospital to Children's hospital, the Psychiatric Hospital and the ambulatory clinics.

Methods/Approach

First steps included assessment of the needs for Children's, Psych and the clinics and the purchase of the equipment they needed.

In order to better assess and support the program, questions about Smooth Moves were added to the Environment of Care Survey which is conducted on every unit on a regular basis. This provides us with a running assessment of information about available equipment and if the staffs are using it. Smooth Moves equipment assessment is built into all aspects of renovation throughout the Medical Center.

Both Vanderbilt Occupational Health and the Vanderbilt Nursing website have dedicated WebPages that serve as a resource for nurses. The staff can view equipment demonstrations, review the equipment maintenance process, review patient handling policies and to sign up for "Smooth Moves Classes".

The Smooth Moves Champion Class was added to the new Learning Management System (LMS) this past year to assist in scheduling and tracking class attendance. We currently have approximately 239 super users of our patient handling equipment who also serve as mentors for equipment use.

Our Smooth Moves facilitator is a nurse in Occupational Health dedicated to this program. She manages our safe patient handling program and also empowers nurses to problem solve and troubleshoot issues around work processes in patient handling and the patient handling program. The facilitator participates on several committees to assist in promoting safe patient handling into everyday nursing practices. Those committees include: Nurse Wellness, Bed Selection Committee, Falls Prevention Committee, Pressure Ulcer Prevention Committee, Medical Center Ergonomics Committee and the Nurse Educators staff council.

Program evaluation

Patient handling injuries are tracked in OHIS. A quarterly Smooth Moves dashboard report is used for analysis of injury causes and trends, and is used to recommend program changes. This dashboard is also discussed with the Nurse Executive Committee (NEB) quarterly

with recommendations. Patient handling injuries are reported with all ergonomic injuries to the VUMC Safety Committee and the OSHA Committee. As a result of the dashboard data we were able to recommend the following changes for the smooth moves program in FY 2009-10:

1. Increasing the supply of repositioning sheets and incorporating replacement cost into the yearly budget
2. Increasing Accountability for the Smooth Moves program across all department levels
3. Completing a VERITAS (Occurrence report) report if safe patient handling equipment or repositioning sheets are not available

Training and Benefits

There are two types of training healthcare staff may receive in connection with smooth moves; champion training and/or smooth moves clinical nurse orientation.

Smooth moves clinical nurse orientation

Every nurse new to Vanderbilt and nursing care partner attends the required 1.5 hour Smooth Moves clinical orientation class. In this class the nurse is introduced to the equipment and its impact on nurses nationwide, the rationale for the Smooth Moves program, and the available resources. The patient handling equipment is interactively demonstrated during this class, with learners participating as "patients" as well as supervised users of the equipment. Individuals are further trained upon arrival in their work area, by a Champion. Competency check offs in the selection and use of equipment are part of the unit-based orientation training requirements. Annual refresher training also occurs.

Champion training:

Champion training provides the opportunity for the caregiver to become an expert in the safe use of patient handling equipment and advocating a safe environment for their patients and co-workers. The individual /mentor attends a 4 hour and 30 minute class and receives a packet which contains the program guidelines, covering the roles/responsibilities of a Champion, basic ergonomics, patient profiles, introduction to equipment, and problem solving exercises. Coaching, problem solving exercises, and review of the equipment is also included. The participants have time to practice new skills, then they perform a return demonstration of the newly acquired skills and the competency assessment sheet is completed by the instructor. After the training, students are asked to complete evaluations forms. Champion Classes are conducted regularly to ensure a continual supply of available Champions in each patient care area. The "Smooth Moves Champion Class is sponsored by VUMC, Department of Nursing

Education, and Development and Vanderbilt Occupational Health Clinic, the caregiver receives 4 contact hours upon completion of the class. *Vanderbilt University Medical Center, Department of Nursing Education and Development is an approved provider of continuing nursing education by the Tennessee Nurses Association, an accredited approver by the American Nurses Credentialing Center's Commission on Accreditation. [EP30EO-Exhibit B-1-Evaluation Form Summary Champions]*

Participants

- Smooth Moves Facilitator/Manager: Wilma Traugher, RN, MSN
- Occupational Health Services
- Safety Committee
- Risk Management
- Medical Center Ergonomics Committee
- Smooth Moves Champions
- OSHA Committee
- Nursing leaders and staff
- Purchasing

Outcomes/Impact

- Smooth Moves supplies have been "mainstreamed" into each operational budget where they can be budgeted annually for additional equipment and replacement costs. Injury data is considered when evaluating for budgetary needs.
- The new Critical Care Tower Units (MICU, SICU and Neuro ICU) all have 2 bariatric rooms incorporated into their design and the cost per room was approximately $115,425 each. Other rooms in the CCT have the potential to be bariatric equipped as needed.
- Additional Smooth Moves equipment for the new CCT was approximately $150,000.
- The initial cost of rolling out Smooth Moves to Children's was approximately $80,000.
- This year we have spent $160,000 for an additional 8,000 slippery sheets to be used for repositioning patients which is one of our top patient handling injuries. This also

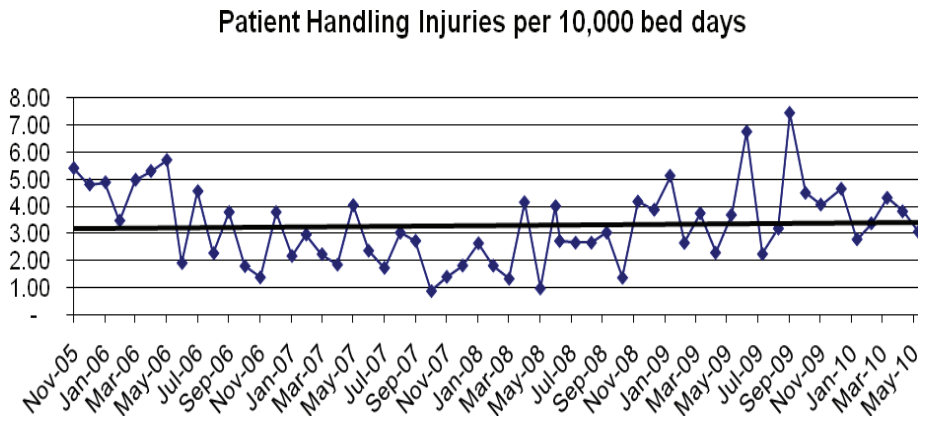
accounts for recommendations for increasing the number of slippery sheets we have in circulation and incorporating replacement costs into the budget based on injury data.

- A bariatric lift was purchased for our new off-site clinic building at One Hundred Oaks.
- A bariatric lift was purchased for the on-site clinics with more Smooth Moves equipment also coming to our on-site clinics.
- Although, we know our Smooth Moves Program does help prevent nurse injuries, we are working on a better system to show work injury costs data. Work injury costs are not spent at the time of the injury, but over the following 3 years. The biostatistician in Occupational Health is working on a system that will better support a true ROI on this important program.

(*A detailed Smooth Moves Dashboard report is provided in OO 24)*

The graph below shows the trending of the number of injures per 10,000 patient bed days since November 2005.

Graph EP 30 EO – 2: VUMC



Laser Safety

Background

During 2008, the risk assessment and error management process identified deficiencies associated with Laser Safety. These identified deficiencies had the potential to compromise safety for patients and staff. EOC tours are routinely conducted in areas where Lasers are used.

Approach

A collaborative team was assembled to review the information and develop and implement an action plan.

Participants

The team included representatives from: (Nurses were key representatives from all of the areas represented)

- Perioperative Services
- Risk Management
- Environmental Health and Safety
- Center for Clinical Improvement
- Vanderbilt Medical Group (clinics)

Outcome

The resulting action plan included designation of a facility Laser Safety Officer (specially trained nurse) responsible for oversight of the program. Since appointment, the Laser Safety Officer has inventoried all laser equipment at Vanderbilt facilities (on-campus and off-site), developed standard operating procedures for the equipment, re-established the Laser Safety Committee, and revised all of the laser safety policies. The Laser Safety Officer is a fully participating member of the VUMC Safety Committee and the Environment of Care Survey Team. Our Laser Safety Officer is Moeseval E. Moralde RN, CNOR, BSN, MA Nursing.

Culture of Safety

Source of Evidence 31

Describe and demonstrate how the organization uses a facility-wide approach for proactive risk assessment and error management

(Please also refer to EP 28 which also addresses some of the ways that VUMC uses a facility-wide approach for proactive risk assessment and error management including: VERTIAS, Tracer Rounds, PYXIS Medication Administration and ADMIN RX (Bar code scanning), VUMC Safety Officer and Department)

(Please also refer to Organizational Overview 3 under Organization Quality Plan for copies of the QPI and Annual Patient Safety Report which have a comprehensive list of patient safety/quality initiatives for VUMC)

Overview

Please refer to the *Blueprint for Quality – VUMC – 2010 - in Organizational Overview Question 3. Blueprint for Quality* is the comprehensive plan for the responsibility for quality and safety by the Governing board members, faculty, physicians and nurse leaders, senior executives, quality management professionals, managers, and direct care staff that comprise Vanderbilt University Medical Center. Produced from stakeholder input, it outlines our investment and strategies for patient safety, quality improvement, and clinical effectiveness as part of the culture of Vanderbilt. The Nursing Quality Plan also located in Organizational Overview Question 3, is in direct congruence with the Medical Center *Blueprint for Quality*.

Please also reference *EP 32* which includes information that is in line with the information in this question.

Nurses Response to Recent Safety Survey

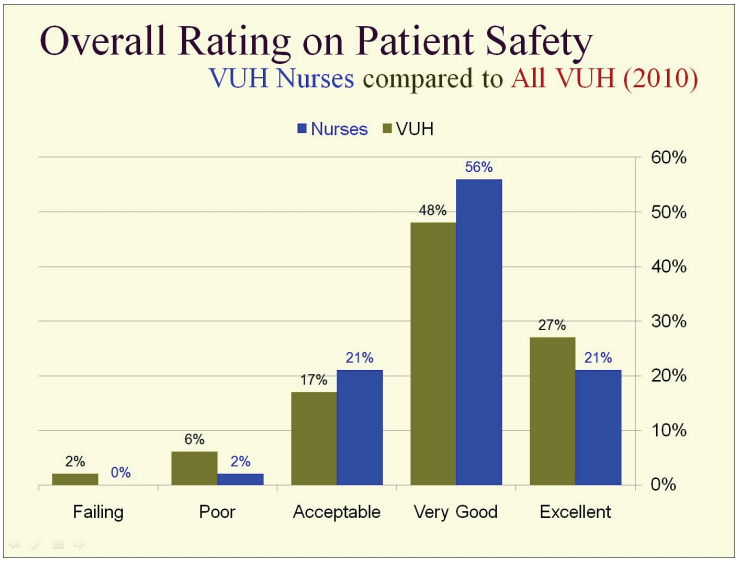
VUMC recently administered the Agency for Healthcare Research and Quality (AHRQ) Safety Climate Survey. Based on the 12 dimensions of safety, there were 42 statements about the organization to be rated and opportunity for comments. The surveys for each of the entities were slightly different. The results are so new/recent that we are still analyzing the results to determine what our next steps would be.

Of the total 2,207 responses to the survey, 871were nurses. Each entity receives their own data which improves our ability to involve staff through our shared governance processes to develop action plans. In addition, each unit/area will be able to see their specific results

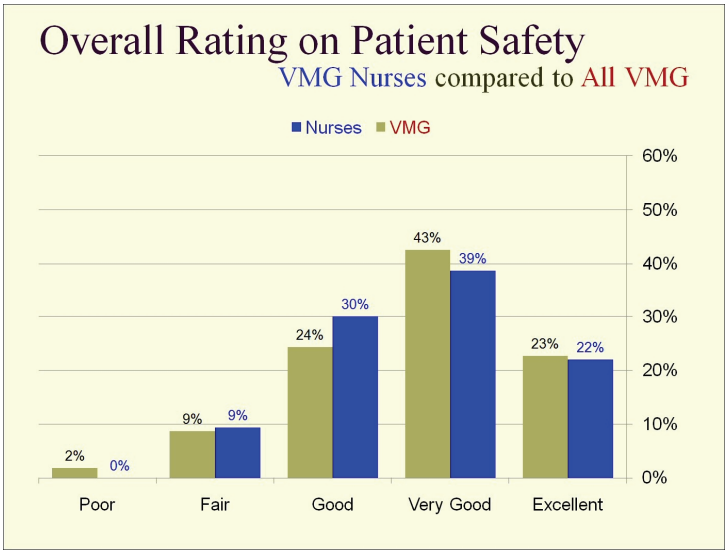
online. We look forward to the continued analysis of this important information and the improvements that might result from the data.

Preliminary results below for nursing per entity:

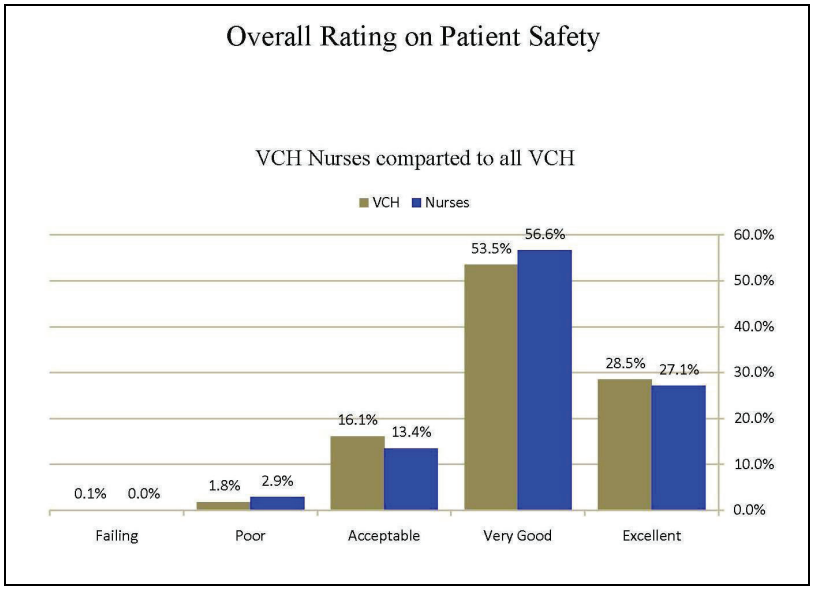
Graph EP 31 – 1: Overall Rating on Patient Safety VUH Nurses (RN) compared to All VUH (2010)



Graph EP 31 – 2: Overall Rating on Patient Safety VMG Nurses (RN & LPN) compared to All VUH (2010)



Graph EP 31 – 3: Overall Rating on Patient Safety VCH Nurses (RN) compared to All VUH (2010)



VUMC Approach to Proactive Risk Assessment and Error Management

The goal of proactive risk assessment and error management is to reduce the likelihood of future incidents that have the potential for injury, accident, or other loss to patients, staff, visitors, and facility assets. VUMC has a formal process for managing this requirement so that it is not just a matter of compliance but an ongoing means to improve safety and quality within the environment of care. Nursing staff are core participants in all facets of this process as committee and team members, consultants, and advisors.

Safety Committee (to become the Quality and Patient Safety Council)

A proactive interdisciplinary group participates fully in risk assessment activities through membership on the VUMC Safety Committee *(committee and membership information provided in Organizational Overview Question 15).* Membership includes the following groups:

- Patient Care (Nursing) representatives from VUH, MCJCHV, VPH and VMG
- Vanderbilt Environmental Health and Safety (VEHS)
- Risk & Insurance Management
- Clinical Engineering
- Vanderbilt University Police Department
- Occupational Health
- Plant Services
- Infection Control and Prevention
- Accreditation & Standards
- Environmental Services
- Emergency Preparedness
- Pharmacy
- Central Supply
- Patient Care Services
- Perioperative Services
- Executive Administration

Representatives from each area responsible for assessing hazards, collecting data, and analyzing and reporting identified safety issues to the VUMC Safety Committee. Additionally, other safety-related committees and subcommittees provide information to the VUMC Safety Committee. The risk assessments from the respective departments and/or committees include a proactive evaluation of the impact of buildings, grounds, equipment, occupants, and internal physical systems on patients and public safety.

Environment of Care Survey Team

Under the auspices of the VUMC Safety Committee and VEHS, the Environment of Care Survey Team conducts environmental rounds to identify environmental deficiencies, hazards, and unsafe practices. This interdisciplinary team includes:

- Nursing
- Administration
- Infection Control and Prevention
- Vanderbilt Environmental Health and Safety
- Accreditation/Standards
- Pharmacy

Environment of Care Hazard Surveillance tours are conducted on a schedule compliant with Joint Commission EC standards: at least every six months in clinical areas and annually in areas where patients are not served. The EOC hazard surveillance audit tool includes risk indicators for all facets of the Environment of Care: general safety, utilities, staff education, equipment, emergency preparedness, infection control, patient safety, hazardous materials and wastes, security, and fire safety. The data collected from the surveys is used to assess the facility's compliance and relative risk for various health, safety and regulatory issues. The aggregate data from the tours is reviewed by the EOC Survey team and the VUMC Safety Committee and communicated to the VUMC Leadership on a routine basis. Team members meet at least every other month to evaluate the results of the tours, review trends and patterns, and make recommendations for process improvement.

Outcome

The use of risk-assessment processes triggers organizational linkages with other aspects of the safe environment program. For example, a proposed change may indicate a need to create or revise existing safety policies and procedures; additional hazard surveillance in the areas affected; safety orientation and education programs; and safety performance improvement monitoring. Identified risks are reported to the VUMC Safety Committee to coordinate the impact of proposed changes with other aspects of the VUMC safety program.

An example

of an improvement process recently identified and managed through this process (as detailed above) is decentralized sterilization. Several of VUMC's newly acquired off-site clinics use table-top autoclaves to sterilize medical instruments. Nursing staff from Infection Control and Prevention and Perioperative Services/Central Processing worked with VEHS and the EOC

Survey Team to:

- Train the EOC surveyors about the core principles of instrument disinfection and sterilization

- Develop survey indicators to assess the disinfection/sterilization processes at these clinics

- Develop an initial and annual training program for staff performing high level disinfection and sterilization

Associated VUMC Policies Safety Program, SA 10-10.01 and Environment of Care Monitoring, SA 40-10.03 are located in OO 20, Environment of Care. Samples of Minutes include the following exhibits:

[*EP13-Exhibit A-1-VUMC Safety Committee Minutes 9-24-09, EP13-Exhibit A-2-Construction Safety Committee Minutes 9-9-09, EP31-Exhibit A-3-EOC Survey Team Meeting Oct 2009, EP31-Exhibit A-4-EOC Inpatient, EP31-Exhibit A-5-2009 Second Quarter Report-EOC Hazard Surveillance Survey*]

Event Reporting

We use event reporting to proactively improve the safety and quality of patient care. Event reporting provides us the opportunity to assess a particular situation for potential changes to prevent further problems. Particularly, "near misses" are viewed as an opportunity for prevention. Strategies and action plans are created through root cause analysis or trend analysis from the reporting. Event reporting has more than quadrupled in the last three years since we implemented the VERITAS reporting system, with 20-25% of events reported as "near misses".

Until 3 years ago, occurrence event report was manual with pen and paper. The hard copy paper report was submitted to the manager who investigated the event. The manager added the follow-up information and submitted the paper copy to Risk Management. Then with the collaboration of nursing, an electronic reporting system was implemented. Education for the electronic system revolved around: catching all events, even "near misses", event reporting analysis and trends support system and process changes and event reporting is not punitive.

Table EP 31 – 1: Increase in Overall Event Reporting with VERITAS

Year	Percent Increase in overall event reporting from previous year
2007	_
2008	55%
2009	47%
January through June 2010	Total is > all of 2007

NOTE: Total event occurrence reporting in 2009 was 128% more than in 2007

Operations policy 10-10.24 outlines our event reporting [*EP31-Exhibit B-1-Policy OP 10-10-.24*]. Our electronic system, VERITAS, was developed by an interdisciplinary team which included: nursing, pharmacy, physicians, administration, educators and respiratory therapists. We have a "non-punitive" reporting culture and the system is set to capture "near misses" and unprofessional conduct events.

Error management is conducted by an interdisciplinary team, both on an individual event level and through organizational trending. Each individual event is reviewed by the designated department manager. The event is screened for: individual/departmental education/peer review needs, unprofessional conduct, any need for follow-up with a patient, human resources action, referral to a residency chair/medical director/other leadership (in the case where an event involves multiple disciplines.

Risk and Insurance Management which has five nurses on staff who review every event for: potential regulatory reporting, the need for a root cause analysis (RCA), potential litigation, patient harm, and/or unprofessional conduct. Risk Management nurses include:

Table EP 31 – 2: Risk Management Nurses

Sandy Bledsoe, RN, ARM, CPHRM	Director, Risk and Insurance Management
Diane Moat, RN, JD	Assistant Director, Risk and Insurance Management
Kristin Gastineau, RN, BSN	Clinical Risk Coordinator
Betty Barrow, RN	Professional Liability Coordinator
Christie Schenk, RN	Clinical Risk Coordinator, VCH

Each event is investigated confidentially when they involve potential litigation or patient harm. In addition, specific events are automatically reviewed by other disciplines, for example, if equipment if involved in a specific event, Clinical Engineering automatically receives and reviews the event. If an event involves medications or an adverse drug event, a pharmacist automatically receives and reviews that event. Depending on the event category, i.e. falls, medication event, etc. the VERITAS questions are specific to that category of event. [*EP31-Exhibit C-1-VERITAS Screen*]

External Reporting

Data from key reporting initiatives is used in order to proactively assess potential risks to the organization. For example, the Patient Safety Indicator data released by the Agency for Healthcare Research and Quality (AHRQ) and the National Database of Nursing Quality Indicators (NDNQI) are used within our quality pillar reporting structure (organizational goals) to ensure that we are aware of areas for further review. Information from these systems serves as pointers to the organization for focused review and proactive assessment. This is built into the structure for patient safety officers and is reported through the Quality Performance Indicator Report.

Failure Mode Effect Analysis (FEMA)

Each year we choose a high risk process that represents either high volume or high risk. This process is facilitated by the Center for Continuous Improvement (CCI) with appropriate representative staff. The process is collaborative and requires input and feedback from a variety of interdisciplinary stakeholders. Below is an example of the model that we use to move from analysis through solution design into evaluation. This process is also used when we

have an event with or without consequences. FEMA provides us a process to be able to analyze every aspect of care delivery to ascertain steps to take to prevent failure in the future.

Table EP 31 – 3: FEMA Model Template

Failure Mode and Effects Analysis **Safe Blood Administration** **Vanderbilt University Hospital** **Nashville, TN** ***Goal: To reduce the RPN for blood and blood product administration by % in 1 year***	**Phase One-Assessment**						**Phase Two: Design Solutio**		**Phase Three: Evaluation Compone**
Process Date:									
Step	**Description**								
Failure Mode	**Causes**	**Effects**	**Occ**	**Det**	**Sev**	**RP**	**Design Solutions**	**Resource Factor**	**Evaluation Factor**
Step	**Description**								
Failure Mode	**Causes**	**Effects**	**Occ**	**Det**	**Sev**	**RP**			
Step	**Decription**								
Failure Mode	**Causes**	**Effects**	**Occ**	**Det**	**Sev**	**RP**			
Step	**Decription**								
Failure Mode	**Causes**	**Effects**	**Occ**	**Det**	**Sev**	**RP**			

FEMA Model Example 1

An example of the use of the FEMA model is shown in the supporting documents. This event included an adverse outcome for a patient who had received a “routine” procedure in one of our clinics. The nurses involved in the care of the patient were essential in identifying different causes and events that led to this particular situation. They also identified gaps in the processes and where improvements could be made.

The Center for Clinical Improvement (CCI) assisted the staff nurses with articulating these gaps and presented this information to the nursing and physician leadership. The nurses participated in the implementation of changes and the audits to determine if the corrective action steps were taken and if they made a difference.

The ability to participate in the identification of process gaps and corrective actions empowered the nursing staff to be part of the solution. In this particular situation, the nurses were part of the identification of gaps and necessary actions as well as implementing these changes. [*EP31-Exhibit D-1-RCA CAP ver 7-2-09 (final 7-2-100)*]

FEMA Model Example 2

In supporting documents we show another example where an analysis led us to take the possible solutions to the simulation lab. Once a potential solution is reached for a problem, using the simulation lab for testing before developing an implementation plan has proven to be helpful. The particular issue addressed was blood administration. Several vendors were contacted to see if they had a product that would meet our needs. After the choices were narrowed to a couple, scenarios were played out in the simulation lab to test the solutions. [*EP31-Exhibit D-2-PPI Usability Results*]

Specific Nursing Structures and Processes

Vanderbilt is such an interdisciplinary driven organization that the separation of nursing from the other disciplines to address proactive risk assessment and error management is a challenge. All of the processes and committees outlined/described above have nursing imbedded in them. Proactive risk assessment and error management is best accomplished with an interdisciplinary approach.

That being said, specific nursing committees (which are interdisciplinary) and processes for risk assessment, error management and patient safety are defined in more detail in *Exemplary Professional Practice Question 32.* Below is a summary of specific nursing structures that help to address proactive risk management and error management.

Table EP 31 – 4: Nursing Structures addressing Risk and Error Management

Clinical Practice Committee	Addresses clinical practice issues and develops and approves clinical practice policies which are evidence-based.
Nursing Quality Council	Organization-wide group that addresses patient safety and quality for all of nursing
Nursing Quality Data Committee for VCH	Specific to Children's to coordinate and monitor the collection of nursing sensitive indicators and analyze for trends, potential need for resources and response.
Entity specific quality councils	Address issues specific to particular patient

(Membership in OO 15)	populations, i.e. adults, children, ambulatory, psychiatry
Patient Care Center Nursing Quality Consultants	For each patient care center – provide oversight for specific quality/patient safety initiatives
Area specific (unit/clinic/department) councils	Provide oversight and address specific quality/patient safety initiatives for specific areas/patient populations at the point of care level
Indicator specific task forces/committees, such as falls, pressure ulcer prevention, etc. addressed throughout this document	Address issues directly related to a specifically identified patient safety and/or quality issue *(examples provided throughout document)*

Examples

Clinical Practice Committee

Examples of the initiatives that pharmacy has covered relating to patient safety and quality are given below. Minutes of the meetings are provided as supporting documents.

1. Issues of workflow around high alert medications; such as sliding scale insulin for two RNs verification process.
2. Noninvasive Ventilation Guidelines using BiPAP: BiPAP is not to be used outside the critical care areas in acute respiratory situations.
3. Intubation Medication Kits: Determined access areas that are appropriate to stock intubation kits and pharmacy is now responsible for stocking the kits in the areas so they will be available at all times for emergency or planned intubations.
4. Labeling of Laboratory Specimens: RACIF (Laboratory) ID Identification and tracking of patient specimens through labeling.
5. Workflow around medication labeling, specifically medications that are not used immediately.

[EP31-Exhibit E-1-CPC Minutes 4-8-10, EP31-Exhibit E-2-CPC Minutes 7-8-10]

Nursing Quality Committee

Approval of Changes in Falls Initiatives

New recommendations from the Falls Committee were presented to the Nursing Quality Committee for approval to go to the Nursing Executive Board for roll-out. Work included:

- Changing fall risk assessment tools
- Rolling out new prevention program for standard and high risk interventions
- Initiate post falls management program
- Revisions of falls policy
- Adding questions about falls and interventions to Rounding Tools
  (State of Falls information is in OO 23 and EP 32 EO)

[*EP31-Exhibit F-1-01-07-09 NQC Minutes-Falls Initiatives, EP31-Exhibit F-2-presentation-Falls Committee 01-07-09]*

Nursing Quality Data Committee for VCH

New to VCH in August 2010, this group is bringing representatives from each unit together to gain consensus on data collection methods and begin to gain agreement on priorities and approach. [*EP31-Exhibit G-1-Nsg Quality Council-VCH*]

Perioperative "Safety & Back to Basics" Initiatives

Perioperative nursing leaders presented the work of the entity specific Perioperative Quality Team to the Nursing Quality Council for information and learning. The initiative is Every Patient, Every Time. The work centers around the national effort to improve quality and patient care by reducing surgical morbidity and mortality by 25% by 2010.

Summary of examples of accomplishments from this work (August 2010):

- Interdisciplinary teams developed to initiate changes in Periop
- Back to Basics
- Eliminated flash sterilization

- Adherence to use of surgical scrub
- Skin disinfection/application of surgical skin prep
- Observing for break in sterile technique is "everyone's role"
- OR Attire (proper procedures)
- Environmental cleaning of OR suites
- Reducing the risk of pressure ulcers in OR
- Use of pressure redistribution mattresses for all adult OR beds
- Wound packing information to be in SBAR
- Decreased OR Traffic
- Measures for UTI prevention

(Perioperative Quality information is in OO23 and EP 32 EO)
[*EP31-Exhibit H-1-03-04-09 NQC Minutes-Periop Initiatives, EP31-Exhibit H-2-Presentation Every Patient Every Time*

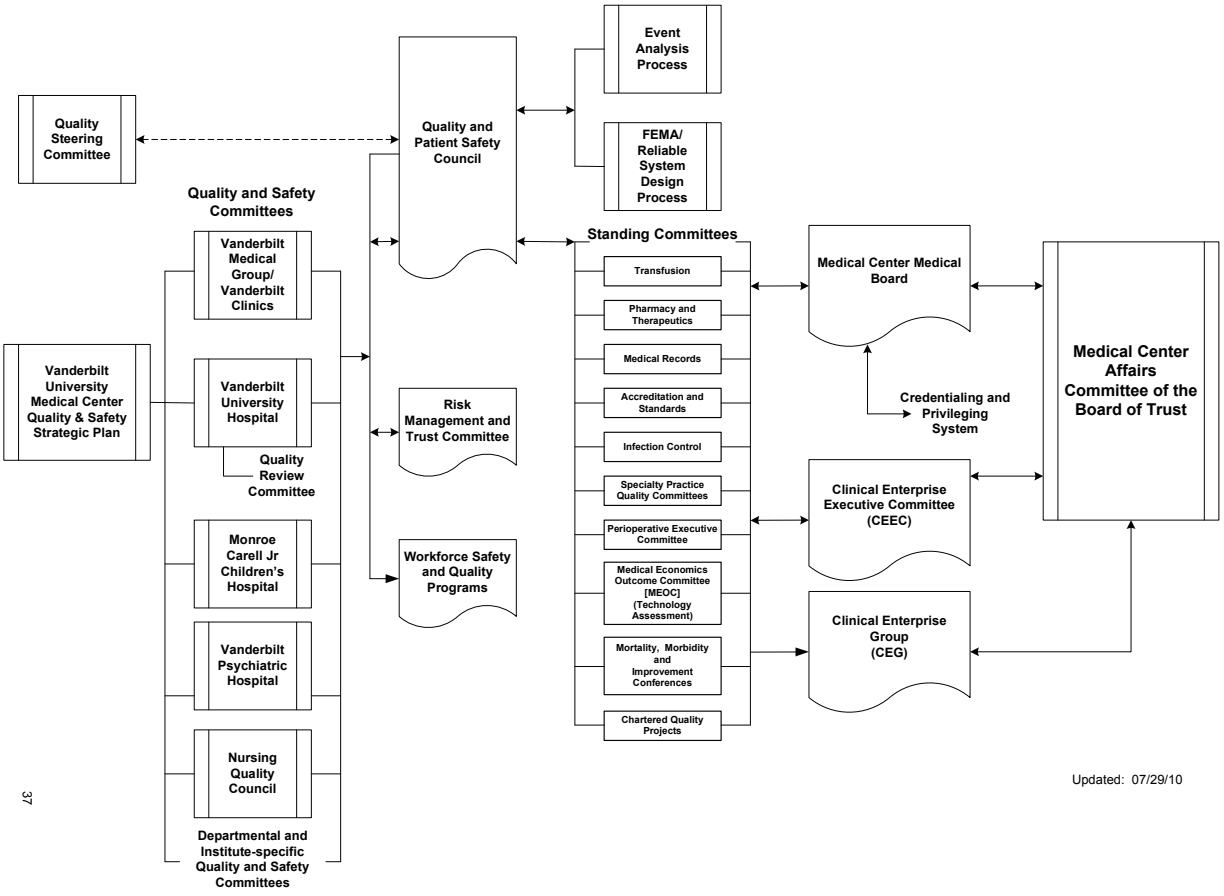
Organization-Wide

As a supporting document we have included a report of the patient safety/quality initiatives for VUMC.

Below is a chart which shows the Clinical Enterprise Quality and Safety Accountability and Reporting Flows. Nursing is involved at all levels as has been discussed and demonstrated.

Chart EP 31 – 1: Vanderbilt Clinical Enterprise Quality and Safety Accountability & Reporting Flows

Vanderbilt Clinical Enterprise
Quality & Safety Accountability & Reporting Flows



Culture of Safety

Source of Evidence 32

Describe and demonstrate the nursing structure(s) and process(es) that support a culture of patient safety.

Please also refer to Exemplary Professional Practice Question 31. Organizational Overview 15 has the Nursing Quality Plan.

In the 2008 NDNQI RN Nursing Satisfaction Survey, VUMC nurses scored higher than other academic medical centers on questions related to quality of care. Our current HR Solutions Staff/Satisfaction Survey does not have questions related to quality of care. (*Detailed information for individual unit/area satisfaction information is in OO 12 and EP 3 and EP 3 EO.)* See overall scores below.

Table EP 32 – 1: VUMC 2008 NDNQI RN Satisfaction Survey for Perceived Quality of Care

National Database of Nursing Quality Indicators ®
2008 RN Survey Report With 2008 Comparison Data

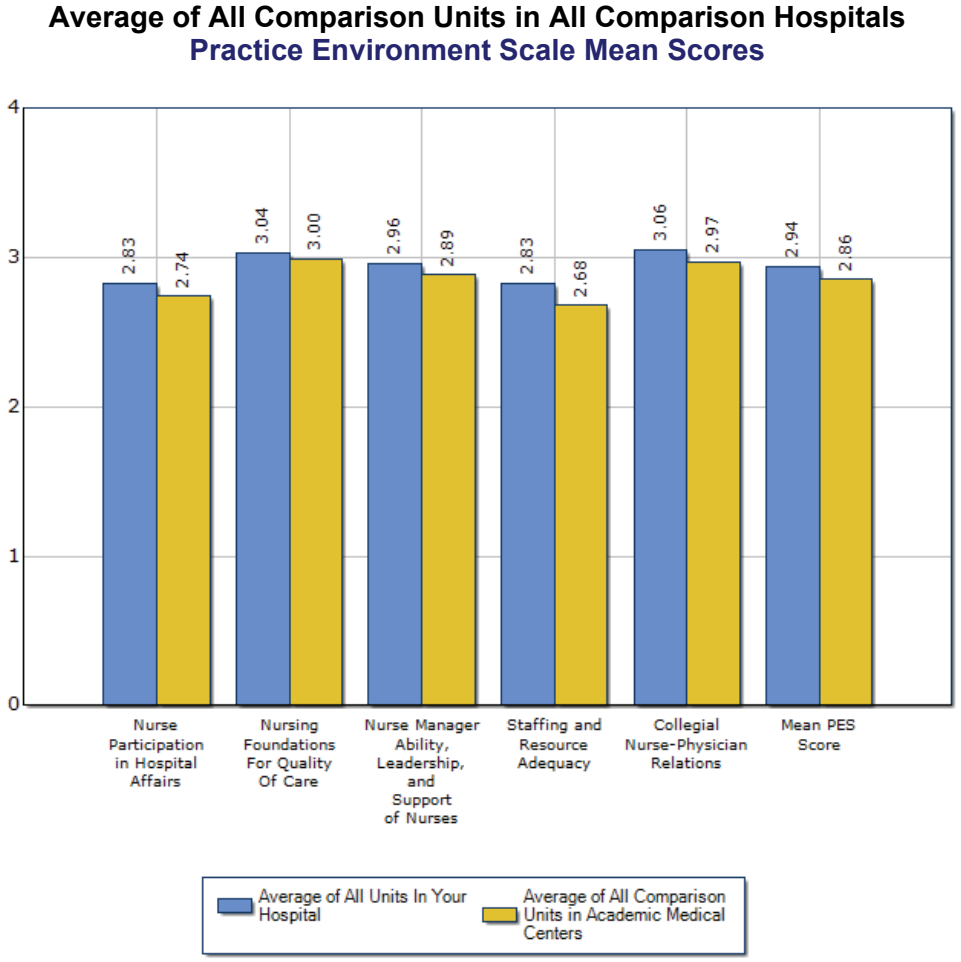
Average of All Comparison Units in All Comparison Hospitals

Unit Perceived Quality of Care

	Mean Rating Last Shift Worked	Mean Rating In General	Mean Change Over Past year
	1 = poor, 2 = fair, 3 = good, 4 = excellent		-1 = deteriorated 0 = unchanged +1 = improved
Average of All Comparison Units in All Comparison Hospitals			
Average of All Units In Your Hospital	3.60	3.60	0.35
	Mean Rating Last Shift Worked	**Mean Rating In General**	**Mean Change Over Past year**
	1 = poor, 2 = fair, 3 = good, 4 = excellent		-1 = deteriorated 0 = unchanged +1 = improved
National Comparative Information - Academic Medical Centers			
Mean	3.42	3.43	0.27
S.D.	0.31	0.33	0.31
10th Percentile	3.00	3.00	-0.14
25th Percentile	3.21	3.21	0.08
50th Percentile (median)	3.43	3.45	0.29
75th Percentile	3.64	3.67	0.50
90th Percentile	3.80	3.85	0.65
# of Units[2]	2,062	2,062	2,062

Graph EP 32 -1: VUMC 2008 NDNQI RN Satisfaction Survey for PES including Foundations for Quality

National Database of Nursing Quality Indicators ®
2008 RN Survey Report With 2008 Comparison Data



"Point of Care"

At the point of care level, data is reviewed by the unit/area Unit Boards or Quality Committees. They review, analyze and monitor their data based on selected benchmarks. Initiatives are driven in multiple ways and examples include: organizational (ELEVATE Goals) *(TL 1),* national patient safety/quality goals, specific event analysis issues, targeted nurse sensitive indicators and specific patient population indicators. Unit Boards or unit level committees are supported to design and implement evidence-based projects and research for their specific patient populations. See examples throughout this document and in *NK.*

Unit Managers and staff (often driving the interdisciplinary team) take responsibility for patient safety and quality outcomes in their areas. As discussed in *EP 7,* they have multiple resources to assist them in review of evidence for practice issues, data collection, analysis, monitoring and implementation of change. Managers have various means for monitoring, receiving and obtaining data. Examples include:

Table EP 32 – 1: Resources to Review Data

Dashboards **Clinical Workstation Screens**	Real time quality/safety measures alert system that appears on the Clinical Workstation Screens in the form of a green, yellow or red Dashboard measurement. Can be customized for each clinical area and/or patient population. Real time Alerts regarding completion of items per patient such as: Braden Scores, Falls assessment and prevention measures implementation, completion of admission H&P, VAP Bundle charting, etc. Units can address issues in real time regarding documentation and patient care. [*EP32-Exhibit A-1-Whiteboard Dashboard*]
"FIX it NOW Reports"	Electronic Reports that the Manager and/or designee can run for their specific areas. Reports that can be used to correct gaps in documentation around items like restraints, pain assessment and reassessment, falls and hourly vital signs. These reports can also be customized to unit and/or patient population. [*EP32-Exhibit B-1-Fix it Now Sample]*
SCI-Health Electronic Data	SCI- Health is a data warehouse of collected quality indicator data. Managers and designees have access to look at data for their areas (various ways) and run different trend and correlation reports. Examples of indicator data in SCI-Health: • Core Measures (Pneumovax, AMI, Smoking Cessation, etc) • Falls • Pressure Ulcers Data • Hand Hygiene • Blood Transfusion Bundle • Hours per Patient Day (HPPD) • Many more [*EP32-Exhibit C-1-Example from SciHealth*]
NDNQI Database	Managers have access to NDNQI for trending reports
Infection Control	Monthly reports on rates
VERITAS Reports	Managers receive reports for their areas and trending reports

Environment of Care Surveys	At minimum 2 times per year and can be more frequent if specific issues arise
Ad Hoc Reports	Per request of team and/or specific initiative
PRC Data	*Data in OO26 and discussed in EP 35 and EP 35 EO*. Patient Satisfaction Data which could lead to identification of issues in team work, handovers, etc. Managers have access to electronic PRC data in real time.

Entity Specific Level (Boards, Councils, Committees, Task Forces)

At the entity level such as Perioperative Services, Children's, etc., indicators specific to their particular patient populations are addressed. Utilizing the same support systems and resources as discussed previously, they address issues for their patients.

Indicator specific committees/task forces

In collaboration with unit and entity teams from across the organization, targeted groups work on behalf of nursing and the organization on specific indicators. Examples include: falls, pressure ulcers, restraints, etc. *(Indicator specific results reported in OO 23, EP 32 EO and throughout this document)*

Organization Wide Nursing Quality Council

The Nursing Quality Council drives quality improvement in nursing by:

- Establishing, implementing and monitoring a nursing quality improvement plan that is patient-focused and multidisciplinary and is integrated with the Medical Center Quality Improvement Plan.

- Facilitating collaboration with other disciplines in coordinating quality monitoring and improvement.

- Working with the Clinical Practice Council and the Nursing Research Council monitors all clinical nursing practices to ensure compliance with standards and recommends new practices or practice standards based on research based evidence or need.

- Evaluating the effectiveness of quality improvement initiatives based on accreditation and regulatory standards, nursing determined benchmark data and metrics which are pre-determined by nursing.

- Working with Information Technology assesses and recommends data bases and tools that support real time data reporting and monitoring with changes in an expedient timeframe.
- Providing guidance and recommendations to clinical nursing areas regarding the measurement of quality initiatives and performance activities including, but not limited to tool development, data analysis and recommendations for improvements.

- Reviewing, coordinating and prioritizing quality activities in conjunction with nursing and organizational strategic plans and goals.

- Facilitating prioritization and approval for performance improvement activities in relation to resource needs and availability.

- Monitoring the work of all committees (nursing and multidisciplinary) that are overseeing aspects of nursing quality.

- Providing education and direction to the Vanderbilt organization regarding nursing quality initiatives, plans and expectations.

- Approving and maintaining oversight of all nursing quality data that is reported both internally and externally.

[*EP32-Exhibit D-1-VUMC Nursing Quality Charter-July 2010, EP32-Exhibit D-2-Nursing Quality Council Members]*

Clinical Practice Committee

CPC supports all Vanderbilt clinical services as an approving body for house-wide clinical policies, guidelines, and protocols ("policies"). The committee serves as an advisor group and clearing house for coordination of evidence-based practice and policy development to meet standards for patient safety and quality care. CPC provides oversight for changes based on required response to outside regulating agencies and organizations. [*EP32-Exhibit E-1-Clinical Practice Committee, EP32-Exhibit E-2-Clinical Practice Charter 2006]*

Data Flow

Data flows in several different directions. Patient safety/quality issues/concerns may flow up from the individual area unit/clinic/department councils or information can come from

any of the other patient/quality structures and processes. Issues can be addressed at the point of care or entity level or the issue can be taken up through the system for resource and/or monitoring needs identification.

With a defined presence throughout the organizational structure for patient safety/quality, nursing plays an important role in overall initiatives for the culture of patient safety/quality.

Examples

The following examples showcase how the nursing structures and processes support a culture of patient safety. Nursing has implemented and either initiated, chaired or served on committees/task forces that brought these safe practices to the patient.

Competencies

Competency measurement for all clinical staff (licensed and unlicensed) is an important part of nursing processes for creating a culture of patient safety. The nursing competency program has two parts: 1) organizational competencies are identified for all clinical staff and 2) units/clinics/departments add patient/process/procedure specific competencies for their areas. Each entity has a competency template, which contains the identified organizational competencies. Each entity customizes the templates and then they are further customized to the unit/clinic/department level.

We have four organizational nursing competencies identified for 2010:

- Safe response in emergent situation
- Communication
- Prevention of Harm to Patients
- Prevention of Harm to Staff

Age and population specific components of care are incorporated into all competencies.

Competencies are identified in consideration of:

- New procedures, equipment, initiatives, policies, patient populations
- Changes in procedures, equipment, initiatives, policies, patient populations
- High-risk job skills and responsibilities
- Problematic areas identified through data collected by QI/PI indicators, patient and staff surveys, VERITAS II reporting system and/or any other evaluation process.

Competency assessment can take many forms however, observation/demonstration in some way is critical. Education may occur per PowerPoint presentation or self-learning module. Check-off sheets and/or testing are used in the process.

Annual competencies are completed prior to April evaluations. For issues that arise in the course of the year, then needed competencies are identified and the process is initiated. All competencies are documented per our electronic annual evaluation system (VPES) and in our Learning Management System (LMS).

Each year we asses our competency program related to the need for additions and/or changes based on the above considerations. Managers and educators are responsible for tracking that all clinical staff complete assigned competencies. [*EP32-Exhibit F-1-Organizational Nursing Competency Plan, EP32-Exhibit F-2-Licensed Competency Document Template-VUH*, *EP32-Exhibit F-3-Chest Tube Competency Questions, EP32-Exhibit F-4-Unit Care Partner Competency Document, EP32-Exhibit F-5-Licensed Competency Document, EP32-Exhibit F-6-Check Off Form for Oral Care Without Answers*]

Nursing Model Tactics which include: (hourly rounding, bedside shift reporting, individualized patient plan of care, and patient discharge phone calls)

Nursing Model Tactics have been implemented on all units and quarterly reports are given to the Nursing Quality Council by entity. Each area may have a slightly different version of forms they use. Area based Unit Boards and/or Quality Committees are responsible for the oversight of this work. [*EP32-Exhibit G-1-11-04-09 NQC Minutes VUH-VCH Nursing Model Tactics, EP32-Exhibit G-2-11-04-09 Nursing Model Tactics Presentation VUHVCH]*

Hourly Rounding

Initiated by nursing, hourly rounding places a care provider at the bedside of each patient minimally each hour. During these rounds, the staffs assess a series of patient needs, including toileting, call light within reach/other safety factors and pain and position/reposition (pressure ulcer prevention). Individual units also assess other needs specific to their patient population. [*EP32-Exhibit H-1-Sample Rounding Log VCH]*

Bedside Report

Initiated by nursing, “bedside report” places the care-givers at the bedside for any change of shift or other report with the patient and family included as appropriate. The report allows the two care-givers to address all aspects of care – like checking IV fluids, tracing the IV lines, pain and education needs, fall and pressure ulcer risk, etc. Again, individual units add

need specific report items for their patient populations. [*EP32-Exhibit I-1-Bedside Report Template VCH7, EP32-Exhibit I-2-Bedside Reporting with OPC Nursing Summary 2010, EP32-Exhibit I-3-NMT Bedside Report Script]*

Patient Hand-Over

Patient hand-over outline a specific list of indicators and sequence of reporting from care-giver to care-giver when a patient changes services, such as from recovery room to patient room, Emergency Room to patient room. Handover communication was defined as one of the 2010 pillar metric goals, which provides a structure for standardized roll out across the organization. Initially, an interdisciplinary task force was chartered to define standardized communication across the enterprise. Based on previous work, the mnemonic SBAR (Situation, Background, Assessment, and Recommendations) was chosen due to its tailorability to specific handover needs. Global handover education was adapted with input from direct care providers and further *Details and examples provided in EP 16.*

Accu-Dose Medication Administration

The pharmacy stocked medication/IV fluid dispensing system used organization-wide. This system provides medications in a patient dose system for additional safety. [*EP32-Exhibit J-1-MUSIC Committee Minutes 2010.01.27]*

Admin-Rx

An organization-wide electronic patient and medication bedside bar coding system for medication administration. There is a specific routine for scanning both patient's arm band and medication. Scanning rates are monitored and reported to nursing leaders. *(Information is reported in Exemplary Professional Practice 28 and 32 Empirical Outcomes)*

Universal Time-Out Protocol

Organization-wide protocol in which the healthcare team pauses to confirm that there is agreement regarding how they are proceeding, regardless of the setting - surgery site, X-ray or other. At the same time that we did organization-wide education for handovers, we also did mandatory education for Universal Protocol/Timeout. A Total of 5,326 staff and faculty completed the education. [*EP32-Exhibit K-1Univ Protocol Presentation, EP32-Exhibit K-2-CL 30.14.16Correct Patient Procedure Site Side]*

Fall Risk Identification and Prevention Program

Initiated by nursing, based on the color coding systems evidence in the literature, our fall risk patients have yellow blankets, socks and arm bands. This is in addition to the falls risk

assessment and other prevention measures. (*Please refer to EP 7 and 32 EO for full details on this program).* [*EP32-Exhibit L-1-30.02.09 Falls Prevention Program-09 Standards, EP32-Exhibit L-2-Falls Committee MEOC 1-13-09, EP32-Exhibit L-3-Falls Committee Minutes 12-17-2008, EP32-Exhibit L-4-Falls Implementation Group Minutes 12-17-08, EP32-Exhibit L-5-Falls Swat Meeting 11-10-08]*

Patient/Families as Partners in Safety

As is the platform for our Professional Practice Model, we have engaged with our patients and family members as partners in our efforts to provide a safe environment for their care. *(Detailed information provided in EP 1 and EP 4)* Examples include: Patient Admission Handbook, Family-Initiated Rapid Response Calls, Patients/Families in Rounds.

Hand Hygiene Campaign

As the evidence mounts about the risk of the spread of infection from caregiver hands, we have placed an emphasis on "Clean Hands", both from an awareness and resource standpoint. We have used education sessions, direct observations, signs and posters to remind staff and family of the importance of hand washing. We have also increased the numbers and locations of dispensers for the clean hands foam products. The motto, "Foam in, foam out" is an easy one to remember. [*EP32-Exhibit M-1-10.10.07 Hand Hygiene]*

Early Catheter Removal

Details presented in EP 32 EO and NK. Initiated by nursing, this program went house-wide after a nursing study in Trauma. Determining that nurses could initiate the early removal of Foleys within the boundaries of a protocol has decreased our catheter related urinary tract infections.

Transparency Around Performance

Public posting of unit-specific information related to safety/quality performance, such as, ___ days since a central line infection.

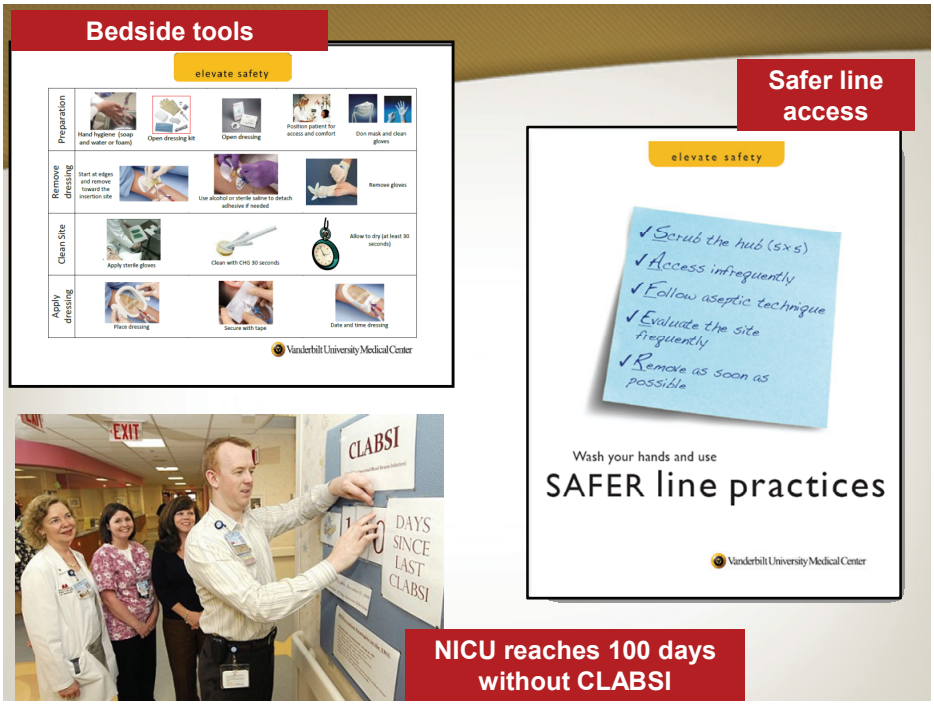
Examples

Quality Goes Public in VCH – Neonatal ICU

In May, 2010, Eric Sullivan, MSN, RN Clinical Educator for VCH, posted the number 100 on a bulletin board in the NICU. The unit had gone 100 days without a central line-associated blood stream infection (CLABSI). This number was something for the staff to be proud of, but they were apprehensive about the posting, the bulletin board was in a public place (public, meaning everyone who passes through the unit, staff/families/visitors, would see it). That

apprehension has decreased and the ownership of patient safety and quality has risen in the unit. This type of transparency is catching on around the Medical Center and driving change. *[EP32-Exhibit N-1 Article NICU Quality]*

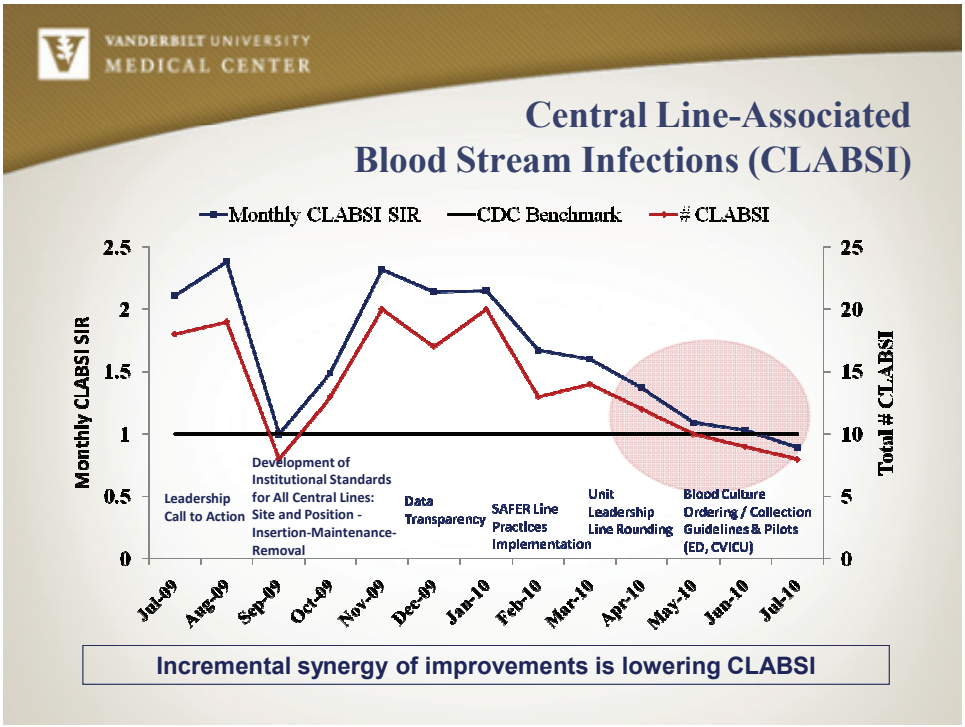
Table EP 32 – 2: Photo of NICU Quality Result Bulletin Board



Safer Line Practices

Based on evidence, the use of a "line bundle" is an initiative we have used to decrease central line associated infection rates. Several tools were developed to support the direct care staff in improving this process and include: Standards for Non-emergent Insertion and Management of Central Venous Catheters (CVCs); Safer Line Practices Poster (with pictures to guide staff through process which also has a blank space for ____ number of days since an infection; pictorial guide of step by step process; supporting policy; reminder posters for units. [*EP32-Exhibit O-1-Policy 30.07.02 CVCs, EP32-Exhibit O-2-CLABSI Unit Poster, EP32-Exhibit O-3-CVC dressing change, EP32-Exhibit O-4-CVC Management]*

Graph EP 32 – 2: VUMC Overall CLABSI Rate



Perioperative Area Hand Hygiene Practices

Initiated by nurses in the Medical Center East Holding/PACU area, this effort was in direct response to their hand washing rate being below the VUMC goal of 90%.

Table EP 32 – 3: Participants

	Department Role	Work
Diane Johnson RN, MSN	Director, HR/PACU/Throughput	Team Leader – Clinical Observer
Ann Benco, RN, BSN, MS, AORN	Nurse Educator	News developer – Clinical Observer
Cynthia Garcia, RN, BSN	Nurse Educator	Hand Hygiene Module creator – Clinical Observer
Kathleen Kelley, RN, APN	Nurse Educator	Poster Developer – wrote newsletter articles – clinical observer

Beth Keith, RN, BS	Charge Nurse	Clinical Observer
MCE Holding/PACU Unit Board		

Plan:

- An electronic educational Hand Hygiene Module was created and required for all perioperative staff (nurses, physicians, anesthesia and other staff)
- Posters with the moniker "Foam in – Foam out" were placed in each patient room
- Articles were published in the weekly education newsletter and the monthly periop newsletter (Perioperative Services Modus Operandi)
- Another education tool was created that showcased the National Safety Goals and Frequently Asked Questions (FAQ) about hand washing
- Observation tool and roster was used to have real time observations in the clinical areas with coaching as needed

[*EP32-Exhibit P-1-Hand Sanitizing, EP32-Exhibit P-2 Foam In Foam Out, EP32-Exhibit P-3-HR PACU Newsletter]*

Outcome:

Increase in the hand washing compliance from the 40th percentile to the 90th percentile

Table EP 32 – 4: VUMC MCE Holding/PACU Hand Hygiene Observations Report (Sci-Health)

Hand Hygiene – from Sci-Health Insight
Path: Hand Hygiene by Observation Location - VUMC : Vanderbilt University Hospital : MCE Holding/ PACU
Aug 31, 2010

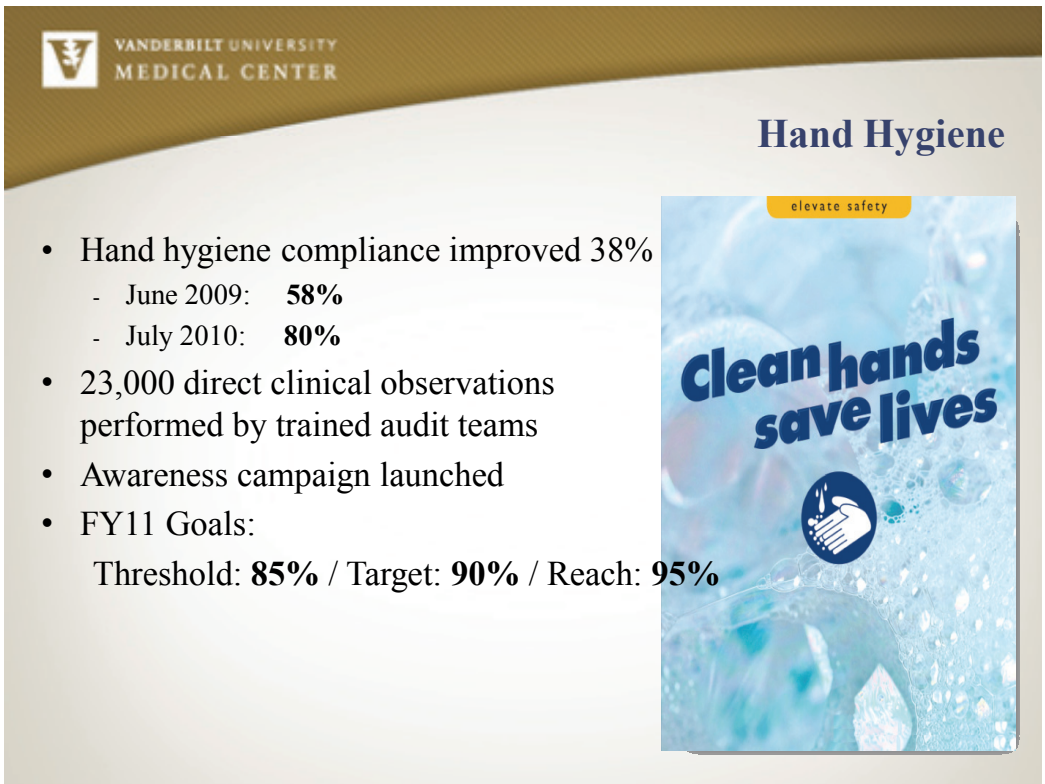
BY Period	Monthly Numerator	Monthly Denominator	Monthly Compliance Rate	Numerator YTD	Denominator YTD	Compliance Rate YTD	Threshold	Target	Reach
Nov 30, 2009	57	97	**59%**	57	97	59%	70%	80%	90%
Dec 31, 2009	86	107	**80%**	143	204	70%	70%	80%	90%
Jan 31, 2010	100	114	**88%**	243	318	76%	70%	80%	90%
Feb 28, 2010	66	79	**84%**	309	397	78%	70%	80%	90%
Mar 31, 2010	13	15	**87%**	322	412	78%	70%	80%	90%
Apr 30, 2010	19	20	**95%**	341	432	79%	70%	80%	90%

May 31, 2010	21	24	**88%**	362	456	79%	70%	80%	90%
Jun 30, 2010	19	20	**95%**	381	476	80%	70%	80%	90%
Jul 31, 2010	20	22	**91%**	20	22	91%	85%	90%	95%
Aug 31, 2010	17	20	**85%**	37	42	88%	85%	90%	95%

Hand Hygiene Program House wide

As one of the most important steps members of the healthcare team can take to prevent infection, VUMC launched a house wide hand hygiene campaign. One of the many facets of this program is direct observations. Clinical staffs are trained as observers and are assigned to units/clinics/departments other than their own. These direct observations are tallied per month in Sci-Health. This provides managers real time data that can be accessed per unit/area or entity. Below are examples of the Hand Hygiene data for VUMC house-wide along with two posters that we are using as part of our hand hygiene campaign.

Graph EP 32 - 3: VUMC Hand Washing compliance Rate (Aug 2010) (Sci-Health)



Graph EP 32 – 4: Compliance Rate

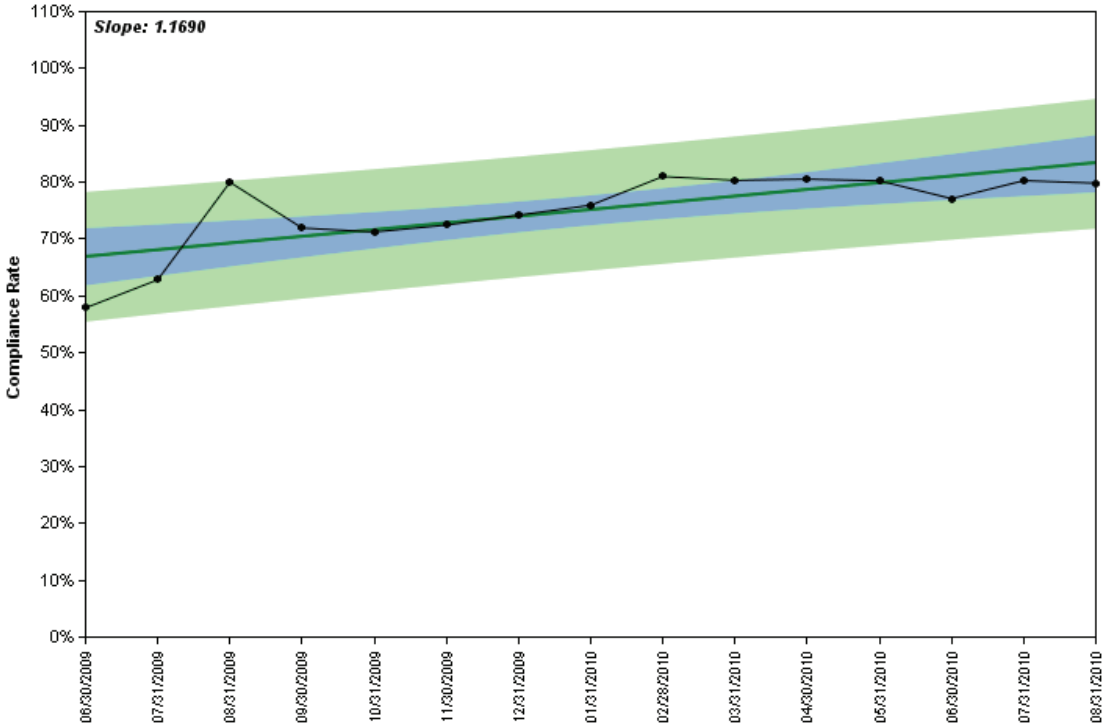
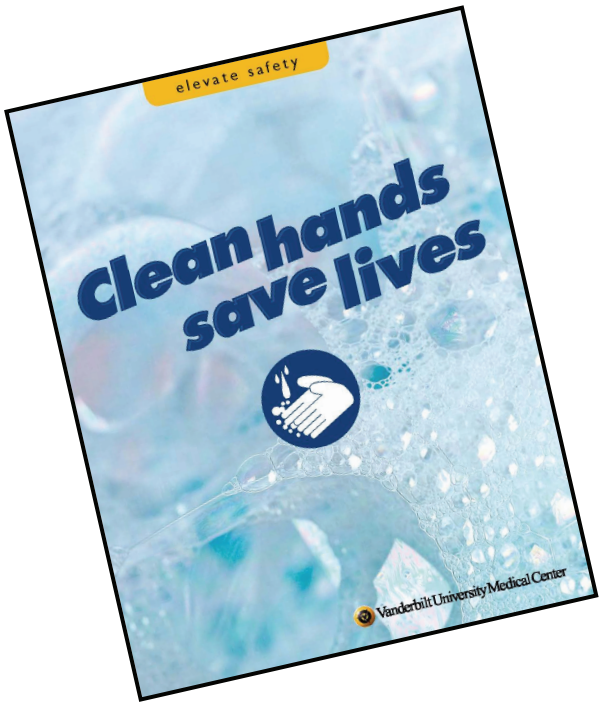


Table EP 32 – 5: Photos of Hand Hygiene Promotions



Culture of Safety

Source of Evidence 32 EO

That nursing sensitive indicator data aggregated at the organizational or unit level outperforms the mean of the national database used. Provide analysis and evaluation of data related to patient falls, nosocomial pressure ulcer prevalence and/or incidence, and two of the following:

- **Blood stream infections**
- **Urinary tract infections**
- **Ventilator-associated pneumonia**
- **Restraint Use**
- **Pediatric IV infiltrations**
- **Other specialty –specific nationally benchmarked indicators (use only for units for which the above does not apply)**

Please refer to Organizational Overview Question 23 for results for quality indicators for each area in folders by entity. The Organizational Quality Report for the past year is also included.

VUH

Catheter Associated Urinary Tract Infections (CAUTI)

Purpose/Background

Prevention of UTI was identified as a National Patient Safety goal for 2009 for Vanderbilt acute care. According to the literature, urinary tract infections account for 40% of all hospital acquired infections (HAIs) (1.7 million events) annually. 80% of the hospital acquired urinary tract infections are attributable to indwelling urethral catheters.

An interdisciplinary task force was formed to address this issue. Their purpose was to develop and support implementation of catheter-associated UTI prevention measures to decrease our incidence of CAUTI. The mechanism for accomplishing this was to define clinical guidelines for management of urinary catheters for Vanderbilt inpatient units.

Methods/Approach

The starting point would be the critical care units, where we have the most indwelling urinary catheter patient days.

Review of the UTI data and urinary catheter management in the intensive care units identified:

1. Internal variation in UTI prevalence

2. Areas with occurrence of UTI well above benchmark

3. Some unit-based initiatives and processes to encourage removal of catheters to try to decrease UTI rates.

4. Absence of organizational standards for insertion, maintenance, discontinuation, and documentation for urinary catheters.

Care and maintenance of indwelling urinary catheters is considered a basic nursing skill, often with little oversight or monitoring of performance to ensure compliance with best practice. In many organizations, changing perceptions that indwelling urinary catheters are a relatively benign intervention is a challenge.

Several of our units had implemented monitoring and maintenance practices, however, no organizational directives regarding urinary catheter utilization were available. The interdisciplinary Urinary Tract Infection Reduction Task Force identified three areas for focus and improvement across the enterprise:

- Insertion procedures
- Maintenance practices
- Discontinuation protocol

Based on current evidence, with staff input, the task force developed clinical practice guidelines for indwelling urinary catheters, with supporting policies, procedures and protocols as appropriate. That work included:

1. Decision-making structure for catheter placement and removal. This is a nurse-driven protocol which supports nursing autonomy/decision-making in catheter placement and removal

2. Implementation of best practice recommendations for care of patients with urinary catheters

3. Structured documentation requirements for insertion and removal of urinary catheters

4. Guidelines for catheter management that can be coded

5. Defined process metrics

6. Baseline performance data

7. Revision of electronic documentation fields to reflect policy changes

[*EP32EO-Exhibit A-1-Policy CL 30-15.05 Cath Mgmt, EP32EO-Exhibit A-2-Cath Educ Flyer, EP32EO-Exhibit A-3-Cath Mgmt Poster, EP32EO-Exhibit A-4-Cath Discon Protocol]*

Table EP 32 EO – 1: Participants

Roxy Baumgartner, RN, ANP-BC	Nurse Practitioner, Urology
Leanne M. Boehm, BSN, RN	Research Nurse Specialist, Allergy, Pulmonary, & Critical Care Medicine
Sandy McGill, RN, MSN, MBA	Nurse Educator, 7 Round Wing
Vicki Jones, RN, BSN	Nurse Manager, VCH
Lorrie Ingram, RN, BSN	Infection Preventionist
Kelly Ernst, RN, MSN	Consultant, Nursing Education & Development
Barbara Martin, RN, MBA	Quality Consultant, Center for Clinical Improvement
Karen Hughart, RN, MSN	Director, Systems Support
Brent Lemonds, MS, RN, EMP-P, FACHE	Adm. Dir. Emergency Services
James Johnson, MD	Infection Control and Prevention
Jack Starmer, MD	Chief Quality Informatics Officer
Titus Daniels, MD, MPH	Associate Hospital Epidemiologist
Roger Dmochowski, MD	Urology Surgery

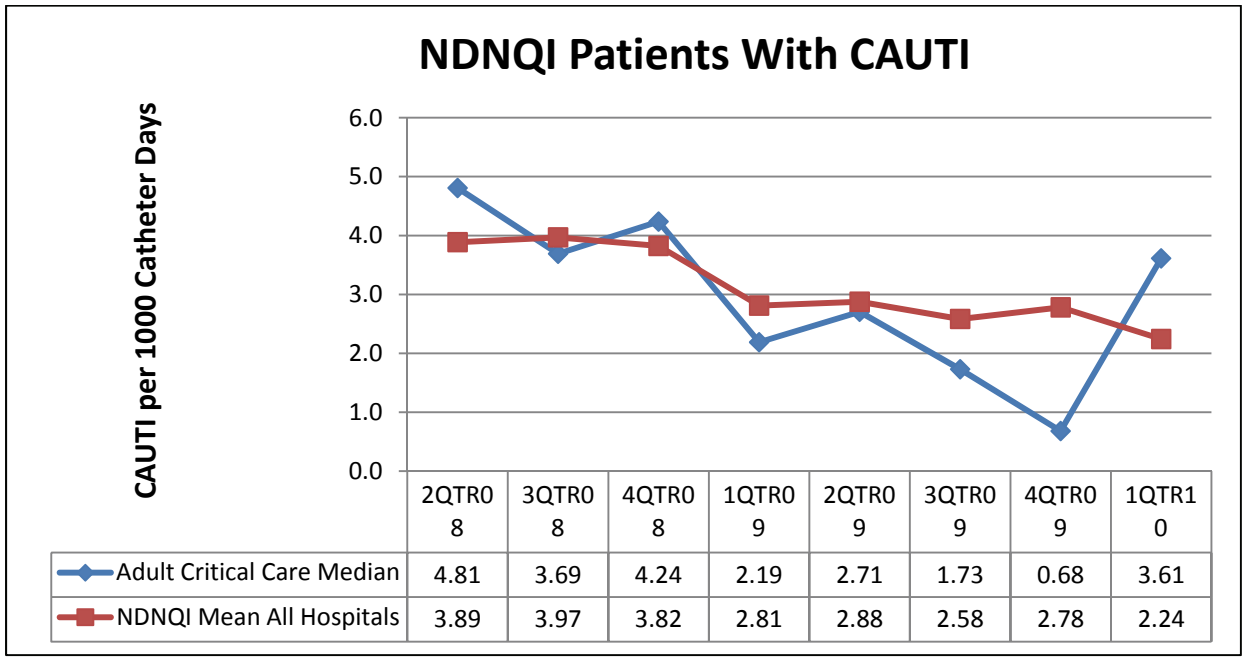
Outcomes/Impact

Within a 10 month time frame, the task force was able to: adopt a charter, conduct a literature review, write and obtain approval for policies and procedures, educate the staff, change documentation, and change interdisciplinary practice.

The task force and the organization were enthusiastic about the process and the outcomes. Elevating the role of nursing in this important infection prevention process has been critical to our success of decreasing CAUTI. We continue to monitor the results of this process, however, we have already seen improvements in our rates. Historically, the emphasis for CAUTI has been in the intensive care areas due to catheter days. We have recently begun monitoring/trending data for all the inpatient units.

The graph below shows the overall rates for the ICUs that benchmark with NDNQI. For the 8 quarters reported, 60% of our critical care units outperform or match the NDNQI benchmark.

Graph EP 32 EO – 1: VUMC Adult Critical Care Units Roll-up CAUTI Comparison with NDNQI Mean for All hospitals in NDNQI Database



	2QTR08	3QTR08	4QTR08	1QTR09	2QTR09	3QTR09	4QTR09	1QTR10
Adult Critical Care Median	4.81	3.69	4.24	2.19	2.71	1.73	0.68	3.61
NDNQI Mean All Hospitals	3.89	3.97	3.82	2.81	2.88	2.58	2.78	2.24

Restraints

Purpose/Background

We strive to be a restraint free organization. However, the use of restraints is still necessary for selected patients. In October 2008, CMS updated the conditions of participation concerning restraints. The Joint Commission quickly followed this update by more closely aligning their requirements with the CMS requirements. At that time, the Restraint Committee

embarked on a journey to heighten the awareness of our staff and ensure safe care for all patients that require restraints in our medical center.

Methods/Approach

- Several committee members participated in a Tennessee Hospital Association conference that focused on State, CMS and Joint Commission restraint requirements, changes and management.

- They reviewed the requirements with the Restraint Committee, made up of unit leaders, educators, charge nurses and staff nurses from inpatient and procedural locations from across the medical center

    - The Restraint Committee historically (consisting primarily of nursing staff) has led this initiative to ensure that our hospital policies, procedures, processes, and workflows were compliant with the CMS, Joint Commission, and state requirements.

- The Restraint Committee reviewed the new requirements and identified the addition of care involved with violent/self-destructive patients. The new model would be more inclusive of care for psychiatric patients. The committee recognized that it would be critical to partner with our psychiatric hospital colleagues to ensure the safety of our patients and staff.

- The Restraint Committee took the opportunity to collaborate with our UHC colleagues from Brigham and Women's Hospital to explore alternative approaches while ensuring that the new policy supported the intent of new requirements.

- Though restraint orders have been a part of our computer order entry system (CPOE), the committee partnered with the members from Standards and Accreditation, psychiatric hospital and informatics to craft order sets that would prompt level of assessment and requirements for renewal.
- The committee partnered with the Center for Clinical improvement on performance measurement and quality improvement processes. They also analyzed frequency of usage, consistency of documentation, and orders by patient care area.

- The committee then re-defined the competencies and education inclusive of the updates. This was done collaboratively with front line staff, and focuses on

alternatives to restraints and seclusion, but if necessary, the appropriate methods for utilization.

Table EP 32 EO – 2- Participants

Helena Adkins, RN,AND, BS	8 North
June Bowman, RN, MSN	Administrative Director, VUH
Cherese Brooks, RN, MSN	Nurse Educator, Burn
Richard Corcoran, RN, BSN, MHA	Nurse Manager, 9 North Stepdown
Michael Daly, RN, MSN, MBA, APN-NP, NE-BC	Assistant Administrative Director, Surgical Svcs
Sarah Dawson, RN, BSN	Assistant Manager, 8 South Medical
Chad Dorn	Health Systems Analyst II – CCI
Kelly Ernst, RN	Nursing ED and Development, Consultant
Mary Lou Farinaro	Director, VPH
Sarah Foster, RN, BSN	Quality Consultant, Accreditation & Standards
Lori Harris, RN, BSN	Manager, VPH
Aaron Hirsch, RN, BSN	Assistant Manager, 9 South Surgical
Sarah Hutchison, RN, BSN	Nurse Manager, Trauma
Pam Jones, RN, MSN	CNO, VUH
Gayle Kilts, RN, BSN, CEN	Assistant Manager, Adult ED
Audrey Kuntz, RN, MSN, EdD	Quality Consultant, CCI
Wendy Leutgens, RN, MSN	Assistant Hospital Dir., VUH
Kim Linville, RN, BSN	Nurse Manager, 8 N & S, Medicine
Autumne Mayfield, RN, MSN, ENPC	Quality Manager, VCH
Sandra McGill, RN, MSN, MBA	Educator, 7 Round Wing
Ashley Staniewski, RN, BSN, MA-HSM	Assistant Manager, SICU
Kaye Stobaugh, RN, BSN	Nurse Manager, 6 North Neuro
Vickie Thompson, RN, MSN	Manager, Special Projects, VCH

Outcomes/Impact

- **Policy**
    - The updated policy was approved by the Clinical Practice Committees at VCH and VUH and at VPH.
    - Policy is scheduled for review at the Medical Center Medical Board August/September 2010.

- **Performance Measurement**

    - We have been able to improve our ability to capture restraint data. At this point, we can capture how many patients are restrained during a month, whether or not the patient has an order, whether or not there is documentation in the nursing documentation system (HED), and the patient's unit.

    - Historically this is information has not been available, but will be very helpful as we try to reduce the inappropriate use of restraints.

Data Results

From the data in OO 23, for 8 quarters, 83% of our units performed better than the appropriate NDNQI benchmark.

[*EP32EO-Exhibit B-1-CL 30-04.18 Policy Restraint Seclusion Mgmt, EP32EO-Exhibit B-2-Restraint Gab Analysis]*

Adverse Events

An organizational priority under our Quality and Safety Performance Pillar Goals is the reduction of adverse events per 1,000 patient days – medication, pressure ulcers and falls. (*Please refer to the QPI Report 2010 in OO 23)* We have set threshold, target and reach goals for these indicators. [*EP32EO-Exhibit C-1-Adverse Events – ORG*] Because decreasing medication events is a priority for us, we have chosen to include this as one of our quality indicators. *(Please refer to OO Question 23 for Medication Event data for all units)*

Part of our focus on reducing adverse events has been around increasing reporting of adverse events through our VERITAS II system. *(Details for VERITAS II was given in EP 28)* Reporting of occurrences at Vanderbilt has increased dramatically over the past 2 ½ years for several reasons. Three years ago we implemented an electronic reporting system, VERITAS, which replaced a cumbersome paper system. Through education, we placed the emphasis on process improvement as opposed to a punitive use of the occurrence reporting system.

See Table below.

Table EP 32 EO – 3: VERITAS Reporting

Year	Percent of increase in overall reporting from previous year
2007	
2008	55%
2009	47%
Jan through June 2010	Total is > all of 2007

(Of note: total occurrence reporting in 2009 was 128% more than in 2007)

Medication Events

Overview

We included Medication Event reporting in our quality indicators, specifically about the work we have done to decrease the number of medication events with harm. We are aware that there is not an agreed upon national benchmark for medication events or the ratio of total events to events with harm. We have actually discussed how we could contribute to the body of knowledge in that regard and establish a benchmark.

Purpose/Background

At VUMC, safe medication use is a high priority. The volumes of medications given on a daily basis, particularly those that are considered high risk, give way to the potential for events with harm. A comprehensive, interdisciplinary approach to safe medication administration has been implemented and is continually enhanced and tested within the Plan-Do-Study-Act (PDSA) method, in order to enforce ongoing process improvement. Additionally, there is accountability for improvement at all levels, from senior executive to staff level.

Methods/Approach

Reporting

Our comprehensive approach to medication safety begins with our structure for reporting adverse events, and subsequent ability to analyze and respond to failure points in our processes that contribute to medication events. Our anonymous voluntary reporting system (VERITAS II) is available to all staff. The purpose of the system is to provide a mechanism for reporting events that reach a patient, as well as events that had the potential to occur but were caught prior to an actual failure (termed near misses or close calls). The data is reported using a web-based application and is stored in a central database. The reports are made available to

Risk Management, unit managers, and designated pharmacy managers for review and follow up. Staffs are highly encouraged to report Adverse Drug Events as well as Adverse Drug Reactions, and aggregate rate-based reports are available per unit.

Analysis

As adverse events are reported, events that result in harm or near miss events and have a high potential for harm may result in a more comprehensive analysis through our event analysis process. A trained facilitator (nurse) conducts the analysis with the participation of direct care staff, risk management, pharmacy, human factors engineers, applicable leadership, and other subject matter experts as necessary. The purpose of the analysis is to specifically focus on the process failures that may have contributed to the medication event. Once the analysis is complete, action items are developed for identified failure points. These action plans are then reviewed with organizational leaders for a closed loop accountability model. Changes are then communicated and implemented to improve the processes.

Technology Support

The third component of our comprehensive approach to medication safety is the use of technology. We have implemented multiple technology systems to mitigate the risk associated with medication events. There is a robust system for computerized prescriber order entry that has been implemented in all inpatient areas. Horizon Expert Orders (HEO) has advanced clinical decision support for the prescriber, and the medication orders interface into the pharmacy system, Horizon Meds Manager (HMM). Each system displays clinical alerts which guide the provider and pharmacist during the ordering/prescribing and dispensing process, respectively.

Horizon Admin RX is the bar-coded bedside medication administration system. This system assists in validating the five rights of medication administration. Additionally, an electronic dashboard is utilized as a proactive trigger tool for designated high alert medications. For example, an anticoagulant dashboard is utilized to provide an alert when an INR has increased. We continuously monitor our scanning rates and the nurse managers receive specific unit reports addressing their scanning rates. *(more information in EP 28)*

MUSIC

One final component for our comprehensive medication safety program at is an active medication safety committee. The chartered organizational Medication Use Safety Improvement Committee (MUSIC) is an interdisciplinary committee which meets monthly to promote the improvement of quality of patient care through safe and effective medication use. This is accomplished by active surveillance, evaluation, and facilitation of process improvement through all steps of the medication use process. Furthermore, several MUSIC subgroups are

assigned to specific action items as recommended by the committee. One of these subgroups is a peer-review group that reviews all high-alert medication events and near misses for trends, according to the List of High Alert Medications designated by the Institute for Safe Medication Practices

Participants

The comprehensive medication safety program is made up of a myriad of staff from multiple disciplines. However, nursing plays an active role in all the components. The nursing unit-based reporting and follow-up on adverse medication events is primarily reported by the staff nurse, and followed up by the nursing manager. Event analysis is primarily performed by Masters prepared nurses who are trained-facilitators within the quality and safety department.

Accountability for improvement is managed at multiple levels, from the unit level to the executive level. There is a defined structure throughout VUMC for senior leadership review within a committee structure. The committee is composed of the Chief Executive Officer, the Chief of Staff, Quality and Patient Safety Director, Physician Leaders for Surgery and Medicine, Nurse Executives (Masters Prepared Nurses), and the Director of Patient Safety (Ph.D. prepared Nurse).

The committee structures described above also contain staff from multiple disciplines. The MUSIC committee is co-chaired by the Medication Safety Program Director in pharmacy and a nurse administrator, and includes representation from staff nursing, nursing education, nursing case management, and nursing informatics. The peer review subgroup for high alert medications consists of nursing leaders in administration, quality and safety, and accreditation and standards (regulatory and policy department). The closed loop accountability model with the organizational leadership has resulted in greater attention to the process failures and a more rapid improvement time for process redesign.

Nursing informatics plays a significant role in medication safety through Systems Support Services. They are responsible for the education of the staff and the implementation of system enhancements and new technology. The Admin RX system is supported by system support nursing staff.

Table EP 32 EO – 4: MUSIC Membership

Ariosto	Deborah	RN, MS	Director, Patient Care Informatics
Barrow	Betty	RN, BSN	Risk and Insurance Management
Beasley	George	RN, BSN	VMG Clinical Manager
Bowens	Cliff	MPH	Anesthesiology

Domaradzki	Kim	RN, BSN	Assistant Administrator, Womens' PCC
Dozier	Cheryl	RN, MSN	Quality Consultant, Accred & Standards
Feldott	Carly	PharmD	Medication Safety Program Director, VUH MUSIC Co-Chair
Foster	Sheree	PharmD	Compliance and Process Improvement Manager
Hargrove	Fred	PharmD	Pharmacy Informatics Manager
Hayman	Jim	MS, MBA	Pharmacy Administrator
Holder	Gwen	RN, MSN	Assistant Director, System Support Services
Jastrzembski	Jenny	PharmD	Assistant Director, Children's Pharmacy, Children's MUSIC co-chair
Kennedy	Christine	MSN, RN	Administrative Director, Inpatient Medicine
Kripalani	Sunil	MD, M Sc	Director, Section of Hospital Medicine
Leutgens	Wendy	RN, MSN	Executive Director, Professional Services Hospital Administration
Lobo	Bob	PharmD	Program Director, Clinical Pharmacy Services
Mackowiak	Leslie	PharmD	Director, Horizon Clinicals
Morrison	Jay	RN, MSN	Quality Consultant, CCI
Polancich	Shea	PhD	Director, Center for Clinical Improvement
Potts	Amy	PharmD	Clinical Manager, Children's Pharmacy; Children's MUSIC co-chair
Rector	Hayley	PharmD, BCPS	VMG Clinic Pharmacy Manager
Richard	Vicki	RN, MBA	Nursing Admin, VUH MUSIC Co-Chair
Rumbaugh (Glazer)	Kelli	PharmD	Pharmacy Resident
Sisco	Janice	RN, BSN	VUH ED Assistant Nurse Manager
Starmer	Jack	MD	Assistant Professor, Biomedical Informatics; MUSIC Physician Leader
Stewart	Phillip	PharmD	Pharmacy Informatics
Sullivan	Mark	PharmD, MBA, BCPS	Director, Pharmacy Operations
Thompson	Vickie	RN, MSN	Children's Hospital Administration

			Special Projects
Wilson	Chris	MSN, RN-BC	Director, Nursing Education and Development-VUH
Ad Hoc			
Ambrose	Anna	RT	Director, Resp Therapy Services
Biesemeier	Christina	RD	Nutrition Services
Boord	Jeff	MD	
Catlin	Rusty	PharmD	Outpatient Pharmacy Manager
Clark	Rick		Clinical Engineering
Conatser	Paige	RN, MMHC	Interim Director, Accred & Standards
Cortez	Susan	RN, MBA, HCM	Evidence Based Medicine Specialist
Fay	Sherri A.	RN, MSN	Medical Supply Sourcing
Fitzhenry	Fern	RN	Research—not sure of exact title
Gregory	David F.	PharmD, BCPS FACHE	Director, Pharmacy Education, Research and Clinical Services
Hickson	Gerald	MD	Director, Center for Patient and Professional Advocacy
Huffines	Steve	PharmD, MBA	Director, Pharmacy Business Services
Humphreys	Elizabeth	PharmD	Director, Children's Pharmacy
Key	Buffy		Clinical Laboratory Services
Kiepek	Wendy		Manager, Health Informations Systems Projects
Kopf	Jane	D.Ph.	VPH Pharmacy Manager
Mayfield	Autumne	RN, MSN	Quality, Children's MUSIC co-chair
Reimer	Todd		Clinical Engineering
Rooks	Craig	RT	Respiratory Therapy
Woods	Walt	PharmD	Director, Outpatient Pharmacy Services
Front Line Nurses			
Burch	Linda	RN, BSN	Ortho Case Mgr
Dasilva	Kathryn	RN	7N nurse
Eller	Joyce	RN	Nephrology nurse
Hyde	Anne	RN, BSN	Hypertension Clinic nurse
Hyde	Terrence	RN	8N Charge Nurse
Russell	Debbie	RN	Direct Care

Outcomes/Impact

Data

Per our Pillar goals, we are at REACH (best) for our goal to prevent medication events. Upon review of the data per unit provided in OO 23, for medication events with harm all of our inpatient units are 2 or below for all 8 quarters reported, with the majority being 0. Only one quarter did a unit have 3.

Admin RX Scanning Results *(more information provided in EP 28)*

Total current scanning rates for VUH and VCH are above 95% (benchmark is 80%). This includes all items: patient's ID band scanned and patient's medications scanned when administered. Nurse Managers get a composite report showing scores for all units. Units that fail to meet the 80% benchmark on any day receive a second report for their unit only that includes a breakdown by individual staff member for scanning performance. [*EP32EO-Exhibit D-1-Admin RX Scanning Rate for VUH, EP32EO-Exhibit D-2-Admin RX Scanning Rate for VCH*]

A variety of medication related reports support our safe medication practices. One example is the adverse drug event report which details the total number of actual and near miss events compared to events resulting in harm. Our organizational goals include: reducing the number of events associated with harm, and having staff report any and all events, including near misses. One of the limitations of the reporting system is the voluntary nature of event reporting, however, we have committed to ensuring a non-punitive response to events and creating an environment of just culture. The quarterly data provided shows what appears to be a stable trend for total events (including near misses) as well as harm events.

The MUSIC committee work has resulted in the refinement of the High-Alert and Look-Alike, Sound-Alike Medication Policy that will be finalized in Fall of 2010. This policy will enforce independent verification of designated high alert medications by two clinicians prior to administration.

Examples

Event analysis of medication events has resulted in a human factor re-design of the dispensing of epinephrine, in addition to patient-specific, unit dose dispensing of warfarin. Each of these analyses demonstrated the impact of the medication use systems on the workflow for the nursing staff.

Epinephrine, with the comment "to bedside" was free texted in the comments field, was ordered for a patient who was showing early signs of Anaphylactic Reaction. The dose of

Epinephrine was given due to multiple contributing factors. The dose of Epinephrine was incorrect for the condition assessed.

When reviewing the facts of this event with all staff involved and completing a 5 Why Analysis, the nursing staff repeatedly reported that every order comes with a symbol alerting them to look at the comments. During our analysis of the Order Tracker system, the majority of those orders had comments that consisted of "…". Consequentially, this desensitized staff to the importance of the alert flag and the attached comments due to alert fatigue. It was also noted that the bar coded medication administration system, AdminRx, was not currently implemented in the particular area.

As a result of this review, the interdisciplinary team who reviewed the details of the event created an action plan to include: requesting Informatics to identify the cause and reduce the "false positives" in Order Tracker so that the comments associated with an order were actually ordered by the provider and not just a computer programming error; implementing AdminRx within that area; create an order set to provide prescribers with decision support regarding the appropriate treatment of patients with anaphylaxis; reviewing the current Anaphylaxis policy while it is being updated by Pharmacy representatives.

The warfarin event similarly identified opportunities within our systems and processes for improvement. In this event, a pharmacist attempted to find an easier way to dispense an order for warfarin 3.75 mg. The default in the system was for the nurse to split a 7.5 mg tablet in half. The pharmacist reviewed the list of available choices and realized the original default was ideal. A 7.5 mg tablet was re-selected and"3.75" was typed in the dose field. Inadvertently omitting the "mg" unit meant that the system used it as a multiplier. This now made the dose 28.1025 mg. A red alert was then presented to the pharmacist stating, "*…the dose exceeds the maximum single dose amount of 15 mg*". During our review, we found that each pharmacist gets between 700 – 900 alerts that must be addressed during the course of their shift. Of those alerts, an average of 20 of those alerts will require an adjustment or intervention by the pharmacist.

The nurse taking care of the patient reviewed the orders entered by the provider. There were fourteen orders on multiple pages of the physician order sheet, six of which were medications. All of those medications were acknowledged at the same time electronically, and the discrepancy in the ordered dose and the entered dose by pharmacy was not identified at that time. The incorrect dose was administered to the patient.

The interdisciplinary review identified several action items. The pharmacy has removed all warfarin doses from automated dispensing cabinets in all inpatient areas. This requires each warfarin order to be dispensed in a bar-coded, patient-specific, and ready-to-administer form.

Limits on tablet configurations have also been implemented within the pharmacy so that no more than two tablets of a given strength may be entered into the pharmacy system. Pharmacy Informaticists are customizing numerous alerts in order to minimize the number of alerts presented to pharmacists. Administration also reviewed the policies related to work hours to ensure staffs are adhering to policy.

Falls

Purpose/Background

Our original Falls Prevention Committee was formed in response to the initial set of National Patient Safety Goals in 2002. This interdisciplinary committee included nursing leaders and staff, physical therapists, a pharmacist, physicians, quality consultants, an ergonomics nurse, and the Director of Patient Safety. The initial purpose was to develop and implement a falls prevention program with a process of regular assessments for fall risk on admission and during hospitalization for adult inpatients.

Through an extensive literature review, several best practices and risk assessment tools were identified. Utilizing one of the most common and most reliable standardized risk assessment tools and the two main predictors of falls, the committee created our own tool. This Falls Risk Assessment tool was piloted on two units and determined to be valid for predicting risk—patients who were identified as high risk were the patients who were falling.

The Falls Prevention Program was implemented in 2006 using this risk assessment tool on admission, every shift, and with changes in the patient's status. Along with the risk assessment, interventions were identified to prevent patients from falling and/or minimize injury to those who fell.

In April of 2008 the VUH Falls Committee was reorganized to:

- decrease inpatient falls with injury
- increase reporting of fall events (including near falls)
- analyze the risk factors that lead to patient falls

Falls are the most frequently reported adverse events in the adult inpatient setting. But underreporting of fall events is possible, so injury reporting is likely a more consistent quality measure over time and organizations should consider judging the effects of interventions based on injury rates, not fall rates. (1, 2) We believe if we can come close to capturing all or near all of our falls or near falls events, then the more data we have to analyze to determine problem areas or changes that need to be made to our program. We understand that different patient

populations fall for different reasons and the issues must be addressed at the specific targeted point of care level.

Methods/Approach

The committee reviewed the existing program including the patient assessment tool, falls data and current evidence to evaluate the falls prevention program for the inpatient units. The Committee used the PDSA model to determine the effectiveness and identify necessary program adjustments. The definition of falls and fall injuries would be the same as used by NDNQI. The benchmarks would be the NDNQI Falls Per 1000/Patient Days and the NDNQI Falls with Injury Per 1000/Patient Days.

The committee focused on assessing patients for fall risk, developing interventions to prevent falls, documentation of the assessment and interventions in an electronic documentation system, and educating staff about the program.

The following key points were decided:

- All adult inpatients will be assessed on admission and reassessed every shift and upon change in level of care. These assessments will be documented in the nursing electronic record, HED.

- The falls risk assessment was reduced from 3 levels of risk to 2 levels of risk. As assessment was made that all patients entering the hospital were at risk for falls due to change of environment and medications; however, many patients are even more prone to falling due to specific increased risk factors.

- Every department who has contact with the patient will need education regarding the new program including dietary, environmental services, diagnostic imaging, etc.

- Many of the interventions will be captured using the Nursing Model Tactics which had been implemented for about 6 months. These include hourly rounding with purpose and bedside report at change of shift.

- The American Hospital Association recommendation about standardization of color use was followed by deciding to use yellow as the “universal” color to communicate a patient is a high falls risk. The committee decided to use yellow armbands, socks and a LAMP sign of the patient’s door to alert everyone that the patient was a high risk for falling. The LAMP sign had previously been in place and stands for “*Look at Me Please*.”

- Falls will be documented using the VUH incident reporting system, VERITAS.

- A standardized post falls program will need to be developed.

- Managers will receive monthly reports regarding fall rates and fall injury rates from the SciHealth System.

Next Steps included:

- Reviewed the data and began to note units with high incident of falls.

- Developed an Implementation Team of experts who met weekly to do design work and report to the Falls Committee on a monthly basis. This team consisted of representatives from nursing leadership and staff, nursing education, pharmacy, physical therapy, physicians, risk management, and IT.

- Approved the new Falls Prevention Program including the Falls Risk Assessment and Interventions.

- Presented the new program to the Clinical Practice Committee, Nursing Quality Council and Nursing Executive Committee for approval.

- Approved the electronic documentation

- Conducted a major educational effort across multiple departments to introduce and implement the new program. This roll out included ancillary services staff, educators, patients, and families.

- Implementation Team changed focus and became a SWAT Team to monitor the effectiveness of the program and reported on a monthly basis to the Falls Committee.

- Members of this team designed a “road show” which presented the program and initial results to every Unit Board Meeting across the adult hospital.

- An electronic documentation tool was implemented as a standardized post falls program. We are currently using this tool and hope to have trending data in the near future.

Table EP 32 EP 5: Participants

Co-Chair - Tracy Coyne, RN, MSN	Quality Consultant – Cancer Center
Co-Chair - June Bowman, RN, MSN	Administrative Director of Nursing Operations – VUH
Deborah Ariosto, RN, MSN	Nursing Informatics - SWAT Team
Lynne Brooks, MA	Informatics - SWAT Team
Betty Barrow, RN, BSN	Risk Management -Falls Committee and SWAT Team
Paige Conaster RN, MHA	CCI - SWAT Team
Richard Corcoran RN, MSN	Manager 9 North - Falls Committee and SWAT Team
Tim Cox, RN	Systems Support - SWAT Team
Pat Duchac, RN, ADN	Staff Nurse 5 South -Falls Committee and SWAT Team
Kelly Ernst, RN, MSN	Nursing Education and Development - SWAT Team
Pat Fleming	Physical Therapy - Falls Committee and SWAT Team
Julie Foss RN, MSN, NE-BC	Manager of MICU - Falls Committee and SWAT Team
Julie Goodrum, BA	CCI - Falls Committee
Debbie Harrell, DPh	Pharmacy - Falls Committee
Terri Hartman, RN, MSN	Accreditation and Standards - SWAT Team
Aaron Hirsch, RN, MSN	Assistant Manager 9 South - Falls Committee and SWAT Team
Christine Kennedy, RN, MSN	Administrative Director Medical Nursing - Falls Committee and SWAT Team
Brent Lemonds, RN, MS, EMT-P	Administrative Director of ED Services-Falls Committee and SWAT Team
Abby Luffman, RN, BSN	Staff Nurse Trauma Unit - Falls Committee and SWAT Team
Sonya Moore, RN, MSN	CCI - Falls Committee and SWAT Team
Nicole Muoio, RN, MSN	Educator, 6N) - Falls Committee and SWAT Team
Ashley Stanieswki, RN, MSN	Charge Nurse SICU - Falls Committee and SWAT Team
Murecka Wallace, RN, ADN	Charge Nurse 3 Round Wing-Falls Committee and SWAT Team
Debby Robin, MD	Gerontologist- SWAT Team
Laurence Solberg, MD	Gerontologist - Falls Committee
Jack Starmer, MD	Informatics - SWAT Team
All Patient Care Areas in VUH	

Outcomes/Impact

Reporting:

We have met our goals to increase the number of events (falls and others) reported in VERITAS – See information below.

We have met our goal to perform better than the national benchmark for falls with injury (moderate or > severe) – see below.

Reporting of occurrences at Vanderbilt has increased dramatically over the past 2 ½ years for several reasons. Three years ago we implemented an electronic reporting system, VERITAS, which replaced a cumbersome paper system. Through education, we placed the emphasis on process improvement as opposed to a punitive use of the occurrence reporting system.

Table EP 32 EO – 6: VERITAS Reporting Increase from 2007 – June 2010

Year	Percent of increase in overall reporting from previous year	Fall reports as a percentage of all reports	Percent of increase in fall reports
2007		10%	
2008	55%	7%	17%
2009	47%	6%	13%
Jan through June 2010	Total is > all of 2007	6%	On track to be about the same as 2009

(*Of note: total occurrence reporting in 2009 was 128% more than in 2007*)

Outcomes:

- **Sixty-nine percent (69%) of our adult inpatient units have performed better than the national benchmark regarding falls with injury. In addition, 100% of our adult inpatient units have performed better than the national benchmark for falls with moderate or > severe injury. Our aggregate VUH Injury Fall rate is 0.54 / 1000 patient days for fiscal year 2009-2010.**

- **Our VUH total fall rate/ 1000 patient days decreased 15 % during the 2009-2010 fiscal year, from 4.31 down to 3.65.**

(Detailed reports for units provided in OO Question 23 and more info on falls is in EP 32)

2009-2010 fiscal year was when we fully implemented our new falls prevention program throughout the Medical Center and continued to evaluate the results with the PDSA cycle. The Falls Swat team also began a detailed analysis of every inpatient fall reviewing each of these events to identify trends and opportunities for change/improvement. So far we have seen:

- Approximately 40-50% of all inpatient falls are toileting related
- Approximately 20% of all inpatient falls were 'repeat falls'
- 'Altered mental status' patients were a higher percentage of patients who fell and repeat falls

Current evidence continues to demonstrate that the two biggest indicators for fall risk are patients over 80 years of age and/or have had a previous fall. Our revised fall risk assessment tool captures these two vital triggers as well as the other risk categories included in the Hendrich II Falls Risk Model. Literature review verified that many like-facilities share the same challenges with toileting- related falls and appropriate prevention interventions. We have revisited nursing model tactics and re-educated on appropriate purposeful hourly rounding.

Examples

Individual units have taken the trended fall information and through unit boards or quality committees have created unit based action plans to address specifics for their patient population. For example:

- OB/GYN has engaged in a falls prevention study related to patients with epidurals
- Neuro/epilepsy unit has created a culture of zero tolerance and began charge nurse rounding at the bedside with all high fall risk patients receiving prevention education every shift and reviewing any fall event that occurs
- 9 North surgical has begun 'safety huddles' at the beginning of each shift to improve staff communications on fall prevention
- A couple of our units have posted approved signage in all patient rooms to encourage patients and families to "Call, Don't Fall" and to help with fall prevention education

These unit level successes are then shared organizationally through various outlets including our Nurse Quality Council, the Falls Steering committee, and Nursing Leadership Board meeting.

Other initiatives include:

- Our new patient/family handbook also includes fall prevention information that continued with the same theme of "Call, Don't Fall" with key points for prevention.

- Our pharmacy colleagues have been an integral part of reviewing fall events to assess the impact of high fall risk medications. They are working on a falls indicator for their dashboard to alert them to patients at high risk of falling due to their ordered meds. This would support us in doing proactive medication analysis for possible changes in medication regime.

- House-wide, we have reinforced an 'open door' policy for patients at high risk for falls and have continued to assist nurses with the balance between patient safety and patient privacy. Assisted falls have increased during this past year with a decrease in injuries noted. We attribute this to an increase in nursing model tactics and engaging in the action plans created from results of falls analysis.

- Currently we are initiating a second pilot for bed and chair alarms which was one of the ideas of the nursing staff. The initial pilot did not show strong results but as the staffs continue to research the best interventions for their patients who are unable or unwilling to comply with safety instructions and need additional assistance to prevent falls, they would like to look at this intervention again.

- We have requested approval for a low-bed trial to use as one injury prevention intervention. 7 Round Wing has researched extensively and found that the use of low-beds has had positive results in prevention of injury especially in the elderly patient. This unit is actively doing the research, writing the protocol for the desired trial, and presenting their information to the necessary committees to obtain approval to trial this bed in the adult elderly care unit and the neuro general care units. This pilot will target the elderly and/or altered mental status patient in light of potential for injury for high fall risk patients.

- Another key emphasis is on patient/family education and staff communication versus focusing solely on the tangible item of non-skid sock, door sign, or armband. For example, rather than just rounding to see if patient has all 3 items in place, actually educating the patient and/or family and communicating with other team members is the more important aspect of fall prevention.

Documentation

Our efforts to reduce repeat falls includes enhanced documentation to maintain awareness of a fall event throughout an entire admission that after one or two handovers the fall event does not get 'lost'. We created a fall event reporting template to support standardized documentation of a fall in the medical record. This process also creates an icon that remains visible to all during the admission to improve communication among all disciplines. Promisingly, the month that this icon first became visible, we had a significant decrease in our 'repeat falls', down to 2 for that month.

Summary

As we continue with daily efforts to decrease our overall fall rate, we have improved our falls with injury rate after implementation of the new falls prevention program and we continue to analyze every fall. In addition to fall risk factors, our risk assessment tool includes injury risk factors as well. Monthly outcomes' reporting has evolved from an organizational level report to include more details and unit specific results, which has helped with unit level engagement.

A small taskforce reviews each fall with injury during our monthly review and these reviews may also involve a root cause analysis as appropriate for moderate and/or major injuries. Through these processes we have identified areas of opportunity such as our outpatient areas, our patients who have had lower extremity surgeries, and patients first up out of bed. Reviews of falls involving patients who have had lower extremity surgeries have led to closer involvement of the staff that care for these patients most often and an increase in the level of monitoring, assistance, and comfort rounds to decrease the risk of having these patients attempt to get up without assistance.

A new process was created to recognize the increased fall risk for visually impaired patients who require retinal dilation during their visit. Accordingly, a standardized method to minimize these risks was developed via staff and leader collaboration with no further events reported thus far.

We are balancing initiatives such as an 'early ambulation' program to decrease post-operative ileus with increased safety activities. Examples include making sure staff utilize smooth moves equipment appropriately to help decrease the risk of falling; utilizing the

appropriate number of staff to assist patients; and making sure that staffs have appropriate competencies with gait belts and transfer training.

As we continue the efforts outlined above and continue to engage the PDSA cycle to improve our falls prevention activities we foresee continued improvement. Our overall plan of action includes current review of recent evidence based practices, strengthening our rounding for safety on high risk patients, unit based review of prevention practices and event review, and strengthening collaboration with interdisciplinary teams to decrease risk factors.

Action Plans from individual units include:

Surgery/Trauma PCC

Any fall on the unit requires the charge nurse to complete a fall audit tool which is reviewed by the manager. This has been allowed them to better understand their falls and has been helpful for trending.

In addition to the tool, the surgical step down unit has initiated a huddle with the nurse and care partner assigned to the patient to discuss contributing factors, prevention techniques specifically for that patient, and assess the need for a sitter. Also, the charge nurses include information about falls risk in their team huddle near the beginning of each shift.

Myelosuppression

Our Myelosuppression unit took steps to reduce falls by first tracking their falls and trending the information. The results were presented to the staff members at a staff meeting and they identified that a major contributing factor to their falls was the tradition of early morning lab draws. After being awakened during the very early morning for the blood draw, many of their falls occurred just after the staff had left the room when the patient needed to go to the bathroom. Also, staff shared that there was confusion regarding what constituted a fall and what to report. The next step involved education regarding falls and our reporting system, which initially resulted in an increase in this unit's number of reported falls. These steps were followed with the implementation of purposeful hourly rounding and within two months, the fall rate decreased from 4.5 to 2.6.

Neuro Medical

Our Neuro general care unit took a three pronged approach to reducing falls with injuries. First they implemented charge nurse bedside rounding to assess interventions, room conditions, and educational needs. Next, a post-fall huddle was implemented with staff attempting to review the event and identify opportunity for further prevention and improvement. Last, this unit placed posters in each patient room encouraging patients and

family to "Call before you Fall", and they have been willing participants in trials for new bed and chair alarms and are seeking to be a pilot unit for usage of 'low beds' for fall/ injury prevention. Through these interventions this unit has managed to go from a range of six to 10 falls per month down to two to three per month during this last fiscal year and they continue to seek new and innovative approaches to fall prevention. [*EP32EO-Exhibit E-1-Falls Committee Meeting, EP32EO-Exhibit E-2-Falls Education Presentation*]

References:

1. Halfon P, Eggli Y, Van Melle G, et al. Risk of falls for hospitalized patients: A predictive model based on routinely available data. J Clin Epidemiol. Dec 2001;54(12): 1258-66.

2. Leape LL, Brennan TA, Laird N, et al. The nature of adverse events in hospitalized patients. Results of the Harvard medical practice study ii. N Engl J Med. 1991;324(6):377-84.

Pressure Ulcers Prevalence

Purpose and Background

The original Pressure Ulcer Prevention Committee was formed in response to the results of a Hill-Rom Pressure Ulcer Prevention survey conducted in March of 2004, with the objectives of reducing the incidence and prevalence of pressure ulcers to or below the national average and to reduce the severity of pressure ulcers that do develop.

Methods and approach

The work of the original committee was modeled after The HealthCare Advisory Board Brief: Effective Strategies to Reduce Pressure Ulcer Rates from May 5, 2004 and the Duke University Pressure Ulcer Prevention Model. Key components included; organizational commitment, WOCN oversight group, unit-based experts, pressure ulcer prevention education, and appropriate tools and resources. Initial work included:

- Unit based experts received a day long class regarding pressure ulcer prevention and treatment and carried their new knowledge to other staff.

- New graduates received the content during core orientation and nursing residency programs.
- Our WOCN nurse team led unit based rounding efforts and dedicated at least an hour each week to rounding 1:1 with staff and reinforcing bedside practice with real-time

education based on observational data. They also taught staff nurses how to 'mine' available resources.

- Quarterly NDNQI prevalence surveys continued to be supported on every inpatient unit.

- The committee also invested in meetings with unit leadership staff and experts to garner continued support for this initiative.

- They also developed and updated all related protocols and tools and provided them as staff resources.

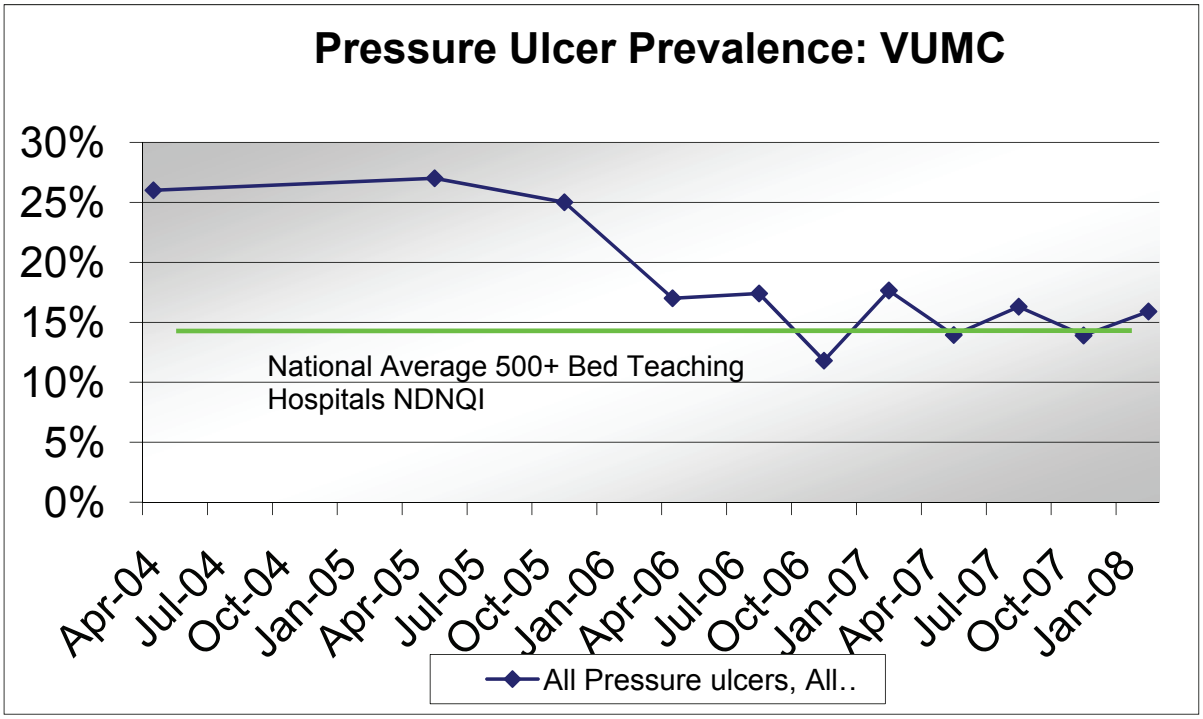
- Many patient and staff educational materials were developed, including an algorithm/ decision tree, collaborative pathway, and electronic order sets.

- A training video about bed surfaces was developed and used during orientation, training, and on-going education.

- Identified some key issues such as TED hose causing pressure ulcers around ankles and below knees especially on larger patients, prone position in OR needs more padding, mulitpodis boots not used appropriately cause pressure ulcers on Achilles area of heel, and rolled towels under the neck causes pressure ulcers as well.

The graph below shows the improvement from the initial pressure ulcer prevention committee work and then a leveling off of outcomes in 2006 and 2007.

Graph 32 EO – 2: VUMC Pressure Ulcer Prevalence 2004 – 2008



Regroup

In 2008, the PUPS Committee was reorganized with a broad institutional, multidisciplinary representation that first focused on why outcomes had leveled off. The goals of the new group were to:

- Identify barriers to meeting existing goals
- Identify action plan for eliminating the barriers
- Identify methods for tracking/ auditing and evaluating the plan

At the point of noticing that our improvement efforts had seemed to level off over a few quarters we began a deeper analysis of our pressure ulcer prevention program and current pressure ulcer prevalence rate. Opportunities for improvement were combined in three groups: Present on Admission, Prevention, and Accountability. Staff-driven, working sub-groups created action plans to improve outcomes. The committee recommendations were presented to Nursing Executive Board, Nursing Leadership Board, and the Nursing Quality Committee. These recommendations were endorsed and have become the basis for the improvement work for pressure ulcer prevention over the last two years.

Assessment

With the large representation across disciplines and from nearly all, if not all, individual units house-wide, significant effort was spent on analyzing down to the lowest common denominator the specific barriers to improvement in the identified areas. These included:

- Awareness and knowledge of available products
- How to order or where to obtain them
- Specialty bed knowledge, appropriate way to order necessary consults
- Challenges with more patients requiring multiple staff to turn them
- Lack of materials for repositioning/ pressure redistribution
- Under utilization of smooth moves equipment to facilitate moving patient
- Perceived time pressures
- IT challenges of having to document the risk assessment in one computer program and chart the skin assessment in a different program
- Novice nurses serving as PUPS experts
- Lack of physician partnership
- Lack of unit audit forms

Action Plan

An action plan was then developed to address these areas of opportunity and barriers. This blueprint for improvement included:

- Development of unit-specific plans for pressure ulcer prevention
- In-service for leaders to learn more about how to use data/ dashboards available for unit-based monitoring and improvement
- Prioritize competing initiatives for staff
- Require event reviews for all hospital acquired pressure ulcers
- Standardize and communicate expectations to all units and leaders regarding pressure ulcer prevention and treatment
- Increase amount of PUPS information in core orientation

- Standardize unit education and increase number of unit in-services
- Include in annual competencies
- Work with unit leaders to assist with prevention/ wound care products available to each unit
- Use visual cues to communicate risk of skin breakdown to all members of the healthcare team
- Implementation of pressure ulcer prevention guidelines in ancillary areas while waiting for inpatient bed
- Improve coordination of documentation systems

As a result of this work and the endorsement of the initiative by the NEB, Nursing Executive Board, a smaller working group was formed with leaders from key areas in order to smooth the way for implementation of the improvement plan and help address any barriers to success, etc. This group includes representatives from WOCN, administration, informatics, clinical nutrition, systems support, physician champions, and quality.

This work has led to deeper investigations of actual hospital acquired pressure ulcers, the development of a tool to standardize this event review process, one-on-one meetings with unit leadership to evaluate and strengthen pressure ulcer prevention activities at the unit level, and the development of a daily 'nursing care indicator' report that displays number of patients at risk for pressure ulcers, number of patients with documented pressure ulcers, and adherence to the prevention bundle for each shift for each unit.

We were able to update our computer order entry system to support the most recent evidence based practices to score patients at risk for pressure ulcers, integrate a specialty bed selection tree, and consolidate the menu of wound care products in an easy to use screen that automatically calculates the total Braden score, creates the prevention bundle if applicable, and records any wounds entered there, prompting appropriate consults for nutrition and either WOCN or plastics.

There are members of the pressure ulcer prevention committee that also sit on the Bed Selection committee and much analysis went into the selection of beds for our new bed tower that opened in 2009. Pressure ulcer prevention as well as fall prevention (bed alarms) attributes were strong requirements when making these decisions. Currently, one of our units is petitioning for a trial of a 'low bed' to assist in fall prevention; however, the chosen bed has

pressure redistribution qualities that would allow patients who currently have contraindications for a specialty bed (confusion) to now be placed on this specialty mattress to assist with pressure ulcer prevention.

The perioperative areas consulted with the PUPS committee and WOCN experts when replacing their surfaces in the summer of 2008. After much consideration they purchased new surfaces to assist with pressure ulcer prevention and also revamped their efforts at performing skin assessments and risk assessments while patients are in the perioperative area.

Currently, we are working with our informatics colleagues to further coordinate the documentation of both the risk assessment and pressure ulcers to decrease duplicity and increase accuracy and compliance of assessments.

The next big step is to package a revitalized pressure ulcer prevention initiative that presents the most up-to-date evidence based practice (i.e. changing the 'at risk' Braden score from less than 17 to less than 19 as per best practice guidelines), provides an updated education package with the emphasis on prevention but includes documentation and treatment as well, introduces unit based awareness of all patients with pressure ulcers on a daily basis as well as reviews of care for all patients with a hospital acquired pressure ulcer, and house-wide reporting of data that will allow at-a-glance awareness of the performance for that unit for the preceding day and month. These pieces will be coupled with executive support, an enterprise wide marketing campaign, and widely distributed visual resources. This approach is being modeled after other successful quality initiatives in the hospital and has been endorsed and requested by staff nurses who have provided feedback.

Table EP 32 EO – 7: Participants:

Carr, Devin, RN, MSN (Executive Sponsor)	Administrator	Trauma
Downs, Sabrina, RN, MSN,MBA, NE-BC	Director-Professional Practice & Magnet	Nursing Admin
Gordon, Kara, RN, BSN, MSN (Co-Chair)	Nurse Educator	MICU
Lee, Sheree, RN, BSN, CWOCN (Co-Chair)	WOCN Manager	Surgical & Transplant
Bailey, Amanda E, RN, MSN	NP Plastics	VUSN
Booth Aubrie, RN, BSN	Assistant Manager	CVICU
Boyer, Rebecca, RN	RN	8 North
Brooks, Cherese, RN, BSN	Nurse Educator	Burn Unit
Burns, Doug, RN, MSHA	Manager	9N/9S

Burns, Kathleen, RN, BSN, CCRN, MNED	CNS	Cardiology
Camp, Debi, RN, MSN	SSS Specialist II	System Support
Campbell, Heather, RN	Assistant Manager	6S/CSS
Cooper, Jennifer, RN, MSN	Educator	Neuro/5 South
Corcoran, Richard, RN, BSN, MSHA	Manager	9N-Surgical Step Down
Davidson, Martha, RN, BSN, MS, CWOCN	WOCN	Surgical& Transplant
Dawson, Sarah, RN, BSN	Assistant Manager	8 South
Dean, Denise, RN	Charge Nurse	7th Floor
Douglass, Anna Elliott, RN, BSN CWOCN	WOCN PEDS	VCH 6th Floor
Goodrum, Julia, BA	Data Analyst	CCI
Hacker, Rebecca, RN	RN	
Hargrove, Marilyn, RN, BSN, CWOCN	WOCN	Surgical& Transplant
Hereford, Tanya, RN	RN	OR
Hickerson, Diane, RN, BSN	RN	Preoperative Services
Hirsch, Aaron, RN, BSN	Assistant Manager	9N/9S
Hutchison, Sarah, RN, BSN, CCRN	Manager	Trauma
Knight, Alaina, RN	RN	7N/6S
Lee, Beverly, RN, BSN	Assistant Manager	6S/7N
Lee, Suzanne, RN	RN	9 North
Linville, Kim RN, BSN	Assistant Manager	8 North
Longaberger, Sandra, RN	Charge Nurse	
Madden, James, MD	Physician-Plastic Surgery	Wound Team Physician
Moore, Sonya, RN, MSN	Qual Consultant	CCI
Nichols, Marty, RN	RN2	Adult ER
Nine, Teri (Mary T), RN	Educator	11 North
O'Brien, Lynette, OTR/L	OTR/L	Acute Care Rehab Services
Padgett, Shelly, RN, BSN	Educator	7N/6S
Patey Jane, RN, BSN	RN	3/7 RW
Robertson, Kimberly, RN	RN	Main OR
Rose, David, RN	RN	5/6 RW
Spear, Marica, RN, MSN, APN-BC	NP	Plastic Surgery
Swift, Ernestine, RN	RN	3/7 RW

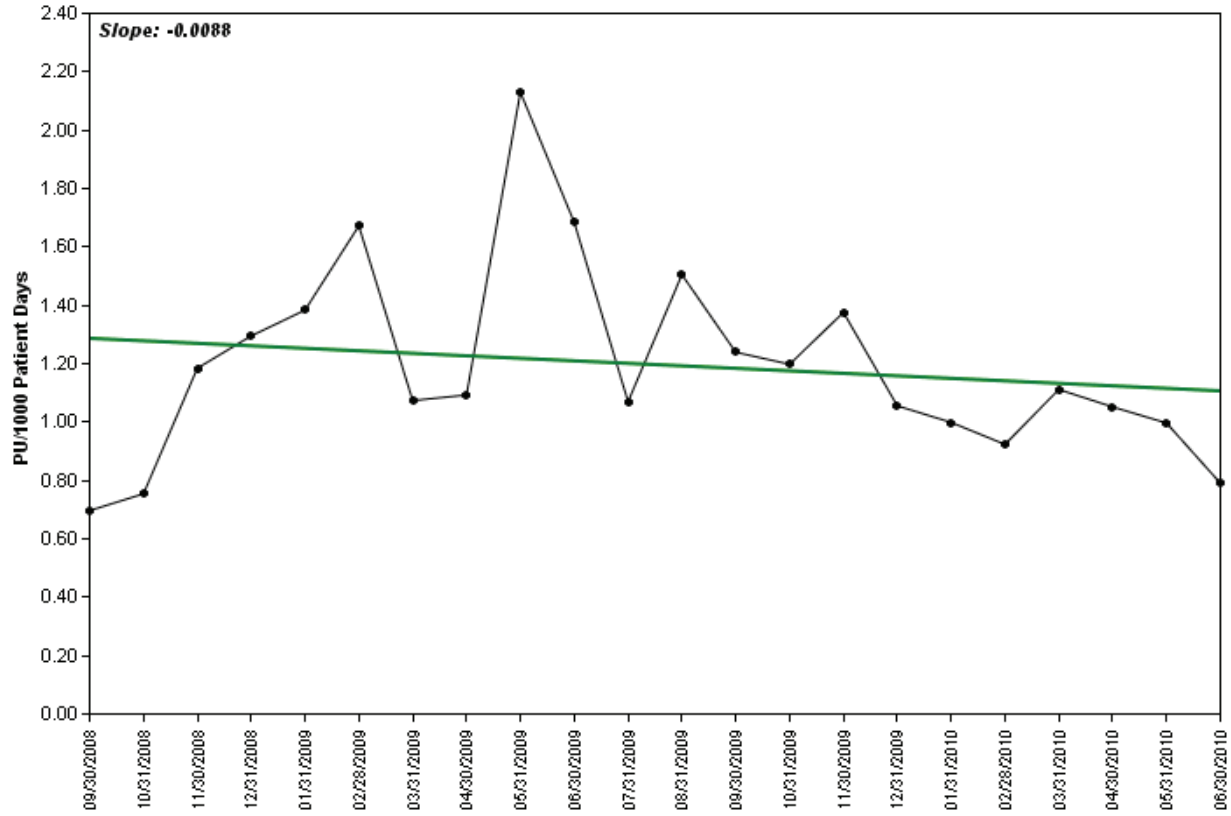
Swor, Britney, RN, BSN, CWOCN	WOCN	Surgical & Transplant
Thomspon, Bonnie, RN, BSN, CWOCN	WOCN	Surgical& Transplant
Tiamson, Lito, RN	RN	NeuroSurgery
Traughber, Wilma, RN, MSN	RN, MSN	Occupational Health Clinic
Varnell, Linda, RN, LDN	Dietitian	Clinical Nutrition Services
Watts, Carolyn, RN, MSN, CWON	CNS	Surgical Services
White, Martha, MSN, APN-BC	Educator	9N/9S
Wiles-Marten, Debra, RN, CPAN, CAPA	RN II	Main Holding Room&PACU

Members of the smaller Pressure Ulcer Prevention Steering Task-Force:

- Devin Carr RN MS Administrative Director Surgery/ Trauma Patient Care Center
- Sheree Lee RN BSN CWOCN Manager of WOCN
- Carolyn Watts RN MSN CWON Clinical Nurse Specialist
- Jack Starmer MD Chief Quality Informatics Officer Assistant Professor, Biomedical Informatics Dept
- James Madden MD Assistant Professor, Plastic Surgery
- Valerie Kibler RN NP Systems Support Specialist
- Christina Biesemeier Director, Clinical Nutrition
- Deborah Robin MD Medical Director, Care Access, Associate Professor of Medicine
- Sonya Moore RN MSN Quality Consultant, Center for Clinical Improvement

Outcomes and Impact

Graph 32 EO – 3: Hospital Acquired Pressure Ulcers 2008 – 2010



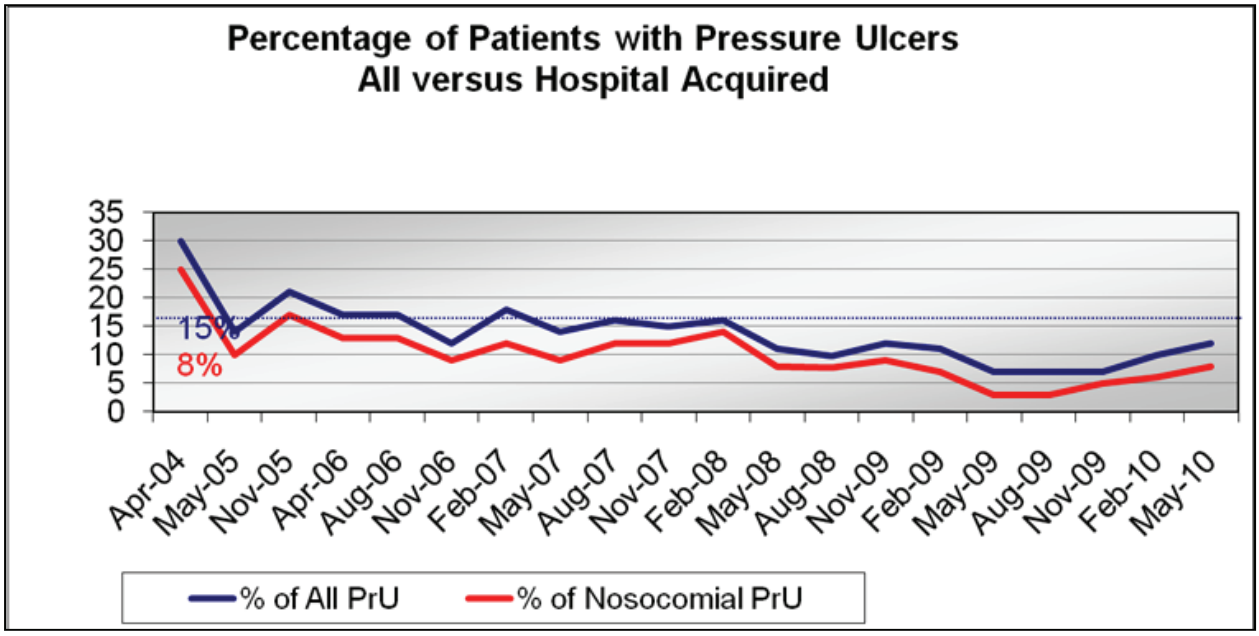
Hospital acquired Pressure Ulcer rate per 1000 pt days FY 2008-2009- 1.35, FY 2009-2010 – 1.11

This performance measured according to administrative/ coding data shows an 18% decrease in rate for all adult inpatient units for hospital acquired pressure ulcers.

So, while we continue to work diligently to improve our pressure ulcer prevention outcomes throughout the entire hospital we have also partnered closely with our coding experts. Our nurse partner in concurrent clinical review is an excellent liaison between the pressure ulcer prevention group and the unit based reviewers. She would alert one of our pressure ulcer experts if one of her coders ran across any discrepancy in documentation regarding an inpatient pressure ulcer situation. That expert would then go to the bedside, assess the patient, educate the nurse and the physician, and reconcile the documentation. Joint reviews of hospital acquired pressure ulcers revealed some opportunities for review of pressure

ulcer coding guidelines. After the reeducation we have seen evidence of improvement with coding and documentation through continued monitoring and validation.

Graph 32 – EO 4: VUMC Percentage of Patients with Pressure Ulcers vs Hospital Acquired



While auditing several charts of hospital acquired pressure ulcers, it was determined that 64% of that particular set of patients had undergone at least one operative procedure prior to the documentation of their pressure ulcer. Twenty seven percent of those had undergone more than one trip to the operating room. In light of this common factor shared by this group of hospital acquired pressure ulcer patients a meeting was called with perioperative leadership to review pressure ulcer prevention practices in this area. By the time the meeting happened all of the OR surfaces had been replaced, along with some of the positioning devices and renewed expectations on skin assessment and risk assessment had been revealed in the perioperative area.

Upon looking at the results from fiscal year 2009-2010 we had improved our rate approximately 18% in the Department of Surgery during that year. We reduced from 18 down to 11 hospital acquired pressure ulcers for this department that met the AHRQ PSI-3 definition (stage 3, 4, and unstageable). This measure would have us ranked 44 out of 73 UHC Level 1 trauma center peers with a PSI-3 rate of 2.98/1000 patient days.

But, perhaps even more important from a nursing perspective the following observations can be made when comparing our pressure ulcer prevention performance with national benchmarks:

1. In the 'Percent of Surveyed Patients with Hospital Acquired Pressure Ulcers Stage II and Above measurement: 63% of units in the benchmark analysis performed at or better than the mean performance for like-units using the national comparative data from NDNQI.

2. 56% of these units met or exceeded the mean for the actual number of patients surveyed when compared to like-units nationally per NDNQI data.

3. For the 1st quarter of 2010, there were 75% of these units that did better than the NDNQI mean for the percent of surveyed patients who had a skin assessment performed upon admission; 81% did better than the national mean for the percent with a risk assessment performed upon admission, and 88% of our units did better than the national mean with having the risk assessment completed within the past 24 hours.

Our nurses have taken this initiative very seriously and they have taken key learnings to their home units and are more aware of pressure ulcer prevention activities in general, are participating in regular skin care rounds on the unit, are providing pressure ulcer prevention reinforcement during unit in-services, and are beginning to review the care of these patients while on the unit and have been very collaborative in nature.

We are very excited in that it seems that we are right at the cusp of being able to reintroduce pressure ulcer prevention best practices to all staff nurses, care partners, leaders, and the entire multidisciplinary team via a proven format with content vital to the care and safety of our patients. The executive support and resource dedication for this effort is tremendous as roll-out and implementation plans are underway. Constant monitoring of current literature reviews and evidence based practice is a foundation of our work, as well as incorporating unit based reviews, and fostering increased interdisciplinary support.

Acknowledging the strong work that has been done in the area of pressure ulcer prevention, the strides that have been made and the evidence that we have strong processes in place, this institution is ripe for improvement of outcomes as we now put all the pieces together to form a system of support for each patient to receive the bedside care that is just right for them.

VCH

Peripheral Intravenous Infiltrations

Purpose/Background

Following an infiltration that required surgical intervention early in 2008, a team was put together to wok on an action plan. Through our Intravenous (IV) task force, the idea was generated to have a mandatory education workshop for all licensed staff about the importance of IV maintenance, monitoring, and assessment. This workshop was called the "IV Education Blitz". There was involvement from each member of the IV task force, as well as educators from each unit of the Children's hospital. The workshop was offered on 4 different days and at various different times to accommodate all shifts. We were successful in training 857 Staff members during the 4 time slots.

Methods/Approach

The IV task force met and included other key individuals to participate in the development of the IV Education Blitz. Through the task force, a Children's hospital specific IV policy was written and approved in 2008. The task force members were faced with the undertaking of an action plan to decrease the number of IVI's requiring surgical intervention. Through brainstorming, the team decided that an education workshop would be the best approach. The topics discussed were Peripherally Inserted Central Catheter (PICC) line maintenance, Incident reporting, documentation, medication and fluid management, and checkoff stations. The IV education blitz was held with the theme of game shows and used The Price is Right, Wheel of Fortune, and Jeopardy as guides. This was very well received by the staff who reported enjoying the workshop and learning a lot too.

Unit managers throughout the Children's hospital promoted and advertised the event with posters placed in each unit. This led to the overall success of having 857 nursing professionals trained in the 4 days offered.

Table EP 32 EO – 8: Participants

Vicki Jones, RN, BSN	Nurse Manager, Adolescent medical/surgical, Chair of IV task force
Jenny Slayton, RN, MSN	Director, Performance, Management and Improvement
Pat Givens, RN, MSN	Chief Nursing Officer
PICC registered nurses	
Nurse educators	
Nurse managers	

Outcomes

The IV Education Blitz was a total success having trained 857 staff on the consistent information prepared on IV care. Following the IV Education Blitz, the reporting of "harm" IV infiltrates increased, while the number of infiltrations requiring surgical intervention decreased. This is shown in the slides attached. Another outcome of the IV Education Blitz was the standardization of PICC care.

Following the IV Education Blitz, the IV task force has tackled other IV needs. For instance, currently the team is in the final stages of obtaining approval for an Extravasation policy that will detail the care that should be provided in the event of an extravasation. The policy details what agent to administer for each vesicant, as well as how to administer.

We continue to emphasize the importance of IV site checks to increase the reporting of IV infiltrations, while decreasing the number of infiltrations requiring surgical intervention. We hold an event analysis on each IV infiltration requiring surgical intervention and to date have only had two since 2008.

Data

Please refer to the data in OO 23. 100% of the 11 units reporting IV infiltrates performed better than the NDNQI benchmark for the 8 quarters reported.

Falls

Purpose/Background

The Children's hospital falls committee was convened in the fall, 2005 to develop and implement a Pediatric Falls Safety Program to include adoption of assessment tools, documentation of falls assessment and intervention, process to evaluate falls and identify opportunities for improvement, development of charter. The committee was started to ensure the safety of the pediatric patient population by preventing injury related to falls, as well as a Joint Commission patient safety goal.

Through the Children's hospital falls committee work, the color of high risk for falls has been standardized with our adult counterparts. The standard color of yellow is used for our high risk armbands and yellow non-skid socks. Also, through the committee, we have made our documentation of falls assessment and intervention one place in our nursing documentation within the medical record.

Methods/Approach

We track our incident reports of falls and have had only two falls with injury since December, 2008. The falls data provided, as well as trend watches and more details and specifics, are provided to the committee on a monthly basis. Within the group we are able to discuss trends and collaborate about strategic plans to decrease further falls.

Because our falls rate is so low, we were asked to be a part of a multi-site research project through Child Health Corporation of America (CHCA). This project was started to collectively review falls prevention practice and create a benchmark for pediatric falls, as well as to validate the small amount of literature available on falls. Though the research hasn't been published yet, we were able to share our best practices with other Children's hospitals as well as learn from them and set a true benchmark for pediatric falls.

Table EP 32 EO – 9: Participants

Autumne Mayfield, RN, MSN	Assistant Manager – Pediatric ED
Karin League, RN, BSN	Assistant Manager – Recovery/PACU
Ellen Gregory, RN	Assistant Manager – NICU
Minden Bullock, RN	Assistant Manager – PCCU
Tia Coleman, RN	Assistant Manager – Pediatric Surgery and Adolescent Med
Janet Cross, Director	Child Life and Family Resource Center
Amber Yampolsky	Asst Manager, Pediatric Physical Therapy
Elizabeth Humphreys, PharmD	Director – Pharmacist, Pediatric Inpatient Pharmacy
Marissa Brown, RN	Nurse Educator, 7th Floor
Jenny Slayton, RN	Director, Quality Improvement

Outcomes/Impact

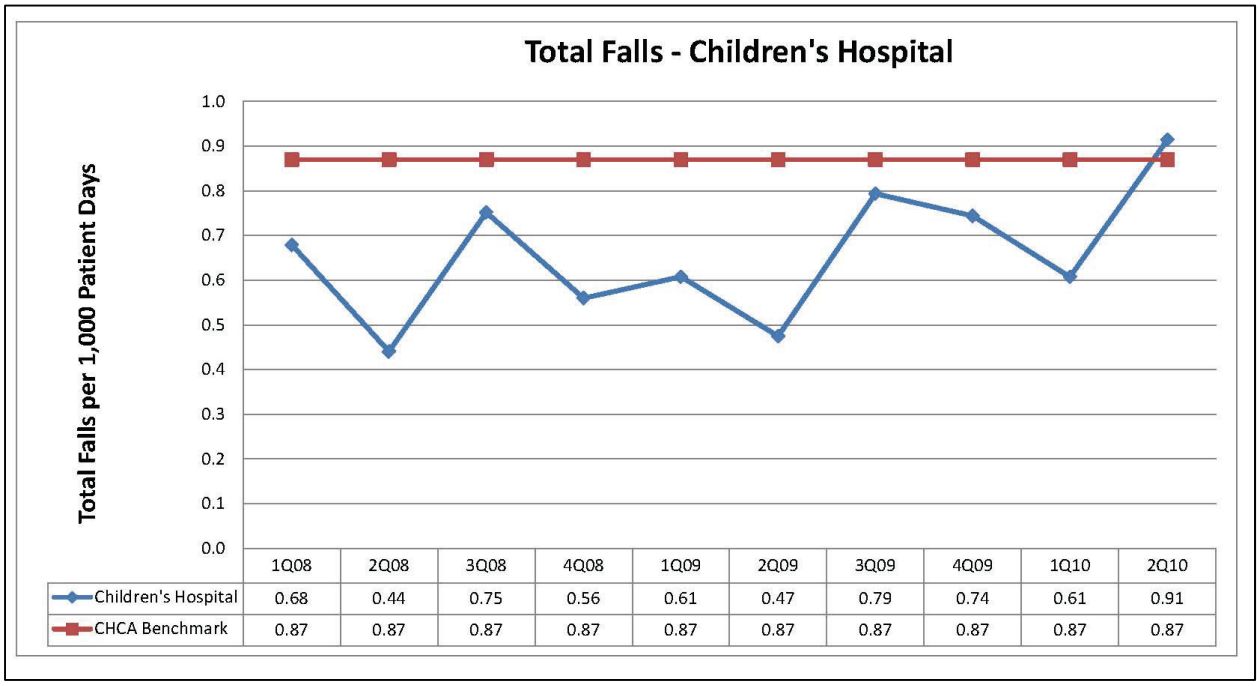
Through the falls committee, a charter was developed and a Pediatric Falls Assessment tool was adopted by Children's hospital. The staff of Children's hospital was educated on the importance of falls safety, the use of the assessment tool, and how to educate families on falls safety. Recommendations from the falls committee also led to documentation of the falls risk score in the electronic medical record, as well as a process for entering Falls Safety interventions in our computerized physician order entry system. After receiving feedback from frontline staff about the barriers of having to enter two systems to document, the group was able to work with our colleagues in informatics to move the documentation all to one centralized location in the nursing electronic documentation system. This move has increased our documentation of assessment scoring and education regarding falls risk to over 90%.

The committee works with Nursing Quality as well as our Performance, Management and Improvement colleagues to analyze the falls incident reports on a monthly basis. Through analyzing the data, we are able to identify trends in units or other areas (i.e. equipment) that need to be addressed. For FY2011, we will begin to monitor the number of assisted falls, number of attended falls, and the number of falls related to toileting.

Data

In the graph below based on our CHCA benchmark, VCH overall (how the data is reported) outperformed the benchmark for 9 of the 10 quarters that have been reported.

Graph 32 EO – 5: Total Falls VCH compared to CHCA Benchmark Data 1QTR 08 – 2 QTR 10



	1Q08	2Q08	3Q08	4Q08	1Q09	2Q09	3Q09	4Q09	1Q10	2Q10
Children's Hospital	0.68	0.44	0.75	0.56	0.61	0.47	0.79	0.74	0.61	0.91
CHCA Benchmark	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87

Pressure Ulcer Prevention Child Health Corporation of America Collaborative

Purpose/Background

Although often thought of as an issue in adult care, pressure ulcers can occur at any age. Evidence shows high rates of pediatric pressure ulcers, especially in Intensive Care Units (ICUs). Studies of pediatric hospitals typically find prevalence rates of 3 to 7 percent among inpatients, with rates as high as 27 percent in ICUs.[1] Child Health Corporation of America's (CHCA) Whole System Measures recently revealed that pressure ulcers are the most common reported "never event" in participating hospitals. Other studies have found that most pressure ulcers occur

within 2 days of admission. There can be very serious consequences with pressure ulcers. They can lead to infections of muscle, blood, and bone, resulting in longer hospital stays, increased costs, permanent injury, and even death.[2]

Monroe Carell Jr. Children's Hospital at Vanderbilt was able to take part in a CHCA collaborative on Pressure Ulcer Prevention. Along with 12 other Children's hospitals, we were able to share best practices as well as track change strategies to see what was working well and what was not.

Methods/Approach

The target population for the collaborative was all inpatients in the Pediatric Critical Care Unit (PCCU), Acute Care units and inpatients in the Emergency Department (ED). The project measures collected throughout the collaborative were ICU Pressure Ulcer Prevalence, house-wide Pressure Ulcer Prevalence, ICU Pressure Ulcer Prevalence by Stage per 100 patient days, and house-wide Pressure Ulcer Prevalence by Stage per 100 patient days. Other process measures includes chart audits for admission skin assessment within 24 hours, admission risk assessment within 24 hours, high-risk risk assessment within 24 hours, preventative care for high-risk patients, and device related pressure reduction for high-risk patients. The balancing measure identified and utilized was Stage 3 & 4 Pressure Ulcer Incidence.

The overall collaborative aim was to reduce pressure ulcers in the ICU by 25% and to increase the pressure ulcer prevention processes to compliance of 95%. Our organization specific goals were to reduce pressure ulcers in the ICU to 3% and reduce house-wide pressure ulcers to 2.25%.

Various key change strategies were used to make this collaborative successful. Some of the change strategies included organizational commitment through monthly data collection and weekly team meetings with key leaders for quality and safety. Assessment was the other category for changes initiated through the collaborative. Through assessment the team members were able to utilize prevalence and monthly chart review data to identify opportunities for improvement as well as evaluate current systems in place such as training, resources and supplies, policies, communication, and documentation. While analyzing our assessments, the team was able to identify gaps in practice that could be discussed and worked on in small groups to help make the collaborative goals successful

Table EP 32 EO – 10: Participants

Elliott Douglass, RN, BSN, CWOCN	Wound, Ostomy, Continence Nurse- Team Co-Leader for collaborative
Lauran Allen, PMP	Quality Consultant, Performance, Management and Improvement- Team Co-Leader for collaborative
Pat Givens, RN, MSN	At that time was Chief Nursing Officer- Senior Leader for collaborative
Donna Williams, RN, MSN	During that period of time became Interim Chief Nursing Officer- Senior Leader for collaborative
Tanya Boswell, RN	Infection Control Practitioner- Team member
Marissa Brown, RN	Nurse Educator- Team member
Angel Carter, RN	Assistant Manager, Acute Care Cardiology- Team member
Beth Chatham, RN	Central Nursing Educator- Team member
Amanda Dawson, RN	Neonatal Intensive Care Unit Educator- Team member
Melissa Lord, RN	Nurse Educator- Team member
Autumne Mayfield, RN, MSN	Manager, Nursing Quality- Team member
Christy Mullen, RN, MSN	Central Nursing Educator- Team member
Debbie Shinkle, RN	Manger, Acute Care Hematology/Oncology Unit Manager- Team member

Outcomes/Impact

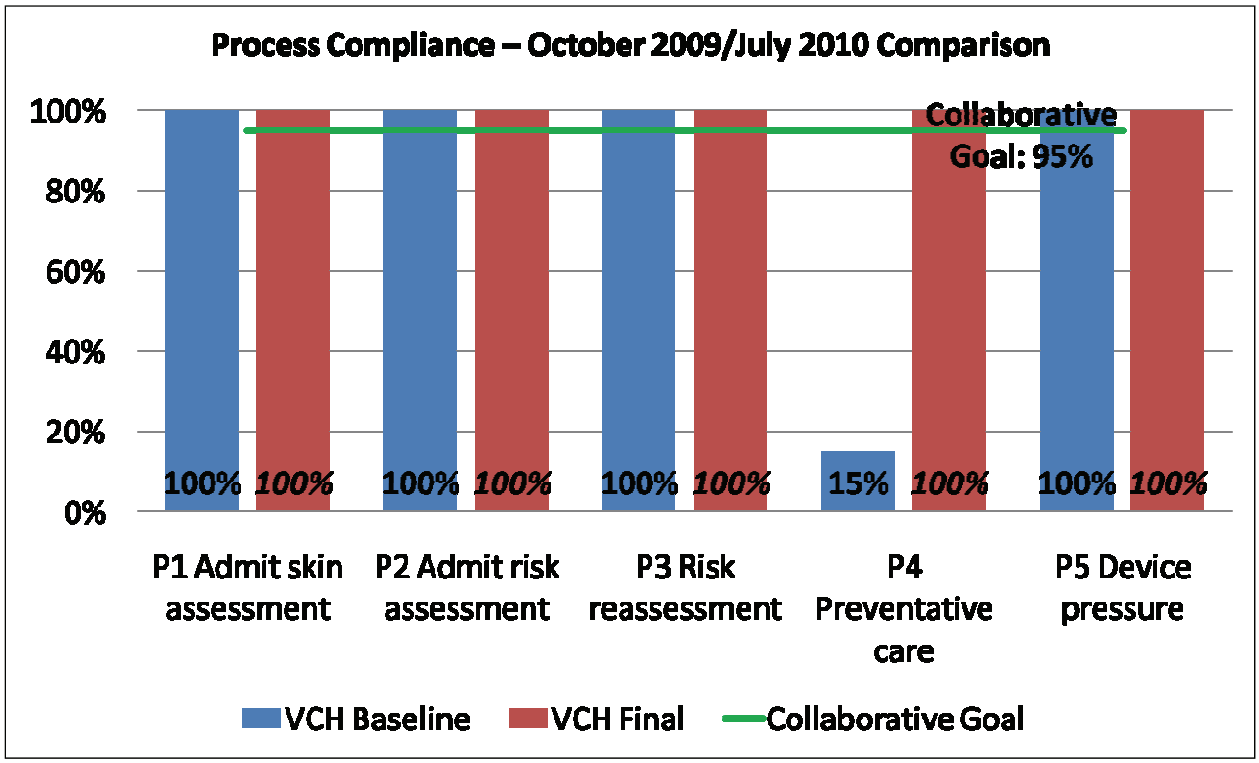
NDNQI Data

Please refer to the graphs for NDNQI data comparison in OO 23. All 6 of the units performed better than the comparison for the NDNQI Academic Mean.

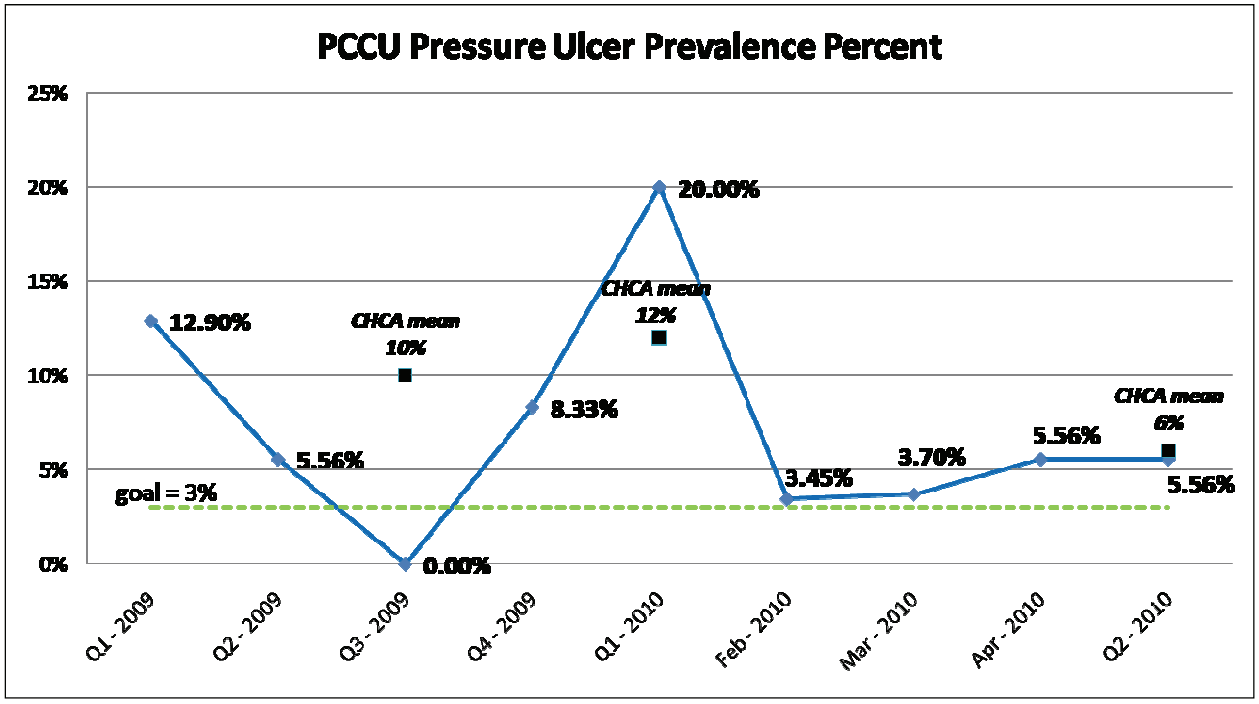
CHCA Data

The following graphs detail the success of our hospital in the work of the pressure ulcer collaborative. Although our goal of 3% prevalence of pressure ulcers in the ICU as not met, we made great strides in other areas such as our documentation of risk assessment and skin assessment.

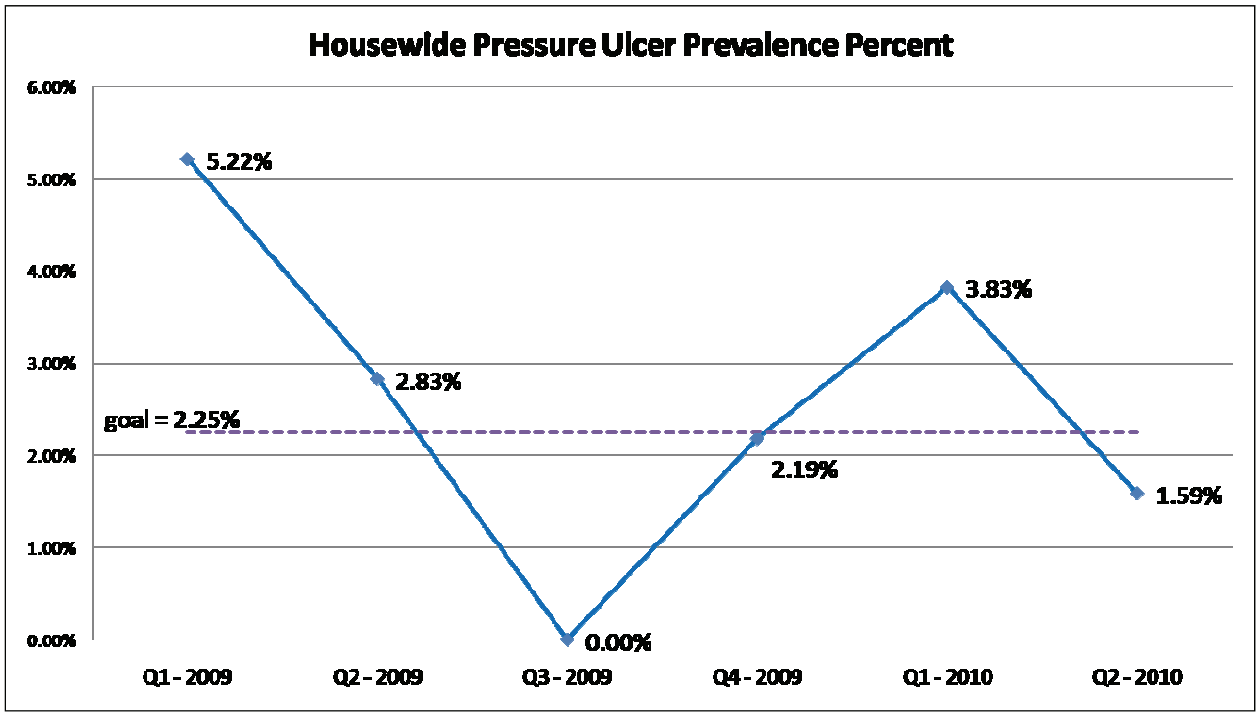
Graph 32 EO- 6: VCH Process Compliance – October 2009 – July 2010 CHCA Comparison



Graph 32 EO – 7: VCH PCCU Pressure Ulcer Prevalence Percent – CHCA Comparison 2009-2010



Graph 32 EO – 8: VCH House-wide Pressure Ulcer Prevalence Percent 2009 – 2010



References:

1. Dixon M, Ratliff C. Pediatric pressure ulcer prevalence-one hospital's experience. Ostomy Wound Manage. 2005;51(6):44-50.

2. Reddy M, Gill SS, Rochon PA. Preventing pressure ulcers: a systematic review. JAMA 2006;296(8):974-84.

Pediatric Emergency Department Left without Being Seen

Purpose/Background

Across the nation, there was an emphasis on patient safety of the patients leaving the Emergency Departments before being seen by a physician due to risk of complications. There is also a loss of revenue that is associated to patients leaving without being seen by a physician. For these important reasons, the Pediatric Emergency Department (PED) at Monroe Carell Jr. Children's Hospital at Vanderbilt was part of a Children's Health Corporation of America (CHCA) collaborative for Decreasing ED Left without being seen (LWBS) numbers. The background before our involvement in the collaborative is Children's hospital was cited by the Centers for Medicare and Medicaid Services (CMS) in 2005 for poor documentation of LWBS/left before evaluation (LBE)/against medical advice (AMA). At that time, a tremendous amount of work was done to improve the documentation electronically.

In 2006, the LWBS rate in the PED was approximately 5%. This was a critical number for the PED that required immediate attention and action. The importance of decreasing LWBS numbers was communicated to the entire management team including charge nurses with rationale to ensure that everyone understood and was on the same page. Almost immediately, we saw a trend down in our data because of the heightened awareness.

Methods/Approach

During the collaborative, CHCA best practices from other pediatric emergency departments were implemented successfully. This began in 2006 as a collaborative over a period of 18 months of gathering and following data and implementing change strategies for effectiveness and has been sustained to the present in the ED. There were monthly conference calls where all hospitals presented their successes and failures for everyone to learn from. One of these strategies included placing a licensed medical provider in the front lobby to see patients as they are registering. Another important change strategy was the empowerment of the charge nurse. The charge nurse or their designee was responsible for ensuring that the patients in the waiting room received excellent communication about patient flow. We also requested from the triage nurse that the charge nurse be contacted for every family requesting to leave before being seen by a physician. The charge nurses had a script to discuss with the family to instill the importance of having their child seen by the medical team.

Additionally, a "waiting room rounder" was implemented. This included a registered nurse in the waiting room at key times. The nurse was able to re-dose on medications as needed and reassess patients as they waited to see a provider. Lastly, the department developed a "Rapid Intake Form" for the licensed provider to complete when the patient was seen at check in. This form prompted the licensed staff to take the necessary information to determine if the patient needed to go back to a room immediately or how often they needed reassessment while they had to wait in the waiting room. These are only a few examples of how we decreased our LWBS numbers to less than 1%. This effort has then been sustained for over 2 years.

Table EP 32 EO – 10: Participants

Barbara Joers, MHSA, ACHE	Chief Operating Officer
Paul Hain, MD	Chief of Staff
Thomas Abramo, MD	Medical director of Pediatric Emergency Medicine
Barbara Shultz, RN, Manager	Manager, Pediatric Emergency Department-Co-chair of Collaborative

Jenny Slayton, RN,MSN	Director Performance, Management and Improvement, Co-chair of Collaborative
Autumne Mayfield, RN, MSN	Charge Nurse, PED
Kate Copeland, RN	Charge Nurse PED
PED nursing staff	

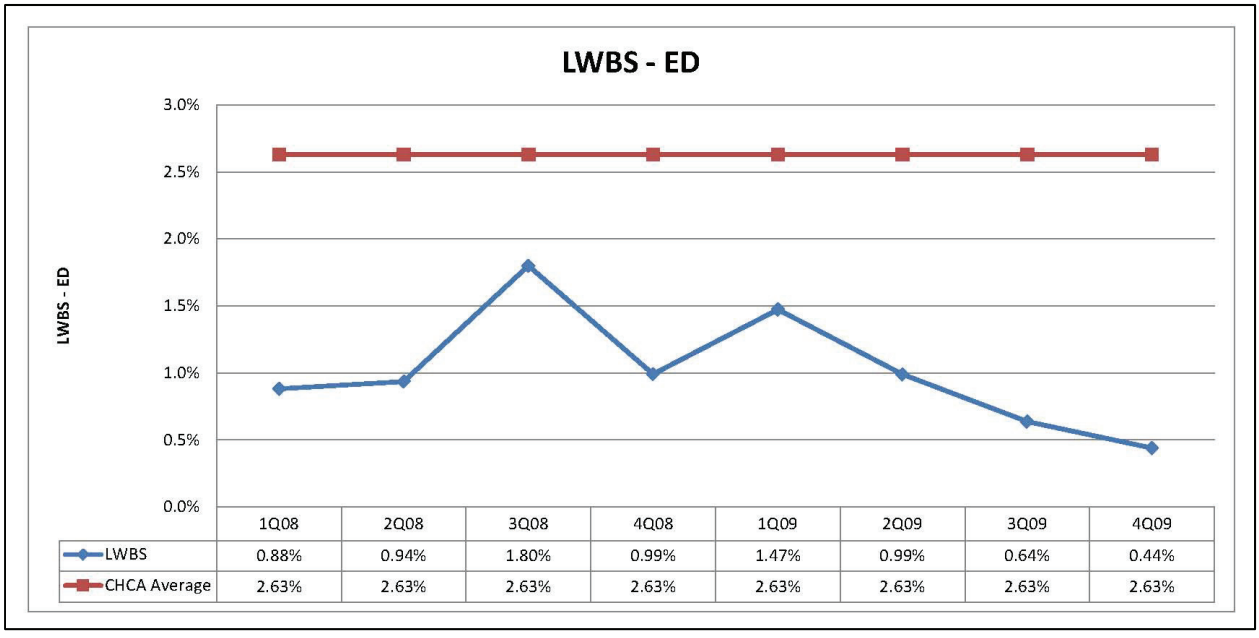
Outcome/Impact

The outcome was definitely success; for the PED as well as the patients and families we serve. We have sustained a LWBS percentage of less than 1 % during as well as since the end of the collaborative in 2006. The PED noted an immediate decrease in LWBS once the project began despite an increase in patient volume. Not only did this increase our patient safety, we also increased our revenue by $35,000 per month. The entire collaborative was focused on teamwork. It was very important to ensure each member of the team was aware of the importance of convincing the patient and family to stay to be seen by the health care team.

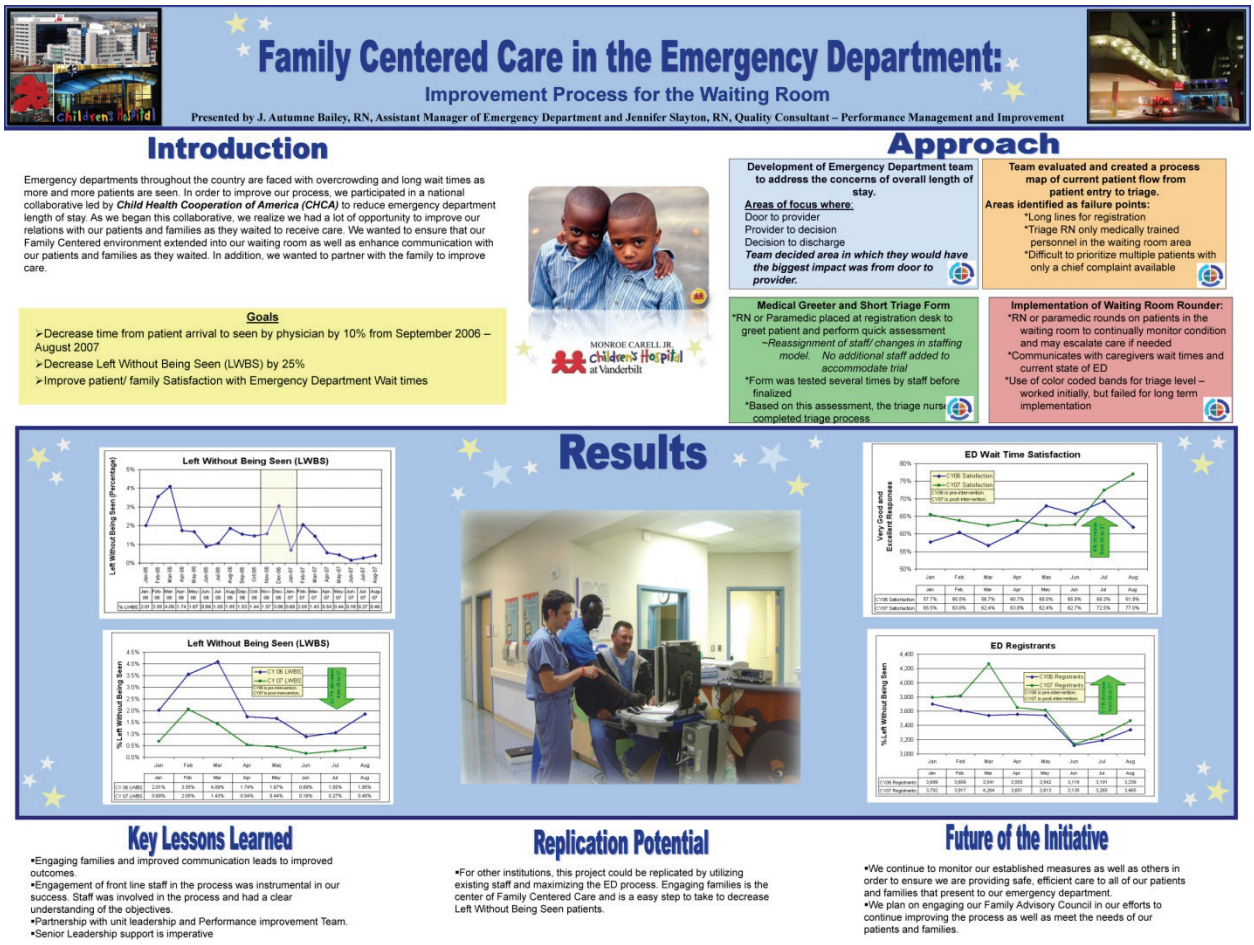
CHCA Data

Per the graph below VCH PEDS ED outperformed the CHCA comparison for the 8 quarters reported.

Graph: 32 EO – 9: PEDS ED LWBS 1QTR 08 – 4QTR 09 CHCA Comparison



	1Q08	2Q08	3Q08	4Q08	1Q09	2Q09	3Q09	4Q09
LWBS	0.88%	0.94%	1.80%	0.99%	1.47%	0.99%	0.64%	0.44%
CHCA Average	2.63%	2.63%	2.63%	2.63%	2.63%	2.63%	2.63%	2.63%



VPH

Restraints

Purpose/Background-

VPH's rate of restraint use has been selected as a measurable outcome. Our hospital has established an organizational commitment to prevent, reduce, and even strive to eliminate the use of restraint, as well as seclusion. A culture of honest communication with our patients and thorough training with our staff surrounding restraint use has been cultivated in order to optimize patient safety and ensure the delivery of the highest quality of care. Each restraint event is evaluated to examine the events leading to the intervention, less restrictive approaches attempted, and the rational for restraint. Information is also gathered upon admission in an attempt to minimize the use of restraint and seclusion. This assessment's intent is to identify tools, techniques, or methods that would be instrumental in assisting the patient to control his or her behavior.

Methods/Approach

Upon admission, each patient/family member/guardian is provided with VPH's philosophy of seclusion and restraint. This is an attempt to provide what is felt to be key information for understanding of our organization's approach to acute interventions in the psychiatric setting. The building block of our philosophy is that the use of restraint and seclusion is limited to emergencies in which there is an imminent risk of a patient physically harming himself or herself or others, including staff.

In addition to Vanderbilt's organization-wide orientation for new employees (Hearts and Minds and You Make a Difference), VPH continues that orientation experience with an additional three day clinical orientation. A key focus of this orientation includes verbal de-escalation training, coupled with behavioral management training. Stressed during this time is that non-physical interventions are always the preferred approach. Also highlighted are the following key focus areas:

- Continuous monitor of the patient for any evidence of physical or emotional distress
- Vital signs and their relevance to the physical safety of the restrained/secluded patient
- Recognizing nutritional/hydration needs
- Checking circulation and range of motion in the extremities
- Addressing hygiene and elimination
- Addressing physical and psychological status and comfort
- Assisting the patient in meeting behavioral criteria for the discontinuation of the restraint/seclusion
- Recognizing readiness for the discontinuation of restraint/seclusion
- Recognizing necessary instances in which to involve the physician and/or EMS to evaluate and/or treat the patient's physical status
- Recognizing how age, developmental considerations, gender issues, ethnicity, and history of sexual or physical abuse may affect a patient's reaction to physical contact
- Using behavioral criteria for the discontinuation of restraint/seclusion and assisting the patient in meeting these criteria.

Identified and supported through hospital leadership is the allocation of a dedicated trainer for each inpatient program. This trainer acts as a resource and expert in practice with regard to our hospital's practiced behavioral management program. There are also two master trainers supported by the hospital who have been conducting the training since 1990.

On a final note, a significant annual competency identified for each clinical employee is a review of pertinent restraint/seclusion policy and definition. This is coupled with a physical demonstration of competency with respect to safe execution of physical interventions associated with VPH's behavioral management program.

Table EP 32 EO 12: Participants

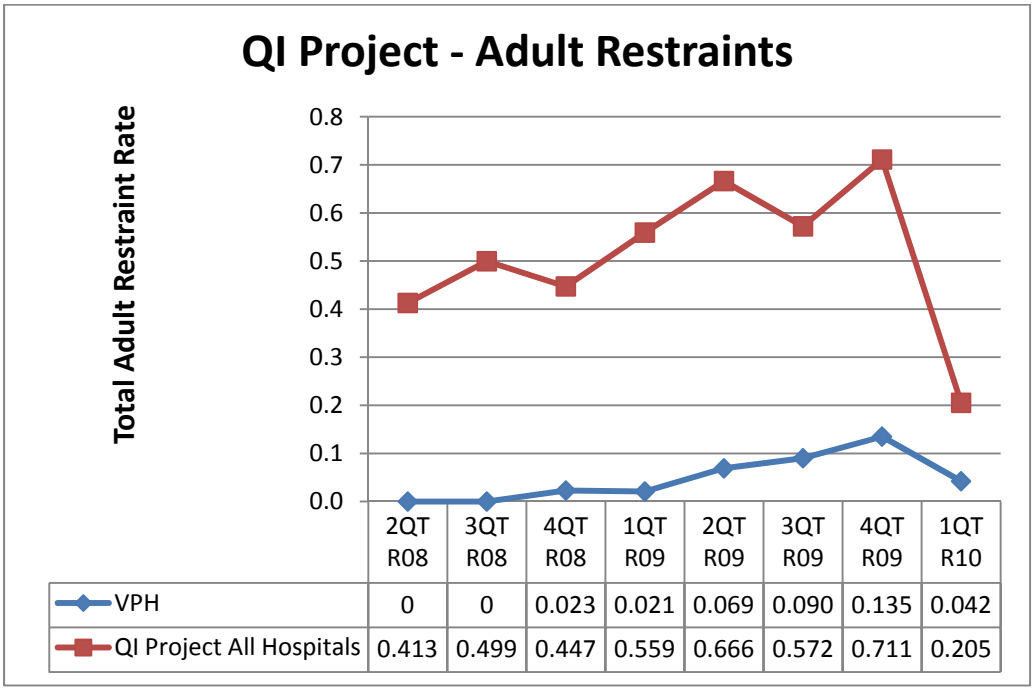
Johnny Woodard RN, BSN	Patient Care Services Manager- Master Trainer
Lori Harris RN, BSN	Patent Care Services Manager
Ro Wallace RN	Patient Care Services Manager
Jon Coomer RN, BSN	Patient care Services Manager
Robert Payne	Mental Health Specialist
Nicole Hutcherson RN2	Nurse
Randy Fuller	Mental Health Specialist
Kate Steinbeck	Mental Health Specialist
Betty Norwood	Utilization Management- Master Trainer
Tim Caldwell	Coordinator Partial Hospitalization
Brandon Walker	Mental Health Specialist

Outcomes/Impact

VPH's rates for adult and adolescent restraints remain significantly below the comparison hospitals identified with the Maryland QI Project. We attribute this to information sharing with our patients and honest, transparent practice philosophies, as well as thorough training for our clinical employees. We, as a hospital, are constantly reminded that patients have an inherent right to remain free of restraint and seclusion, except when clinically indicated. Our staffs are dedicated to preserving their safety and dignity as individuals who are entrusted to us for their care.

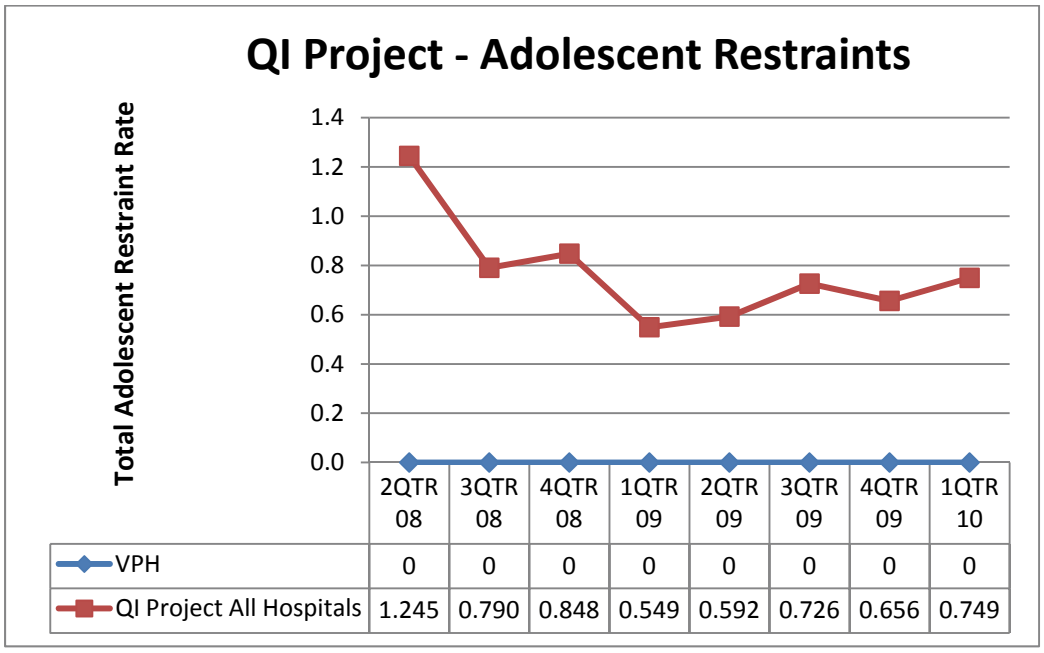
As per the graphs below, VPH has outperformed the comparison for the 8 quarters reported.

Graph 32 EO – 10: VPH Adult Restraints Comparison Maryland QI Project



	2QT R08	3QT R08	4QT R08	1QT R09	2QT R09	3QT R09	4QT R09	1QT R10
VPH	0	0	0.023	0.021	0.069	0.090	0.135	0.042
QI Project All Hospitals	0.413	0.499	0.447	0.559	0.666	0.572	0.711	0.205

Graph 32 EO – 11: VPH Adolescent Restraints Comparison Maryland QI Project



	2QTR 08	3QTR 08	4QTR 08	1QTR 09	2QTR 09	3QTR 09	4QTR 09	1QTR 10
VPH	0	0	0	0	0	0	0	0
QI Project All Hospitals	1.245	0.790	0.848	0.549	0.592	0.726	0.656	0.749

Seclusion

Purpose/Background

Rate of seclusion is selected as a measurable outcome. It stands as an indicator for both patient safety and treatment efficacy. Although our seclusion rates are low, we continue to monitor each episode to ensure we are providing quality intervention and care.

Methods/Approach

During VPH hospital specific orientation for clinical employees, seclusion philosophy and policy is discussed and reviewed. Scenarios are used to illustrate and guide clinical decision making around the use of seclusion. It also encourages critical thinking and problem solving to resolve the situations with as minimal a disruption as possible, avoiding the use of seclusion. A primary annual competency is a review of the seclusion definition, policy, and safety practices, until employee is able to demonstrate understanding.

The patient care managers track every episode of seclusion and submit for comparison to a national database of facilities. Additionally, patient behavior leading to the event is evaluated with each incident to offer feedback to staff and patients involved. As patterns are identified, it is determined by the treatment team whether a modification to the treatment plan is therapeutic. Ongoing education and event debriefing is used to guide staff in the use of alternatives to seclusion.

Table EP 32 EO 12: Participants

Johnny Woodard, RN, BSN	Patient care Services Manager
Lori Harris, RN, BSN	Patent Care Services Manager
Ro Wallace, RN	Patient Care Services Manager
Jon Coomer, RN, BSN	Patient care Services Manager
Robert Payne	Mental Health Specialist
Nicole Hutcherson, RN	Nurse
Randy Fuller	Mental Health Specialist
Kate Steinbeck	Mental Health Specialist
Tim Caldwell	Coordinator Partial Hospitalization
Brandon Walker	Mental Health Specialist
Betty Norwood	Utilization Management

Outcomes/Impact

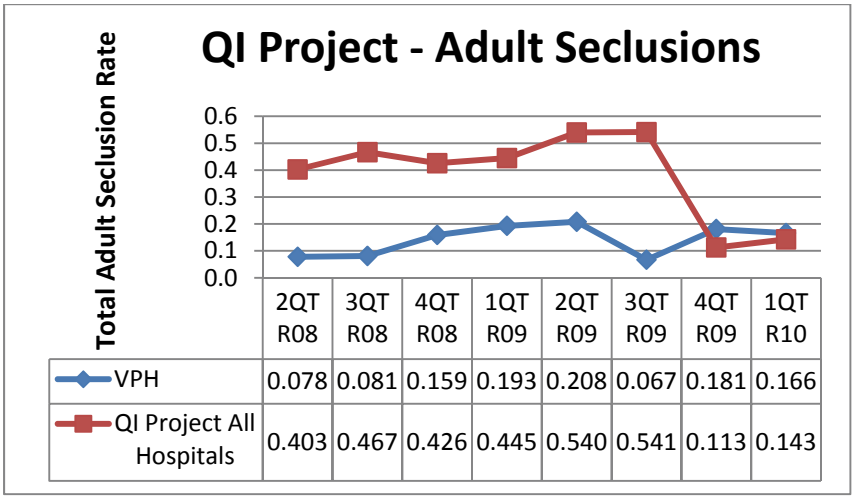
100% of clinical employees are trained at hire and participate in a clinical skill review/competency event during the year. Three of six seclusion rooms are in use for seclusion

throughout the hospital, the remaining three are used for storage. Seclusion rates for both adult and adolescents remain significantly below the comparison group (see graph). VPH leadership and staff continue to evaluate each episode of seclusion in real time in order to maximize the patient outcomes during their hospitalization.

Data

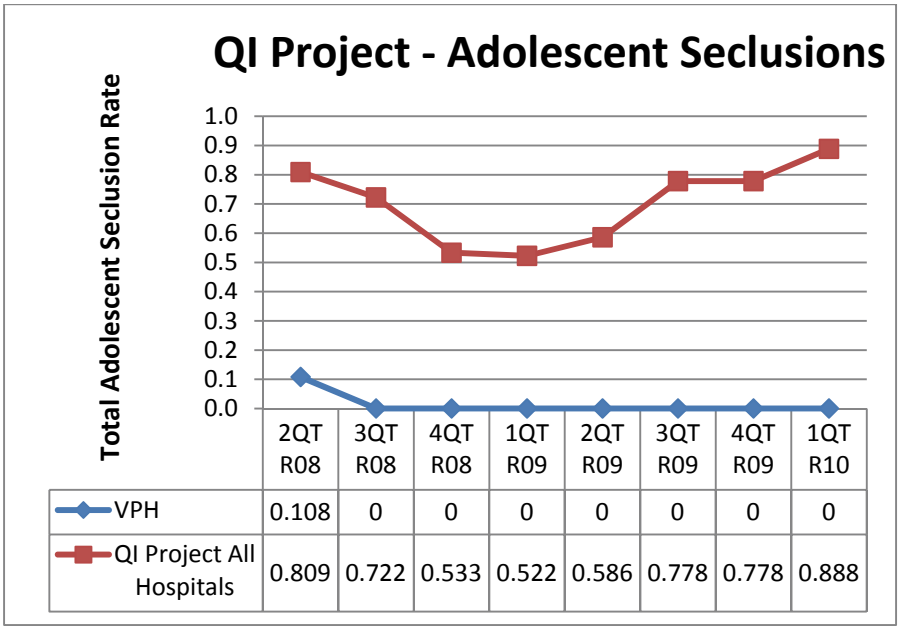
As shown in the two graphs below, VPH outperformed the benchmark for both adult and adolescent seclusion rates as compared to the Maryland Project.

Graph 32 EO – 12: VPH Adult Seclusions Maryland Project Comparison



	2QT R08	3QT R08	4QT R08	1QT R09	2QT R09	3QT R09	4QT R09	1QT R10
VPH	0.078	0.081	0.159	0.193	0.208	0.067	0.181	0.166
QI Project All Hospitals	0.403	0.467	0.426	0.445	0.540	0.541	0.113	0.143

Graph 32 EO – 13: VPH Adolescent Seclusions Maryland Project Comparison



	2QT R08	3QT R08	4QT R08	1QT R09	2QT R09	3QT R09	4QT R09	1QT R10
VPH	0.108	0	0	0	0	0	0	0
QI Project All Hospitals	0.809	0.722	0.533	0.522	0.586	0.778	0.778	0.888

Quality Care Monitoring and Improvement

Source of Evidence 33

Describe and Demonstrate the structure(s) and process(es) used by the organization to allocate and/or reallocate resources to monitor and improve the quality of nursing and total patient care. The nurse has responsibility for ensuring the coordination of care among other disciplines and support staff.

Please refer to Organizational Overview Question 3 for the quality plans for the organization and nursing and to Question 25 for the structures and processes that support and oversee the quality of patient care.

The *Vanderbilt Clinical Enterprise Quality & Safety Accountability & Reporting Flows* chart shown and discussed in EP 31 and 32 shows the structure and the multiple councils, committees, task forces and processes that support quality and patient safety at Vanderbilt. Each of these councils, committees, task forces and processes has key nursing representation and the processes are interdisciplinary. At any juncture, discussion can occur regarding the allocation or reallocation of resources to monitor and improve the quality of nursing and total patient care.

Although represented widely on all groups that address overall quality and patient safety, nursing centric groups as presented in EP 32 include:

- Nursing Quality Council
- Clinical Practice and Policy Committee
- Entity Specific Nursing Councils
- Entity Specific Interdisciplinary Quality Committees
- Area Based Boards and Committees
- Issue specific Task Forces (such as Falls, Pressure Ulcer Prevention, etc.)

Nursing staff are responsible for the overall coordination of safe, quality care and serve as the patient safety officer for each patient. This role is supported by educational programs and resourced workflow design that is a result of the patient safety and quality activities across the organization.

Nursing staff are supported to attend meetings and lead/participate in quality and patient safety initiatives. Unit budgets and staffing grids allow scheduling for staff in quality

initiatives, including meeting attendance, data collection, etc. Other support provided includes clerical or administrative assistant support for coordinating work activities, including meetings and E-mail for communication purposes.

Nursing leaders are able to obtain and receive data from various systems, departments and sources which were outlined and demonstrated in EP 32. These resources support the sharing of data and provide nursing the ability to act quickly in real time.

The Center for Clinical Improvement (CCI)

CCI is a fully resourced department for the work of performance improvement in quality and patient safety. The staff includes a group of nurse consultants who work as facilitators for improvement activities and to support recommendations for change such as the allocation or reallocation of resources. These consultants work with organizational teams to be the "quality and safety" experts bringing to the table specific skills in performance improvement and reliability science.

Oversight

The Quality Steering Committee provides a broad oversight for all patient safety/quality activity throughout the enterprise. Their membership is encompassing of representatives (including nursing) from throughout the Medical Center. *(Refer to OO 15 for membership)* Any over arching organization-wide issues requiring high cost/high resource use would be vested and prioritized through the Steering Committee and could come from any committees, task forces, or groups across the Medical Center. All quality activities and initiative reporting filters through the organization wide Quality and Patient Safety Council, which would show trends and issues that are prominent house-wide.

The structure in nursing also supports patient care resource allocation or reallocation. Changes can be at the entity level only and/or across the enterprise of nursing. The Nursing Quality Council serves as a clearing-house.

Examples demonstrating the allocation or reallocation of resources to monitor and improve the quality of nursing care include:

Adult Clinics Hypertension Improvement Project

Led by Sharon Mullins, RN, BSN, MA, this project is designed to develop and implement an agreed upon strategic plan of care for hypertensive patients across designated Clinics (Cardiology, Internal Medicine, Diabetes, Nephrology, Hypertension) in an effort to improve the

percentage of patients within target BP measurement according to The Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure (JNC7) Guidelines. This was accomplished with the development of a clinical algorithm implemented at each clinic visit.

Phase I of this work included the allocation of funds to standardize all the blood pressure equipment in the clinics to aneroid. *(More information in OO 23 and NK)*

Children's Inpatient Oncology & Hematology/Oncology Clinic

To provide coverage for all areas of the Center for Childhood Cancer and Blood Disorders, a plan was developed that supported the nursing staff to cross-train for each area. This provides additional resources for coverage. This plan also supports the continuum of care by having nurses who know each aspect of care and are the coordinators of patient care across the continuum.

The outcome was that this system was very beneficial to all parties. We evaluated by skill sets and patient satisfaction. Since the patients move in and out of the clinic and hospital, the patients and families knew the nurses covering and felt very comfortable with the care they provided. This had been an issue with other coverage in the past.

We had several staff that oriented and now can provide intermittent coverage. This has also further developed relationships between inpatient and outpatient staff. See the results of patient satisfaction below.

Table EP 33 – 1: Children's Oncology Services Patient Satisfaction Data (PRC) FY 2009

National Percentile Ranking	6A	6B	Clinic
Overall Quality of Care	93%	100%	99%
Overall Quality of Nursing Care	96%	96%	95%
Nurse responsiveness to	100%	100%	

needs			

Adult Emergency Department Triage Process

Over a period of time the Adult Emergency Department began to see their Left without being seen rate increase as their volumes increased. Over a period of time, the triage nurses determined that the creation of an Observation Unit would help the ED patient flow and decrease the wait time and thus the LWBS rate. An Observation Unit was created and quickly the LWBS rate significantly decreased. (*Detailed information in EP 33 EO)*

OB/GYN Unit Staffing

The development of an acuity tool by a nurse led to budget changes and an increase in nursing FTEs for this unit to support a change in staffing ratios and to support thevariability in acuity based on a diverse patient population.

Admission Nurse Role within the Float Pool

A dedicated admission nurse role in the "float pool" to be utilized at times of heavy admissions was created. This role is responsible for admission histories and activities around getting patient admitted and oriented.

Bar-coding Medication Administration System

All inpatient units have the Admin-RX bar bedside bar coding system for medication administration designed to decrease the potential for medication events by nursing and to improve overall patient care.

Labor and Delivery Beds

In early 2009, the nurses expressed concern regarding several birthing beds. They were concerned about the risk for patient and staff falls due to the failure of the brakes on the beds to remain locked. The beds were sent to the bed shop for evaluation and repair, however, the brakes continued to fail even after replacement. In addition, the beds tended to "run away" when the staffs were moving the patient to the OR. Another bed failed to go into trendelenburg immediately during a code. Further investigation revealed the beds were also approaching obsolescence by the vendor. A capital request for emergency capital was approved and 5 new beds were ordered and received one month later. [*EP33-Exhibit A-1-Birthing Bed Request. EP33-Exhibit A-2-PO for Birthing Bed]*

Direct Care Staff request Purchase of Bladder Scanners

Vanderbilt has undertaken many efforts to decrease the patient risk for "catheter-associated" urinary tract infections. An interdisciplinary group working to address the prevalence of catheter-related infections developed a protocol for more timely removal of foley catheters. (Details in EP 32 EO) A potential consequence of early removal is urinary retention. Historically, to assess for urinary retention the nurse had to rely on patient's subjective symptoms, the presence of palpable bladder distension, or had to perform intermittent catheterization to determine residual urinary volumes. This predisposes the patient to additional infection risk and is uncomfortable for the patient. The early foley removal protocol is nurse driven and supports autonomous decision-making at the bedside by the nurses.

Several VUMC Nurses attended the AACN National Teaching Institute and Critical Care Exposition in May of 2010. At the conference, they found Verathon – a company who manufactures and distributes bladder scanners. This is a simple device that allows the nurse to place a sensor on the patient (over the region of the urinary bladder) and by simply clicking a button it will provide a digital reading of the residual urine volume in the bladder. The staff saw the device, contacted an administrative director who was present at the conference and asked him to come see the device. Back at Vanderbilt, the staff continued to ask for support to purchase these devices for the hospital. This is considered a standard of care in many facilities but only one such device was available at VUH. Additional units heard about the device and asked if one could be purchased for their area.

Advocates for this product included:

- Donna Sabash RN, BSN,CCRN, Charge Nurse in SICU
- Melissa Jo Powell RN, BSN, MHA Educator in Colorectal/GYN Surgery
- Christine Kennedy RN, BSN, MHSM, Administrative Director for Inpatient Medicine
- Roxy Baumgartner RN, MSN, APN Adult Urology
- Phebe Bloomingburg RN, BSN, Nurse Manager Ortho/Urology inpatient

As a result of seeing this product at the national conference and making a solid clinical case to demonstrate the need, 2 scanners have been purchased. One will be housed in the critical care tower to be shared by SICU, NCU, and MICU. The other will be housed in the Round Wing and will provide service to patients who have had urologic surgery as well as gyn surgery –

two patient populations at high risk for urinary retention with complications. [*EP33-Exhibit B-1-Bladder Scanner PO, EP33-Exhibit B-2-Bladder Scanner Training Email*]

Equipment Changed to meet Staff Needs

When AdminRX was first implemented on the Myelosuppression Unit in VCH, the staff indicated that they wanted to leave the existing laptops in the rooms and add bar code scanners. They believed this was the best solution due to the amount of space available in the rooms. Fairly quickly the staff realized the equipment was inadequate due to the size and visibility of the screens.

Through a Unit Board meeting which included our IT Systems Support expert Ron Reed, RN, the issue was discussed. Based on the staff feedback and continuing problems, other equipment options were presented to the staff. A two week pilot of using Workstations on Wheels (WOW) was completed. Based on the feedback of this pilot, new computers and carts (WOW) were ordered.

You're Not My Type: Changing the Policy for Type and Screen in the Operating Room

Obtaining a blood type and screen (T & S) is standard procedure for many surgical patients. Hospital policy stated that a T & S expired 72 hours after being drawn. Most of our surgical patients are evaluated in the pre-operative clinic (VPEC) more than 72 hours before their surgeries. New computer software in the blood bank increased the amount of time it took for T & S to be drawn and processed. This delay impacted the OR for patients having T & S performed the morning of surgery. Patients with positive antibodies experienced long delays, frequently resulting in cancellation or delays of their surgeries. This was anxiety producing for the patients/families and nonproductive for surgery. We needed to determine if we could change the hospital policy to allow extended time limits for T & S in patients meeting specific criteria.

An interdisciplinary team of staff from the blood bank, anesthesia and periop clinical staff collaborated to change the hospital policy to allow a T&S requested by the pre-operative clinic to be extended for 14 days if the patient met certain criteria. We researched the guidelines of other medical centers around the country; the Cleveland Clinic & UPMC in particular. These other medical centers extended their T & S to 30 days but our blood bank

does not have physical space to hold that many specimens. Based on space limitations, we recommended the policy be changed to extend the T & S for 14 days for patients who met the following criteria:

- The patient has not been pregnant within the last 90 days.
- The patient has not been transfused within the last 90 days.
- The patient does not have positive antibodies.
- The patient was undergoing a procedure that had an increased chance of blood loss.

Patients meeting these criteria and having surgery within 14 days now have their T&S extended for 14 days. Patients who do not meet the criteria are required to have a T & S within 72 hours of surgery. Once this change was agreed upon by the team, a policy change was approved by the Clinical Practice Committee. The staffs were education on the policy change. The effect of this policy change was monitored through number of surgical delays and cancelations related to inappropriate T & S.

Table EP 33 – 2: Project Team Members

Personnel	Title	Credentials	Role
Russell Kunic	Manager, Pre-operative Clinic	RN, FNP	Project leader
Diane Johnson	Director, Peri-operative Services	RN, MBA	Team member
Susan Calderwood	Co-medical Director Pre-operative Clinic	MD	Team member
Annemarie Thompson	Co-medical Director Pre-operative Clinic	MD	Team member
Scott Hoffman	Director, Main OR	MD	Team member
Eileen Ricker	Director, Blood Bank	MT, ASCP	Team member
Pampee Young	Medical Director, Blood Bank	MD	Team member

Implementation of the new T & S policy significantly reduced the OR start time delays and cancellations because of extended T & S. Patients with unknown antibodies are now identified in advance, and return to the pre-operative clinic within 72 hours of surgery for their T & S. This eliminates the need for a day of surgery redraw for T & S. This policy change has also

increased the volume in our clinic for pre-operative evaluation & testing. This practice change had a substantial impact on the patient's perioperative experience, the nurses' satisfaction and the cost savings related to decreased delays in surgical start times.

Statement from Policy – CL 30-07.06 Blood Product Administration:

IV. Procedure(s):

A. Obtaining sample for blood administration:

1. Type and screen is required for any red blood cell or whole blood product and may be used for up to three days after it is drawn.

    a. For Neonatal Intensive Care Unit (NICU) patients, the type and screen sample may be used for the entire admission provided only O negative red blood cells are given and the baby remains under four months of age based on date of birth.

    b. For pre-operative patients who have not been transfused or pregnant in the last 3 months, the type and screen sample may be used for an extended period of time after it is drawn according to Blood Bank protocol.

2. Platelets and plasma also require a type and screen completed during the current admission. For outpatients receiving plasma or platelets on a regular basis, a sample is not required provided the Blood Bank has the current patient's blood type on record. Plasma requires an ABO/Rh type confirmation every 30 days.

Quality Care Monitoring and Improvement

Source of Evidence 33 Empirical Outcome

Describe and demonstrate how the allocation and/or reallocation of resources improved the quality of nursing care.

Left Without Being Seen: Reallocation of Space to Improve Overall Quality of Care in the Adult ED and for Cardiac Observation Patients

Purpose/Background

The left without being seen (LWBS) rate in the Adult Emergency Department went from 1.8% in January 2009 to 4.6% in September of 2009. In numbers, this was an increase from 75 patients to 184 patients who left the ED without being seen. The Office of Inspector General (OIG) considers any LWBS of 7% or greater an indication that an ED is unable to manage patient flow volumes, and we were creeping close to that figure. The ED also used the University Health System Consortium (UHC) benchmark of 3.5% as a target goal once the project had begun. Increase in LWBS has both a clinical and a financial impact. History has shown that some of our higher risk patients are typically those that tend to leave. The ED nursing staff was concerned for several reasons:

- If there was a "backlog" of patients waiting to be seen, were they rushing with patients which could potentially cause errors or mistakes

- Were the patients waiting to be seen being "triaged" appropriately in order that a potential acute situation (high risk patients) did not occur once a patient LWBS

- Were the current ED observation patients being monitored and discharged appropriately

Methods/Approach

Interdisciplinary emergency bed meetings were initiated. An analysis of patient flow, numbers and types of observation patients and potential reallocation of patients was explored. At this time, seven (7) ED beds were reserved for cardiac observation patients. In November 2009 the Cardiac Observation beds were relocated to the Cardiac Cath Lab to free up those seven (7) beds for ED observation (non-cardiac) patients.

Table EP 33 EO – 1: Participants

Janice Sisco	RN, BSN	Adult Emergency Department Nurse Manager ED LWBS Project Manager
Janice Gabbard	RN, BSN, MSN	Nurse Manager, TVC (relocation) Observation Project Manager
Brent Lemonds	RN, BS, MHA, EMT	Administrative Director, Emergency Services
Deb Chamberlain	RN, BSN, MBA	Administrative Director, VHVI Inpatient
Marie Hasselbald	RN, BSN	Administrative Director, VHVI Cardiac Cath Lab/OR
Kristy Bare	RN, BSN	Assistant Manager, Adult ED
Karen Sturbutzel		Director, Service Center
Mark Sullivan	DPH	Director, VUH Pharmacy
Susan Clark		Linen Services
Susan McDonald		Informatics Support
Nola Vest	RN,BSN, Med	IT System Support Services, Specialist II
Staff		Adult Emergency Department, TVC Observation Unit, and Cardiac Cath Lab

Outcomes

By December 2009 the LWBS rate had decreased to 2% or 81 patients. Therefore, by the end of 2009 our LWBS rates were below the OIG and UHC benchmarks. This change in location of an observation unit required collaboration between the leadership and nursing staff of two patient care areas – cardiology and the ED. Interdisciplinary teamwork with support services and pharmacy was critical in making this change in a short period of time. There was an allocation of 8 nurses to provide care for these observation patients.

Not only did this free up ED beds, the cardiac observation patients were not being cared for by cardiac cath lab staff. If the patients did require further treatment/procedures, the relationship was established and the patient was in the right place for care to move quickly.

Graph EP 33 EO – 1: Left Without Seeing a Physician

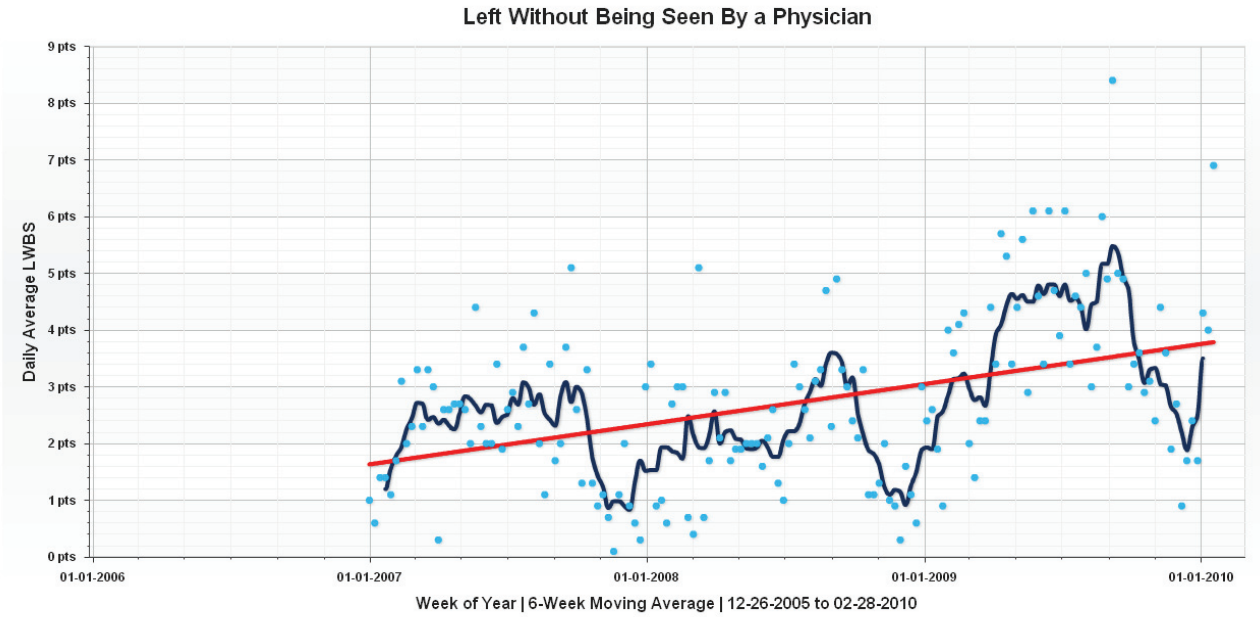
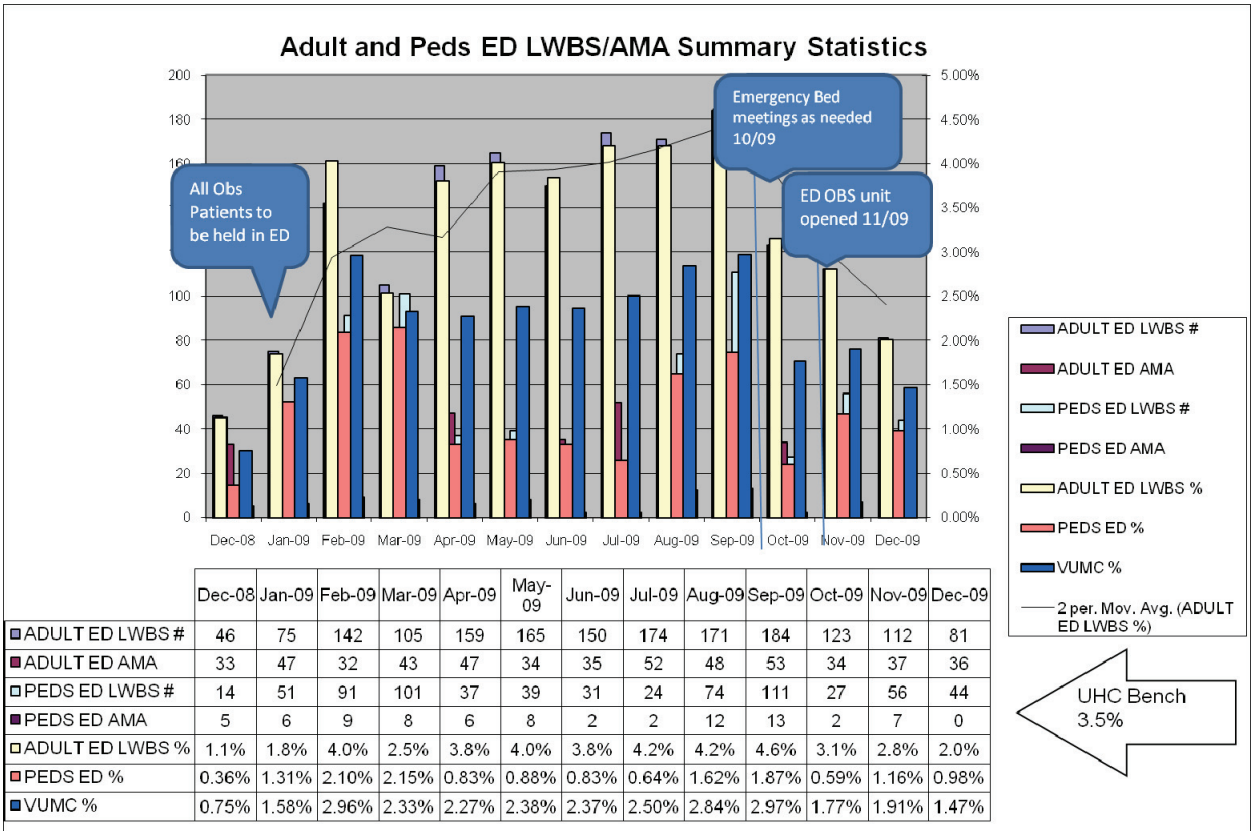


Table EP 33 EO – 2: Cost to Organization of ED LWBS

4 patients per day = 3 patients x $72 =$216 x 365 = $78,840 1 patient x $929 = $929 x 365 = $339,085 TOTAL: $417,925 + MRI + CT Scans + Labs + Consults + Physicians Fees.

Graph EP 33 EO – 2: Summary Statistics of LWBS



	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	May-09	Jun-09	Jul-09	Aug-09	Sep-09	Oct-09	Nov-09	Dec-09
ADULT ED LWBS #	46	75	142	105	159	165	150	174	171	184	123	112	81
ADULT ED AMA	33	47	32	43	47	34	35	52	48	53	34	37	36
PEDS ED LWBS #	14	51	91	101	37	39	31	24	74	111	27	56	44
PEDS ED AMA	5	6	9	8	6	8	2	2	12	13	2	7	0
ADULT ED LWBS %	1.1%	1.8%	4.0%	2.5%	3.8%	4.0%	3.8%	4.2%	4.2%	4.6%	3.1%	2.8%	2.0%
PEDS ED %	0.36%	1.31%	2.10%	2.15%	0.83%	0.88%	0.83%	0.64%	1.62%	1.87%	0.59%	1.16%	0.98%
VUMC %	0.75%	1.58%	2.96%	2.33%	2.27%	2.38%	2.37%	2.50%	2.84%	2.97%	1.77%	1.91%	1.47%

Clinical Pharmacist Added to Pediatric Emergency Department Interdisciplinary Team

Purpose/ Background

Through the process of interdisciplinary Unit Board/Quality reviews of quality of care/patient outcomes in the Pediatric Emergency Department, a pilot was developed to evaluate the use of the clinical pharmacist role. Literature review of the evidence shows that in other institutions, the involvement of clinical pharmacists in direct patient care has resulted in safer and more effective medication usage. The 1999 report, "*To Err is Human,"* highlighted the fact that emergency department settings have some of the highest rates of preventable adverse events. Having a pharmacist to support nursing and patient care would be advantageous to assist in the prevention of medication events. The VCH emergency department has anywhere from 2-5 acute cardiopulmonary resuscitations each month as well as approximately 2,000 Level I or Level II trauma resuscitations each year. Each of these

patients requires a number of medications and quick calculations that have the potential to result in serious medication events. In 2008, our clinical staff reported 7 adverse drug reactions as well as 124 medication and fluid administration events/ near misses.

In early 2009, there were already reports of one adverse drug reaction as well as 98 medication and fluid administration events. The goal was to bring the number of medication events with harm to zero.

The America Society of Health-Systems Pharmacists (ASHP) wrote in 2006 that, "*shortages in both nursing and physicians will be a driving force in expanding pharmacist involvement in the ED*." In the last 2 years, the number of pharmacists practicing in emergency departments around the country has nearly doubled.

This work was a collaborative between the pediatric inpatient pharmacy and the Pediatric Emergency Department.

Methods

An interdisciplinary team was formed to examine this potential. Due to an extensive literature search and documented evidence, the planning team predicted that a clinical pharmacist would:

- Increase the amount of time the nurses have to spend with patients as they would be freed up from tracking down medications
- Support that medications could be mixed/checked closer to the point of care, therefore freeing up the nursing staff to provide direct patient care
- Decrease order to administration time
- Decrease the turn-around time for oral or intravenous antibiotics that are required prior to discharge from the emergency department
- Streamline the discharge process
- Decrease overall length of stay for the patient in the department
- Work in conjunction with the interdisciplinary team to make expedited and appropriate decisions regarding further care that may be needed; such as discharge with oral antibiotics versus the need to be admitted for intravenous antibiotics

- Work in conjunction with the interdisciplinary team to determine the level of care needed, ICU vs. acute care vs. discharge – potentially decreasing the "door to decision" time as well as the "door to disposition" time

- Support proper "door to drip" time for high risk patients including diabetics who require insulin, spinal cord injuries requiring Solu-Medrol, and unstable patients in cardiovascular shock who require a number of pressure supporting medications

- Support the monitoring of drug compatibility and best practice use of medications

- Eliminate the duplication of medications being prepared. For example, the staff mix and prepare oral Decadron and administer and another dose usually arrives from pharmacy within thirty minutes

- Follow the patients until disposition thereby ensuring that medications follow the patients to other areas of the hospital

- Ensure that medication administration records have correct times on them, and that medication reconciliation occurs prior to discharge

The pilot consisted of the interdisciplinary team collecting data and monitoring for the above metrics. Two pharmacists were placed in the Pediatric Emergency Department for 4 hours a day for 15 days during peak volume times (1700-2100). They utilized a laptop computer, 2 workstations on wheels and a locked medication tackle box. The medication tackle box included: STAT meds, frequently prescribed antibiotics, anti-seizure medications, and steroids.

During this time, the pharmacists' responsibilities included:

Table EP 33 EO – 3: Pharmacist Responsibilities in the ED

Routing medications	Prospective profile review
Processing medication orders	Participation in codes and trauma cases
Preparing & dispensing medications	Obtaining medication histories
Answering medication information questions	Patient education

The team also decided that a staff survey would be completed to get the "subjective" response for the pilot. Participants included:

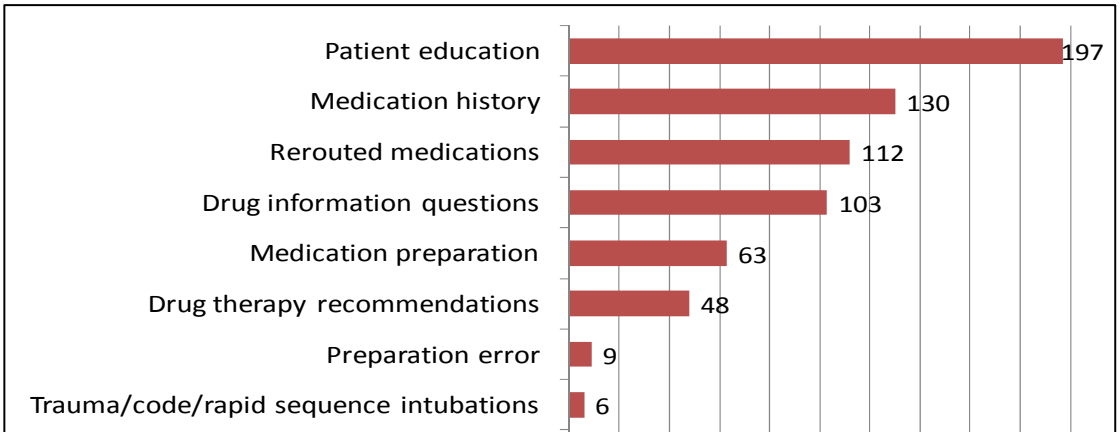
Table EP 33 EO – 4: Participants in Pilot

Direct Care Nurses	Pediatric Emergency Department
Kate Copeland, RN, CPN, BSN	Nurse Manager, PEDS ED
Katie Koss, RN, CPN, ENPC, BSN	Assistant Nurse Manager, PEDS ED
Jessica Inkster, RN, BSN, MSN	Administrative Coordinator, VCH
Missy Hollingsworth, RN, ENPC, BSN	Assistant Nurse Manager, PEDS ED
Elizabeth Humphries, Pharm D	Director Of Pharmacy, VCH
Jenny Jastrzembski, Pharm D	Assistant Director of VCH Pharmacy
Amy Potts, Pharm D	Manager, VCH Pharmacy
Pratish Patel, Pharm D	Clinical Pharmacist
Thomas Abramo, MD	Medical Director PEDS ED
Matt Gentry	Graduate Student

Outcomes:

Based on the predictions as outlined above, the bar graph below shows the allocation of the pharmacists' time as they logged the information.

Graph EP 33 EO – 3: Allocation of Pharmacist Time



There were 62 responses to the REDCap survey of 28 questions to evaluate the process and 81% of them were nurses. Probably the most revealing question and answers is below:

Which of the following do you think is the most important role of the emergency department pharmacist?

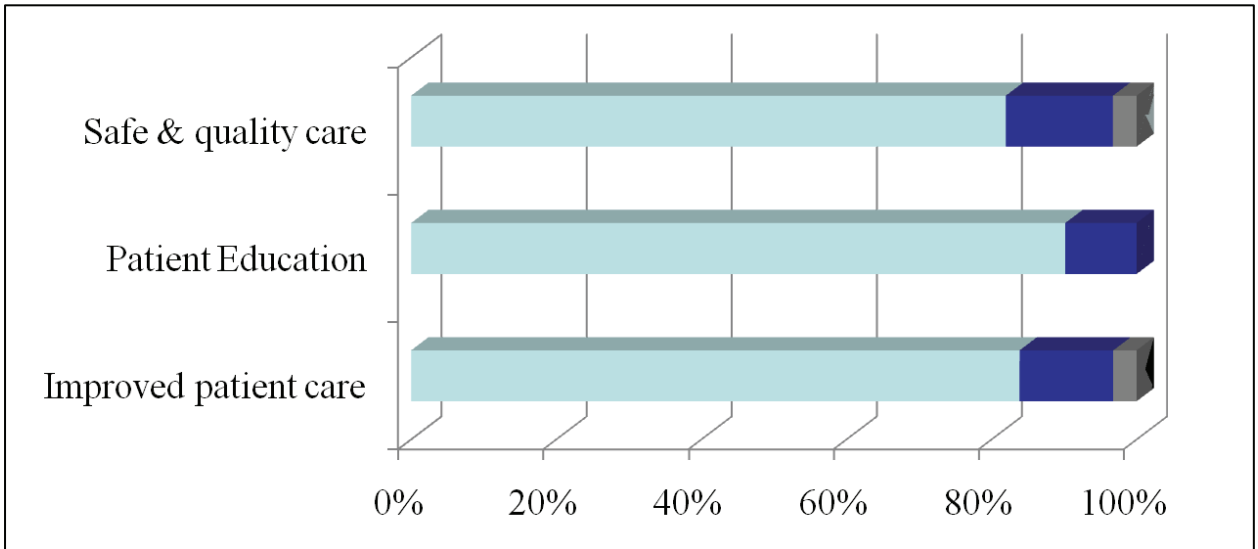
Table EP 33 EO – 5: Role of Pharmacist in ED

Role	Percentage answering as most important
Participating in codes and traumas	57%
Prospective order review	23%
Drug information consultations	16%
Staff education	3%
Patient education & counseling	1%

Even though the pharmacists' logged that they spent the most time in patient education, the staff answered that "participating in codes and traumas" was what they thought was most valuable about the study.

The bar graph below shows the opinions of the staff in having the pharmacists.

Graph EP 33 EO – 4: Staff Opinion of Pharmacist in ED



Based on the results from the pilot study, the Pediatric Emergency Department now has clinical pharmacists that respond to all codes and trauma cases. This supports the nurses who are working quickly on the calculations for pediatric dosing; decrease in room for errors. Having this support has also given the nurses the time to attend to other responsibilities that come with emergency situations. The next step of having full-time pharmacists is being explored for budgetary adjustments. [*EP33EO-Exhibit A-1-ED Presentation Gentry Final 04-15-10, EP33EO-Exhibit A-2-PEDS ED Pharmacist email, EP33EO-Exhibit A-3-Code-Trauma Memo for PEDS ED]*

Quality Care Monitoring and Improvement

Source of Evidence 35

Describe and demonstrate the structure(s) and process(es) used to identify significant findings and trends in overall patient satisfaction with nursing as compared to benchmark resources

Introduction

At Vanderbilt Hospitals and Clinics, we are committed to excellence in patient care. Our credo guides our work and our interactions with colleagues, patients and visitors. Our philosophy of nursing as outlined in the Nursing Bylaws supports patient/family centered care.

(S*ee Organizational Overview Question 26 and following this question Exemplary Professional Practice Question 35 Empirical Outcomes for further data and information.)*

Structure/Process

In 2005, Vanderbilt's service excellence program, ***Elevate***, began with the introduction of the service pillar and a dedicated focus on patient satisfaction. Pillar goals are tied to service and service excellence. Patient satisfaction scores are included in performance evaluations as well as incentive plans to recognize those areas, managers, administrators, faculty and staff that excel in the service goals.

(*The Pillar Goals as the strategic plan for the Medical Center are outlined in Organizational Overview Question 3)*

Our ability to support quality patient care, excellent outcomes and a positive experience for every patient at every Vanderbilt contact point is based on our ability to receive feedback quickly and address issues as they arise. Patient satisfaction is measured using a telephone methodology implemented through the department of Strategic Development and Professional Research Consultants (PRC) in Omaha, NE. Professional Research Consultants is a healthcare survey and consulting firm and has been in business for 30 years. Among their clients is the Mayo Clinic, Carolinas Health System, Novant Health and BJC HealthCare.

Patient Surveys

The survey effort is ongoing and measures patient satisfaction across the inpatient (adult, pediatric, psychiatry), outpatient (VMG clinics, outpatient technical, ambulatory

surgery), emergency (adult, pediatric) and urgent care settings. PRC also conducts the HCAHPS survey for Vanderbilt which is the survey required by CMS. PRC takes a sample of patients from each area being surveyed and trained interviewers make telephone calls each week. Each survey is customized for the particular patient population. The calls occur from 1 to 2 weeks after the patient has been to Vanderbilt.

Results

A web-based electronic system provides nurses at all levels access to the results that are placed in ***PRCEasyView*** within 24 hours of the call. Updates from patient satisfaction interviews are available on a daily, monthly or quarterly basis. The results include the number of interviews conducted, the percent of response (% of excellent), percentile (benchmark) score and % excellent needed to be at the goal of the 95th percentile. With real time results, this system supports the quick response to issues and affords nursing the opportunity to monitor trends and to measure the success of their improvement strategies. Below is an example of what the **PRCEasyView** looks like.

Table EP 35 – 1: PRCEasyView

NURSE COMMUNICATION WITH PATIENT/FAMILY MEMBER	Nurse Communication			Nurse Communication			Nurse Communication		
	FY09			July-Sept 2009			Oct-Dec 2009		
VUH and Psych Inpatient Units	n	% Excellent	Percentile Ranking	n	% Excellent	Percentile Ranking	n	% Excellent	Percentile Ranking
Vanderbilt University Medical Center-Overall Adult Inpatient	**4775**	**59.2%**	**92.1**	**1220**	**62.6%**	**95.2**	**1158**	**59.6%**	**86.3**
Vanderbilt Psychiatric Hospital	**683**	**39.7%**	**36.0**	**202**	**40.6%**	**33.3**	**205**	**37.6%**	**16.6**
4S (Inpt Surg)	63	57.1%	88.7	37	78.4%	100.0	32	68.8%	100.0
5S Neurocare (Inpt ICU)	197	69.5%	97.1	50	58.0%	71.4	51	66.7%	100.0
CLINICAL RESEARCH CENTER (Inpt Med)	147	70.1%	99.2	45	71.1%	100.0	42	69.0%	100.0
TVC Observation (Inpt Med)	94	73.4%	100.0	21	76.2%	100.0	12	75.0%	100.0
7 North General Medicine (Inpt Cardiac)	200	55.0%	69.3	50	66.0%	97.6	50	70.0%	99.2
9 South General Surgery (Inpt Surg)	199	50.8%	62.0	50	58.0%	88.8	50	66.0%	99.2
11 North Adult Myelo (Inpt Onc)	200	70.0%	95.2	50	68.0%	95.0	50	72.0%	97.5
6N Neuroscience (Inpt Neuro)	199	56.8%	92.5	50	58.0%	80.7	50	62.0%	96.1
8 North General Medicine (Inpt Med)	199	49.7%	71.8	50	56.0%	94.2	50	58.0%	95.7
S3400 General Surgery (Inpt Surg)	198	61.1%	96.7	50	44.0%	15.2	50	60.0%	91.2
8 South General Medicine (Inpt Med)	200	57.5%	93.6	49	53.1%	87.1	50	54.0%	90.7
7SMI MICU (Inpt ICU)	193	59.6%	71.4	48	62.5%	90.4	19	63.2%	90.4
9NSM Surgical Stepdown (Inpt Surg)	199	54.8%	79.8	49	67.3%	99.2	50	58.0%	88.8
VITA 1 (Inpt Beh Health)	123	40.7%	44.0	42	38.1%	33.3	28	50.0%	88.8
11S Burn (Inpt ICU)	183	59.0%	71.4	48	58.3%	71.4	39	61.5%	88.0
5N Cardiovascular ICU (Inpt ICU)	200	67.5%	97.1	50	82.0%	100.0	50	62.0%	88.0
10S Renal Transplant Patient Care Unit (Inpt Surg)	199	59.3%	95.9	50	56.0%	81.6	50	46.0%	81.6
S5400/S6400 orthopedics (Inpt Ortho)	399	52.1%	70.9	100	53.0%	59.9	99	56.6%	80.0
MCE3 (Inpt Surg)	198	63.6%	99.1	50	66.0%	99.2	50	54.0%	74.4
S44 Colorectal Unit (Inpt Surg)	200	61.5%	96.7	50	72.0%	100.0	50	54.0%	74.4
S74 General Medicine (Inpt Med)	197	52.8%	83.0	47	59.6%	97.8	50	48.0%	65.7
OB/GYN (Inpt OB/GYN)	387	58.9%	47.1	100	66.0%	74.6	100	58.0%	47.0
6S Cardiovascular (Inpt Cardiac)	200	62.0%	96.3	50	66.0%	97.6	50	50.0%	39.0
3N/C Surgicial Intensive Care Unit (Inpt ICU)	126	56.3%	60.0	28	78.6%	100.0	15	53.3%	35.7
Adult Unit 2 (Inpt Beh Health)	159	32.1%	20.0	42	42.9%	55.5	47	38.3%	33.3
10N Trauma Patient Care Unit (Inpt ICU)	198	56.6%	60.0	48	54.2%	42.8	49	53.1%	30.9
Adult Unit 1 (Inpt Beh Health)	86	41.9%	56.0	24	50.0%	88.8	30	26.7%	0.0
VITA 2 (Inpt Beh Health)	112	44.6%	68.0	44	40.9%	44.4	37	21.6%	0.0

Measurements

Vanderbilt began focusing on the percent of patients who rated their Vanderbilt experience as ***excellent.*** Benchmarks that support us to compare our scores to other facilities, tell us how we rank across the nation. Our focus has been on the following overall metrics with the goal being the 95th percentile. Verbatim comments are also provided which include comments regarding nursing care.

- *Overall Quality of Care*
- *Likelihood to Recommend*
- *Overall Teamwork* between Doctors, Nurses and Staff
- *Communication* (specifically related to nurse communication on explanations, instructions or treatments)

PRC provides key drivers of excellence which are calculated using discriminate analysis that identify the survey questions which are the greatest indicators of patient perception of *Overall Quality of Care*. These key drivers assist in moving patients that rate Vanderbilt Very Good to rating Vanderbilt Excellent. **Questions related to nursing are among the top key drivers for Overall Quality of Care in the inpatient setting. Among the key drivers for units are the following nurse related questions:**

- Level of confidence and trust
- Communication with patient/family
- Efforts to manage physical pain
- Instructions/explanations of treatments/tests, responsiveness
- Understanding and caring

Key drivers are provided for each unit, clinic or department for identification of areas of focus for improvement. Summary reports are also sent out to executive leadership, administrators and managers on a quarterly basis in a red/yellow/green format indicating units, clinics or departments that have met or exceeded the goal as well as those needing improvement.

The reports are prepared on the corporate goals and identification of percentile scores at or above the goals are identified as follows:

Table EP 35 – 2: Summary Report

At our above 95th percentile	REACH
At or above 90th percentile	TARGET
At or above 80th percentile	Threshold (Adult inpatient, VCH inpatient, OP technical, Ambulatory Surgery, Adult Emergency, Pediatric Emergency)
At or above 70th percentile	THRESHOLD (VMG, Psych Inpatient, Urgent Care)

Program Support

Internal coaches were hired to work with inpatient and outpatient areas on improving scores using Studer principles which have been modified for Vanderbilt's program, Elevate. Focus has been placed on rounding, managing up, communication and teamwork. For clinics and hospital units the coaching lasts six to eight weeks, with follow-up contact continuing for about a year afterward.

The website also provides examples of best practices for improvement and benchmarking/ranking performance against peers on a given time period.

Training classes are held by Vanderbilt's Strategic Development Department to assist nursing leaders in accessing, using and understanding their survey results. The 3 hour training classes go over each application in the vendor's website, ***PRCEasyview,*** including the *Overall Quality of Care* results and key drivers. Specific areas of success (specific questions/categories where areas excel) are also available allowing for an opportunity to recognize and reward excellent performance. Training also includes an explanation of why focusing on excellent is important, how/why the percentile scores are created and the relationship between them. The staff of Strategic Development is also available following training to assist nursing leadership with questions about their patient satisfaction results and guidance on areas of focus.

Action Alerts

Should a significant issue arise during the interview process, an action alert process has been put in place to identify and attempt to correct the issue whether it is nursing related or

due to some other area. The issues listed below are part of the action alert process and are forwarded to the hospital, clinic or department within 24 hours of receipt. Should an issue not be as serious, the issue would be provided in both written and summarized comments which are distributed and/or available on a monthly basis. Summarized patient comments are available on a daily basis.

An Action Alert will be generated for any of the following reasons:

- Any mention of filing a lawsuit or any legal action
- A serious breach of privacy or confidentiality (with the exception of PRC being given the patient's phone number)
- Physical or verbal abuse, hostility, sexual harassment or discrimination
- Patient safety issues
- Gross misconduct, malpractice or negligence
- Quality of care rating is poor and there is a particular incident mentioned
- When the patient asks to be contacted by the hospital, clinic or dept
- Interviewer's discretion regarding value in filling out action alert

All Action Alerts are received by the Patient Affairs Department and the Strategic Development Department.

Skylight TV

The Skylight TV System in each inpatient's room provides the opportunity for immediate evaluation and feedback. Patients and/or family members can send an electronic message directly to a department (such as nutrition services) or the nurse manager of that unit. When a message is received, the nursing leader can interview the patient/family and perform service recovery on any issues before the patient leaves the unit.

Nursing Follow-up

Patient Satisfaction data is followed by all levels of nursing. Managers access their results at the unit/clinic/department level for follow-up. CNOs and Administrative Directors have access to the data for the areas that fall under their purview. Patient satisfaction data is discussed through our shared decision-making/shared governance structures.

- Nursing Executive Board reviews the data for global trends and issues for nursing
- Patient Care Center Boards review the data for their particular patient populations to identify any overall trends and areas for improvement
- Unit/clinic/department boards review the data for their specific areas and develop improvement plans as needed.
- Data is also reviewed at the entity level for trends related to facility issues or patient population specific issues

Patient/Family Advisory Councils

Patient Satisfaction Survey results are also presented to the Patient/Family Advisory Councils for their discussion and insight.

Examples:

VUH – 9 North – "The Promise"

In direct response to patient satisfaction – **Overall Quality of Care** - scores were well below the targeted 95th percentile, 9 North which is an adult surgical step-down unit developed and initiated, *The Promise. The Promise* is a unit healthcare team commitment to deliver excellence in patient care, one that they pledge to never break.

Based on the patient satisfaction feedback, the staff realized that simple Credo behaviors needed to be brought back to the forefront of care delivery for the entire team. Brought back to the forefront and put into action. Work focused on what patient care and team work look like when practiced by the Vanderbilt Credo.

The 9 North Promise

We promise to provide patients with "excellent care".

We promise to respect and listen to each member of the healthcare team (nurses, physicians, advanced practice nurses, therapists, case managers, etc.)

We promised to act as professionals and follow the Vanderbilt Credo.

We promise not to tolerate poor treatment of patients, their families, or any member of the

healthcare team.

We Promise to always strive for excellence in all that we do.

When 9 North team members sign their names, they make a commitment to strive for excellence, respect each member of the team, act professionally and not tolerate any poor treatment of patient, their families or other staff members.

Richard Corcoran, RN, BSN, nurse manager sees it as being about culture and not the piece of paper. "*It is a visible declaration of the unit's desire to change the culture. If we follow the promise every day, we will live up to the Credo*."

Potential new staff members are informed of *The Promise* during their interview process and sign the promise after orientation. Current staffs renew their promise as part of their annual evaluations. The commitment is extended to support staff, physicians, and patients by putting a copy of the promise on display in each patient's room. Phone numbers are displayed on the white boards in the rooms next to *The Promise*, and staff let patients know this is their mechanism to put out any problems.

"In their own words"

"*The promise is a good reminder or what the team strives for daily with patients. It is just our way of saying that we will do everything in our power to help our patients through the difficult times they may be facing to the best of our abilities, that we will look out for their best interest, listen to their concerns, and work together to give each and every person the best outcome possible while they are in our care*."

Kelly Hutchison, RN

"*The promise applies to everyone who steps on the unit. It is a declaration to ourselves, our co-workers, and our patients as to the type of care we aim to provide. It does not change the scope of our job nor the purpose in which we enter work each day. However, those days when I am tired, mentally and physically, frustrated, and/or dealing with issues outside of work, it does remind me why I am here*."

Hunter Hamilton, Care Partner

"*Having the promise posted in so many places makes him more aware of the level of care that is expected. I'm human. There are times that if I'm not careful, I can feel stressed out. It helps*

to have the promise up there on the wall. When I see it, it puts my mind back in check, and I remember it's something I believe strongly in."

Ferrell Martin, RN

Focused rounding by the unit leadership team on staff and patients keeps *The Promise* at the forefront of what 9 North is all about. Rounding supports an understanding of *The Promise* and the message that the expectation is excellent care.

Table EP 35 – 3: 9 North Patient Satisfaction Survey Roll-up Data for PRC Scores – "Overall Quality of Care"

Year	9 North	Target (Benchmark)
2008	88.3 Percentile	At or above 90th Percentile
2009	96.0 Percentile	At or above 90th Percentile
2010 YTD	94.7 Percentile	At or above 90th Percentile

[*EP35-Exhibit A-1-Reporter Article 9N Promise, EP35-Exhibit A-2-Newsletter July10]*

Announcement in 9 North Weekly Newsletter on July 10, 2009:

This week the entire unit received a very special team award.
A beautifully mounted Eagle statue was presented to the unit that reads –

"Your dedication and commitment to fulfilling the Promise of Excellent Patient Care truly helped this soldier remount the Wings of the Eagle.
With our sincere appreciation and gratitude."

SSG. Matthew L. Anderson and Family
101st Airborne Division (AASLT)
Ft. Campbell, KY

Changes needed in MICU

Improving patient satisfaction with overall teamwork and communication of nurses and physicians with patients/families

Each month the MICU Service Team (Direct care nurses) reviews patient satisfaction data looking for trends and areas for improvement. In early 2009, the scores around teamwork

and communication were falling. The Service Team invited the MICU Medical Director and Associate Medical Director to their monthly meetings to discuss these results. The group came up with targeted tactics to make improvements.

Some of the tactics to improve perception of teamwork included use of key words at key times, for example, the word "we" and "team", acknowledge bringing issue to the "team" – references that one person (discipline) does not work in isolation of others. The Medical Director and Manager set expectation for including the nurses in rounds with the "off-service team patients" in the MICU. They also made the decision to establish informal evening rounds where the late call resident/intern team and the assigned nurse would round on patients together – to introduce the team that would be present during the night to the patient/family.

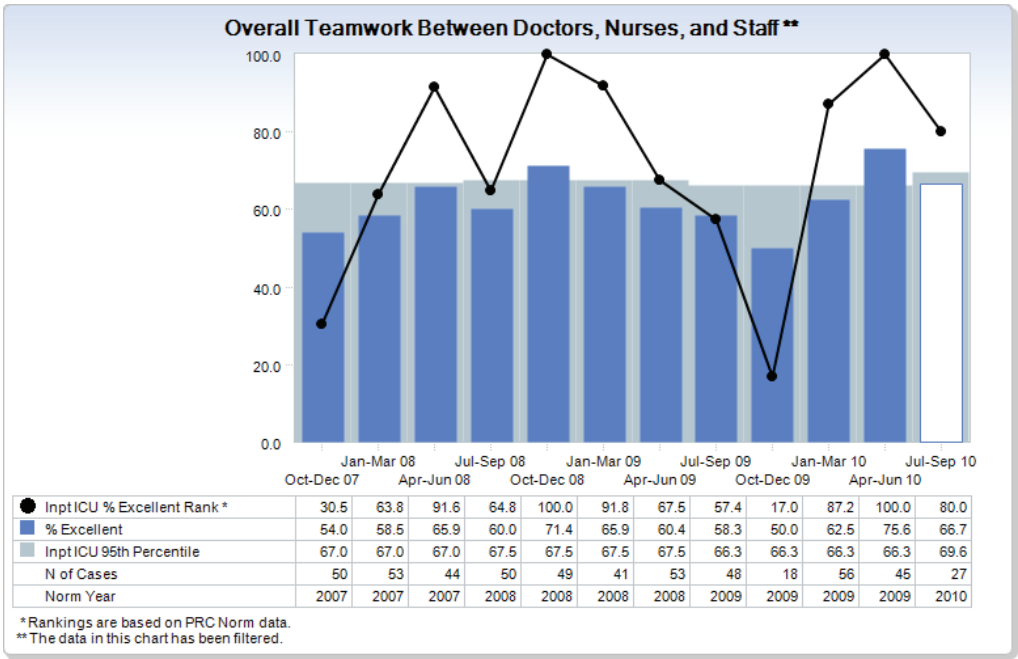
Other tactics used to improve communication included a communication board in patient rooms in the old unit (before new Critical Care Tower). This was for family members or patients to write down questions for the team to answer during rounds and one member of the team would bring the answer back to the patient/family, also, the hardwiring of bedside report by the oncoming and off-going nurses. There were two tactics implemented by the leadership team to improve communication – 1) Charge Nurse orientation of the family on admission to the MICU and 2) Manager and Assistant Manager rounding of patients/families.

Where are we now? We continue to monitor these variables frequently as they continue to show some variability. We also continue working on plans for stabilizing/improving these scores. Satisfaction with nurse communication with patient/family has stabilized and has been consistently above the 95th percentile since July-September 2009. Satisfaction of overall teamwork has been above the 95th percentile for the past three quarters. Satisfaction with doctor's communication and doctors involving patients/families in decision making have shown improvement over the past three quarters.

There are some of the tactics identified that we are still trying to figure out how best to do and then to hardwire that practice, especially evening rounds. In the new unit we now have 24/7 visitation and with that there is an increased presence of families during rounds. The health care team also spends a portion of rounds on each patient at the bedside. It is during this part of rounds where patient/family involvement in helping the whole team to identify the plan of care for the patient. Bedside report is happening 95% of the time. Leader rounding is happening approximately 90% of the time.

See Graph below.

Graph EP 35 - 1: Current PRC Patient Satisfaction Scores MICU



Inpt ICU % Excellent Rank *	30.5	63.8	91.6	64.8	100.0	91.8	67.5	57.4	17.0	87.2	100.0	80.0
% Excellent	54.0	58.5	65.9	60.0	71.4	65.9	60.4	58.3	50.0	62.5	75.6	66.7
Inpt ICU 95th Percentile	67.0	67.0	67.0	67.5	67.5	67.5	67.5	66.3	66.3	66.3	66.3	69.6
N of Cases	50	53	44	50	49	41	53	48	18	56	45	27
Norm Year	2007	2007	2007	2008	2008	2008	2008	2009	2009	2009	2009	2010

*Rankings are based on PRC Norm data.
**The data in this chart has been filtered.

(NOTE: When the new CCT opened in November 2009 – there was dropped data, thus the dip in Oct-Dec 2009 and Jul-Sept quarter is still open)

VCH Holding Room/PACU – Interdisciplinary Problems Affects Patient Satisfaction

The Pre and Post Anesthesia Care Areas in the Children's Hospital have been challenged with increased volume, a complex care environment, and a need to increase efficiency. In the fall of 2008, there were increased tensions between physician and nursing staff that needed to be addressed. The unit Medical Director and Nurse Manager met to discuss staff and physician feedback related to increased tension between the two groups. Nurses (per Unit Board) and physicians were asked to provide the most common reason for disagreement.

Both groups agreed that the availability of physician coverage for discharging patients and providing pain and nausea symptom management was probably the most frequent source of disagreement. The ability of the nurses to obtain a physician discharge for post anesthesia patients and to get orders for pain or nausea symptom management was hampered by the

need for anesthesia providers to begin their next case in the OR. Nurses repeatedly paged physicians who could not respond because they were caring for another patient in the OR. A process problem had created unnecessary tension between team members and was impeding the timeliness and quality of patient care.

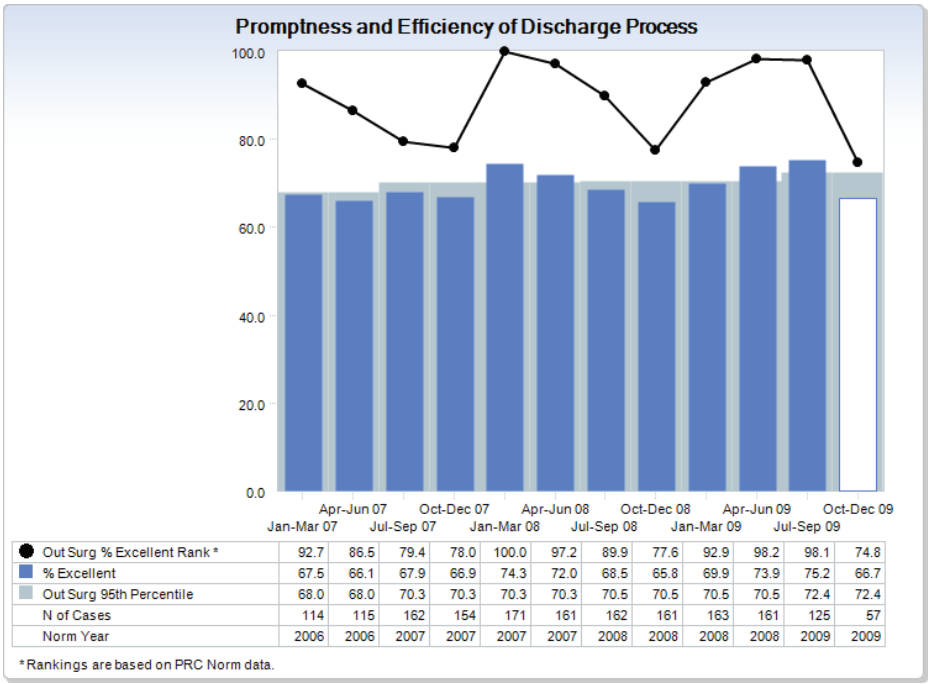
What did the data show?

- The Community Survey for PACU/Holding staff was used to measure the staff's perception of nurse physician teamwork. There was an opportunity for improvement in the area of good teamwork between physicians and staff with a score of 3.54 out of 5. Overall, there was a 21% unfavorable response from the PACU/Holding staff for this question.

- Qualitative data from a post anesthesia survey of outpatient surgery patients revealed that 10% had a negative response related to the discharge process including feeling either rushed or delayed.

- The graph below shows the score drop in relation to – Promptness and Efficiency of Discharge Process.

Graph EP 35 – 2: VCH PACU/Holding PRC Data – Promptness & Efficiency of Discharge (07-09)



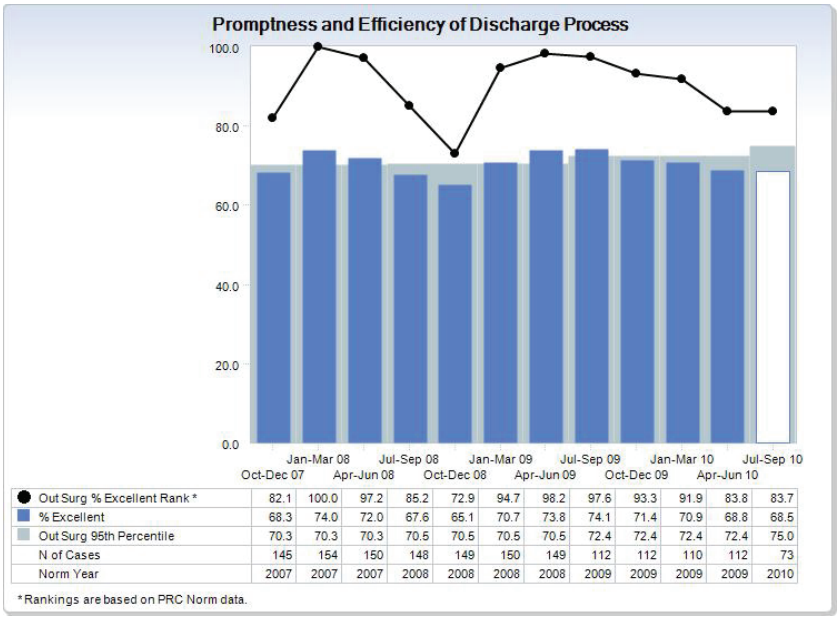
	Jan-Mar 07	Apr-Jun 07	Jul-Sep 07	Oct-Dec 07	Jan-Mar 08	Apr-Jun 08	Jul-Sep 08	Oct-Dec 08	Jan-Mar 09	Apr-Jun 09	Jul-Sep 09	Oct-Dec 09
Out Surg % Excellent Rank *	92.7	86.5	79.4	78.0	100.0	97.2	89.9	77.6	92.9	98.2	98.1	74.8
% Excellent	67.5	66.1	67.9	66.9	74.3	72.0	68.5	65.8	69.9	73.9	75.2	66.7
Out Surg 95th Percentile	68.0	68.0	70.3	70.3	70.3	70.3	70.5	70.5	70.5	70.5	72.4	72.4
N of Cases	114	115	162	154	171	161	162	161	163	161	125	57
Norm Year	2006	2006	2007	2007	2007	2007	2008	2008	2008	2008	2009	2009

*Rankings are based on PRC Norm data.

The staff proposed a plan to improve patient satisfaction and nurse- physician communication. A pilot plan for a resident rotation in the PACU was developed and implemented. Residents would be assigned to float to a PACU rotation for 1 week. They were oriented by the Medical Director and the PACU Charge Nurse. The PACU Holding staff continued to discuss the process change through staff meetings, weekly communications, and daily jumpstart meetings.

After 14 months there is an ongoing rotation for residents assigned to PACU for one week at a time. This allows for prompt communication for nurses and physicians to address symptom management and discharge more quickly. This change has also lead to improved teamwork and improved patient satisfaction. PRC data shows an upward trend for satisfaction with the discharge process for outpatients. Changes in the Staff Community Survey prevented a comparison of 2008 and 2009 data. Another positive effect of this initiative was an overall decrease in PACU length of stay and a decrease in delays.

Graph EP 35 -3: VCH PACU/Holding PRC Data – Promptness & Efficiency of Discharge (current)



Out Surg % Excellent Rank *	82.1	100.0	97.2	85.2	72.9	94.7	98.2	97.6	93.3	91.9	83.8	83.7
% Excellent	68.3	74.0	72.0	67.6	65.1	70.7	73.8	74.1	71.4	70.9	68.8	68.5
Out Surg 95th Percentile	70.3	70.3	70.3	70.5	70.5	70.5	70.5	72.4	72.4	72.4	72.4	75.0
N of Cases	145	154	150	148	149	150	149	112	112	110	112	73
Norm Year	2007	2007	2007	2008	2008	2008	2008	2009	2009	2009	2009	2010

*Rankings are based on PRC Norm data.

(NOTE: Jul-Sept 2010 data collection is still open)

VMG Patient Satisfaction

The Care Delivery Model in the outpatient clinics (VMG) is a functional care model with an interdisciplinary team. In 2009, an interdisciplinary team reviewed patient satisfaction scores, patient complaint aggregate data and employee satisfaction data for the Clinics and established a coaching plan for VMG for FY 09.

In July 2009, the group reconvened to review the results after implementation of the plan and to develop Phase II for FY 10. From the first plan, progress was made, however, the team wanted to continue to move the patient satisfaction scores up. [*EP35-Exhibit B-1-VMG Coaching Plan*]

The focus of the improvement plan was the use of coaches through our internal Elevate experts. Behavioral coaching of physicians and work teams was used to educate and engage the staff in changes that would improve service and patient satisfaction.

The initial work involved 12 clinics. The table below shows the range of scores as this work progressed. The Threshold for the Clinics is Above the 70th Percentile and the Target is Above the 90th Percentile. [*EP35-Exhibit C-1-Percent Excellent Change in VMG Scores*]

Table EP 35 – 4: Percent of Patients Who Ranked VMG Excellent

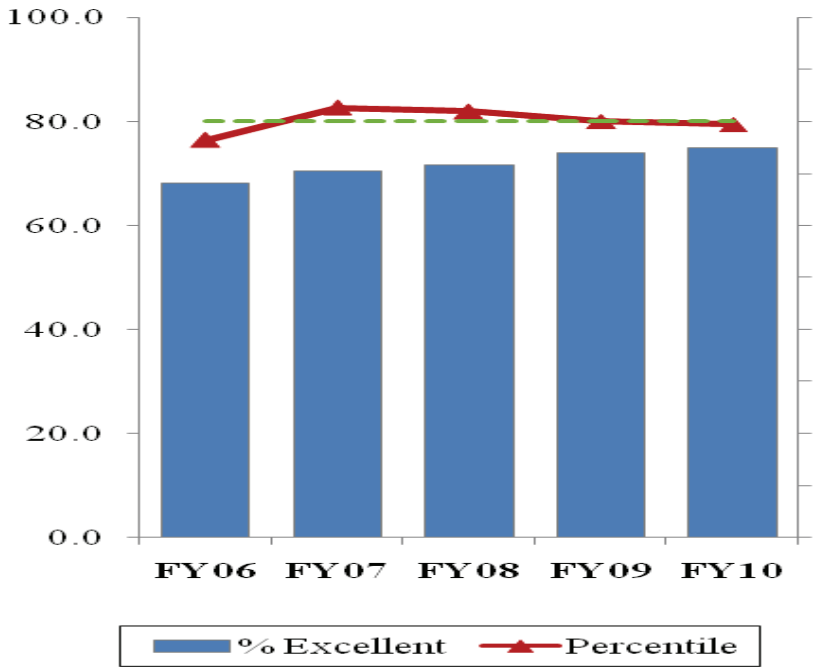
Question: Overall Quality of Care Percent Excellence (% of patients who ranked VMG Excellent)		
YEAR	**Lowest Ranking**	**Highest Ranking**
Baseline 2007	46.4%	75%
2008	49%	78%
2009	51%	80%

As evidenced above, VMG Clinics continue to make progress with their increase in patient satisfaction scores. The coaching plan continues. In addition, as outlined in EP 7EO, the Clinics have started a total redesign process that has shown significant improvements in issues like appointment times and patient wait times (clinic and phone). As the clinic redesign work continues, we expect to see continued improvement in patient satisfaction scores.

For FY 2010, the total patient satisfaction score for the Clinic for Overall Quality of Care is at 80% (80% of surveyed patients gave excellent for their overall quality of care).

See Graph below.

Graph: EP 35 – 4: FY 2010 VMG Clinics PRC Score for Overall Quality of Care



VPH

Please refer to EP 1 EO for the excellent work that Vanderbilt Psychiatric Hospital has done with Patient Satisfaction Scores

Quality Care Monitoring and Improvement

Source of Evidence EP 35 EO

Describe and demonstrate that overall patient satisfaction data aggregated at the organization or unit level outperforms the mean , median, or other benchmark statistic provided by the national database used, Provide analysis and evaluation of data and resultant action plans related to patient satisfaction addressing four (4) of the following:

- **Pain**
- **Education**
- **Courtesy and respect from nurses**
- **Careful listening by nurses**
- **Response time**
- **Other nurse-related national survey questions**

A recent year-end report at a Leadership Assembly meeting highlighted some of our Patient Satisfaction Scores. Many areas were highlighted as exceeding the set targets for Overall Quality of Care under our Service Pillar. *(Overall Patient Satisfaction Scores per entity/unit/clinic are provided in OO 26).*

Graph EP 35 EO – 1: Overall Quality of Care

Purpose and Background

Our ability to support quality patient care, excellent outcomes and a positive experience for every patient at every point of contact at Vanderbilt is based on our ability to receive feedback quickly and address issues as they arise. Patient satisfaction is measured using a telephone methodology implemented through the department of Strategic Development and Professional Research Consultants (PRC) in Omaha, NE. Professional Research Consultants is a healthcare survey and consulting firm and has been in business for 30 years.

We chose this company based on their research ability to identify key drivers of excellence which tell us what the greatest indicators of patient perception of Overall Quality of Care are. PRC provides key drivers of excellence which are calculated using discriminate analysis that identify the survey questions which are the greatest indicators of patient perception of *Overall Quality of Care*. These key drivers assist in moving patients that rate Vanderbilt Very Good to rating Vanderbilt Excellent.

In addition, Service is one of the 5 pillars by which we set our strategic plan and goals. Service is measured through our patient satisfaction data. Based on the PRCs research and benchmarks, we have set the 95th percentile as our goal for comparison to other organizations in the PRC database.

Methods and Approach

The survey effort is ongoing and measures patient satisfaction across the inpatient (adult, pediatric, psychiatry), outpatient (VMG clinics, outpatient technical, ambulatory surgery), emergency (adult, pediatric) and urgent care settings. PRC also conducts the HCAHPS survey for Vanderbilt which is the survey required by CMS. PRC takes a sample of patients from each area being surveyed and trained interviewers make weekly telephone calls. Each survey is customized for the particular patient population. The calls occur from 1 to 2 weeks after the patient has been to Vanderbilt.

A web-based electronic system provides nurses at all levels access to the results that are placed in ***PRCEasyView*** within 24 hours of the call. Updates from patient satisfaction interviews are available on a daily, monthly or quarterly basis. The results include the number of interviews conducted, the percent of response (% of excellent), percentile (benchmark) score and % excellent needed to be at the goal of the 95th percentile. With real time results, this system supports the quick response to issues and affords nursing the opportunity to monitor trends and to measure the success of their improvement strategies.

Participants

Patient participants are chosen at random by PRC and represent every area that patient care is provided. All areas that provide patient care at Vanderbilt Hospitals and Clinics receive data.

Organizational participants include all patient care areas throughout the Medical Center.

Outcomes

There are several helpful features of PRC Patient Satisfaction and those include:

- Phone calls being made soon after patient discharge
- "Live" data that changes as the surveys are completed – action can be taken quickly at the point of care
- Unit/clinic/department specific data
- Action Alert System which allows us to respond within 24 hours of phone call
- Ability to have question sets individualized to specific entities – such as Clinics have very different questions than inpatient areas
- Statistical analysis

Some of the challenges of working with PRC Patient Satisfaction data include:

- Ability to look at aggregate data and do comparisons
- "Scores are moving targets" as the numbers of surveys completed is different each time
- "Moving targets for benchmarking" (change each quarter)
- Given the "moving targets" our internal benchmarks (expectations) for each entity are different also which can be challenging for comparisons

Scoring/benchmarking

Our focus is on the percentage of patients who rated their Vanderbilt experience as ***excellent***. We compare our scores (benchmarks) to other facilities by looking at the percentile we fall in based on how many of our patients ranked that particular question as excellent. For example:

- In first quarter – question 1 – 60% of total people who answered ranked us as excellent and comparatively that put us in the 90th percentile.

- In the second quarter – same question 1 – 70% of total people who answered ranked us as excellent and comparatively that put us in the 85th percentile.

- That type of change can easily occur based on the total number of people surveyed in the entire PRC database and how all the organizations did as a whole.

Organizationally we have focused on what we believe to be two key indicators: Overall Quality of Care and Likelihood to Recommend, with the understanding those are the elements that will most likely bring patients back to us for their healthcare in the future. Key questions are identified that influence these two items and they also change based on the area and what is going on with all the hospitals in the database.

Table EP 35 EO – 1: VUMC PRC Patient Satisfaction Data for 2009 and 2010

Question	2009				2010		
	VUH	VCH	VMG		VUH	VCH	VMG
Overall Quality of Care	84.9	85.7			91.8	86.0	
Pain Management Needs	86.3	85.7			86.3	88.8	
Promptness in Response	94.7	72.2			91.6	91.3	
Nurse Friendliness and Courtesy	88.4	91.7	69		92.8	93.9	80
Nurse Communication	92.1	77.2	84.7		91.0	84.0	86.8
Patient Education	98.2	40			100	80	

- Numbers represent our benchmark percentile scores based on the PRC Database
- Blanks indicate that no data is available for that specific question

Table 35 EO – 2: Targets

At or above 95th percentile	Reach
At or above 90th percentile	Target
At or above 80th percentile	Threshold (Adult inpatient, VCH Inpatient)
At or above 70th percentile	Threshold (VMG)

Analysis

Analysis is ongoing; first at the point of care level and then for the entity level.

Since we can follow the results at the point of care level essentially daily, we don't typically see unwanted trends continue as we are able to address quickly. We have set a very high bar for ourselves – the 95th percentile. However, with the understanding that as long as areas are within threshold or reach, they are not below the benchmark we have set for ourselves compared to the PRC data information.

In the table above all areas are within the threshold or target, with one exception 2009 VCH for Patient Education. It is believe that is an anomaly of the data and/or reporting.

Several things have been put in place at VUMC to address patient satisfaction as discussed throughout this document. Examples include:

- Bedside Rounding and Reporting
- Work around Patient/Centered Care
- Development of Patient Education Department
- Clinic Re-design
- Intensive work at VPH to address patient satisfaction which has always been a challenge