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Nurse's Notes

 Advocate
Christ Medical Center

 Advocate Children's Hospital



On the Cover

GEM Nominees for 2013 Pictured from Left to Right: Amanda Kurcob, BSN, RN, ACM, 6 south nominated Darlene Trendl, BSN, RN, manager, clinical operations, 6 south; Ken Lukhard, market president; nominee Katherine Tilleman, BSN, RN-C, NCIII nominated by Laura Jester, MSN, APN-BC, ACNS-BC, advance practice nurse 3 east/ west; Lynn Hennessy MS, MBA, RN, NEA-BC, vice president, chief nurse executive; nominator Lorian Williams-Willis, MSN, APN, RN-C, manager, clinical operations 3 east/FCC; *Not Pictured:* Colleen Butler, RN, Advocate Children's Hospital-Oak Lawn Transport Team

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Be Accountable and Respectful

Lynn Hennessy, MS, MBA, RN, NEA-BC,
vice president, chief nurse executive

As I sit down to write my first article of 2013, my youngest of four daughters is away at college celebrating her birthday. I'm sad I can't be with her on her special day, but I'm so grateful to be blessed with four healthy, beautiful daughters. It seems as if they've turned into young women overnight.

For the most part, I think my husband and I have done a pretty good job raising them, though I usually take all the credit when they're good and blame him for any indiscretions that may come up.

Leadership and parenting have a lot in common. As a parent, I have tried to teach my children the "rules of the road": do the right thing even when no one is looking, do your best at everything you do, treat everyone with respect, stand up for what is right, and the "golden rule"—do unto others as you would want done to you—all in the hope that they mature into happy, kind adults.

Like parents, leaders also have rules and behaviors that we model, expect, and reinforce.

At Advocate Christ Medical Center, we have our "Be's" to guide our behaviors. Our behaviors of excellence call for us to be responsive, respectful, professional, accountable, and collaborative. The Advocate Experience team that brought us the "Be's" reviewed them in a recent Patient Care Leadership meeting.

As a majority, Christ Medical Center nurses and associates truly practice and "live" these "Be's." I hear amazing stories of our nurses displaying these behaviors every day, and I am truly blessed and humbled to lead such generous, compassionate nurses. However, though they were introduced almost two years ago, some nurses and other associates aren't familiar with them, and some even knowingly disregard them.

Just this week, I overheard two transporters discussing the poor treatment received from staff every time they transport patients to a particular floor. When we treat other associates in a disrespectful manner, we are not only breaking the golden rule of respect and neglecting our "Be's," but in essence, we are bullying.

Bullying, A.K.A. lateral violence, has been the topic of discussion at many Patient Care Leadership meetings, facilitated by myself and our Director of Clinical Education, Deb O'Connell. We educate our leaders on this topic so they can in turn educate staff, proactively look for it, and act on it.

Our goal: eradicate lateral violence from the Christ Medical Center. It is a lofty but necessary goal, and we need everyone's help to achieve it. Patient safety is our main priority, and a safe environment cannot coexist with lateral violence and bullying.

What can you do to stop it? Well, if you are experiencing bullying firsthand, or if you are a witness to it, literature supports confronting the "bully" on the behavior. You can address the behavior by using "ARCC" methodology:

Ask a question

Request a Change

Voice a Concern and if no success

Use your Chain of command.

If someone intentionally ignores you or rolls his or her eyes at you, simply and politely Ask a question. "I noticed you rolled your eyes at the meeting when I talked about handoffs, is there something you wanted to say to me?"

If no response, Request a change: "I appreciate your feedback and I hope the next time we will be able to discuss your opinion."

If you still receive no response, you should voice a Concern: "I am concerned that our inability to communicate effectively may negatively impact our patient's safety."

Sometimes with lateral violence, results of the conversation are not immediate; if the behavior continues then use the Chain of command: "In order to protect our patients and provide them with the best care possible, I will have to share this behavior with my manager."

Most bullies choose easy targets; so just addressing the bully makes you less of a target.

If everyone takes these steps, we will create a safe environment for our patients to heal and a safe environment for all associates to work.

Deb and I will continue our work with lateral violence in 2013 with additional education and resources. In the meantime, if you would like to discuss an experience you've had or if you have any questions or concerns, feel free to contact either of us.



In the News

Presentations:

- Geanette Barry, BSN, RNC and Lorian Williams Willis, MSN, APN presented Let's stay together: Nurses attitudes and confidence related to non-separation at the Ninth Annual Evidence Based Practice Conference in Naperville, Illinois in October, 2012
- Cheryl A. Lefaiver, PhD, RN, CCRP and Wendy Tuzik Micek, PhD, RN, NEA-BC presented Evidence based practice implementation improves for journal club users at the Ninth Annual Evidence Based Practice Conference in Naperville, Illinois in October, 2012
- Wendy Ambrose-Gavin, BS, MBA, RN, invasive cardiology, presented an educational inservice to 9 south telemetry associates on care of the post cardiac catheterization patient with an emphasis on radial procedures and closure devices.
- Roseann M. Zahara-Such, DNP, RN, PCNS-BC, 2 Advocate Children's Hospital, won second place in a poster presentation entitled Improving Accuracy of Pediatric Medication Administration Utilizing Simulated Scenarios with BSN Nursing Students at the 28th Pediatric Nursing Conference in Boston, Massachusetts in July, 2012.

Retired:

- Mary Pierce, RN, registry, 6 east/west began her career at Advocate Christ Medical Center in October, 1999. Mary retired December, 2012.

MVP nominations:

- Susan Manske, BSN, RN-BC, care manager, care management department recipient of the MVP for Excellence.
- Laura Burokas, MS, APN, CPNP, CCNS, advanced practice nurse, pediatric neurosurgery; MVP winner for Compassion.
- Linda Rassman, ADN, RN, nurse clinician II, invasive cardiology, MVP winner for Compassion.
- Karen Peterson, ADN, RN, nurse clinician II, invasive cardiology, MVP winner for Excellence.
- Candice Gunderson, BSN, RN, nurse clinician II, 9 east/west, MVP winner for Compassion for October
- Hazel Boncodin, MSN, RN, advanced practice nurse; Candice Gunderson, BSN, RN, nurse clinician II; Kimberly Hickey, BSN, RN, PCCN, nurse clinician II; Danielle Markham, ADN, RN, registry; Mohini Jayswal, BSN, RN, PCCN, nurse clinician II; Tewande Oshodo-Adebayo, MSN, RN, nurse clinician II; Meghan Meskill, patient care associate, Linda Davis, patient care associate, Chanel Coney, patient care associate and Lindsey Wyman, patient care associate, 9 east/west, are the MVP winner for compassion for November, 2012.

Be Respectful -

every person, every encounter, every day.

DNV Healthcare – a New Accrediting Body for Advocate Health Care

Ernesto Flores, MT (ASCP), CIC, manager of regulatory compliance

Colleen A. Perez, MS, RN, NEA-BC, director of quality and regulatory compliance

LEARN Model:
Environment



New Knowledge,
Innovations & Improvements

During early 2011, the Advocate Health Care system made a decision to transition the hospital's accreditation from The Joint Commission to Det Norske Veritas (DNV) Healthcare, Inc. DNV is an international organization with a global reputation for quality and integrity in certification, standards of development and risk management in health care. As part of its approach to promote improvements in quality and patient safety, DNV requires accredited organizations to be compliant with International Standards for Organization (ISO) 9001. Although relatively new to health care, ISO 9001 has been widely adopted by a variety of industries in more than 175 countries.

Advocate believes the approach taken by DNV Healthcare, Inc. and the ISO 9001 international quality management system standard will provide a framework to drive operational excellence by integrating business objectives, accreditation efforts, quality initiatives and risk activities resulting in improved health outcomes and patient satisfaction. DNV's hospital accreditation program uses the National Integrated Accreditation for Healthcare Organizations (NIAHO) standard. The NIAHO set of standards integrates the requirements based on the Centers for Medicare and Medicaid (CMS) Conditions of Participation for Hospitals (CoPs) and ISO 9001 for the formation and implementation of the quality management system. A key feature of NIAHO is the standards do not frequently change allowing an organization to create a sustainable system focusing on quality improvement.

DNV Healthcare, Inc. conducts surveys on an annual basis ensuring accountability

for compliance and validation of improvement efforts. Survey activities will focus on tracer methodology which will consist of a comprehensive review of care and services provided to patients in both the inpatient and outpatient settings including all off-campus sites. Another hallmark of DNV accreditation is the substantial focus on non-clinical or support areas.

Several Advocate hospitals have already completed the first DNV survey and have commented on the collaborative and consultative demeanor of the survey team. Advocate Christ Medical Center can expect the first survey sometime early in 2013. The Centers for Medicare and Medicaid Services require all surveys remain unannounced. Leaders have already been involved in reviewing the NIAHO standards performing a gap analysis for their respective areas of accountability. Additionally, Christ Medical Center, including the off campus sites, participated in mock surveys to assess opportunities for improvement. In addition to the annual DNV accreditation surveys, each Advocate hospital can expect to be part of two mock surveys throughout the year.

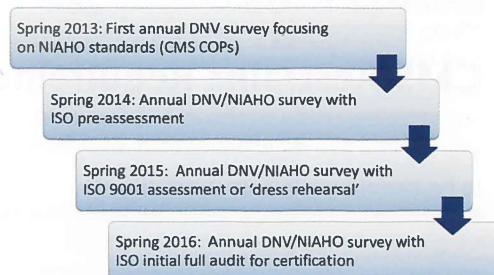
How long does Christ Medical Center have to become compliant with the ISO 9001 Standard?

It is required that hospitals be ISO 9001 compliant within three years of its first assessment by DNV. The diagram below depicts the three year cycle of NIAHO and ISO 9001 certification. While ISO 9001 clearly defines the requirements to develop a strong health care management system,

it does not offer prescriptive instructions on how to meet the requirements. Advocate Health Care will define the system to ensure hospitals continue to meet the needs of the patients we service, our quality and business objectives as well as the ISO 9001 requirements. This process will involve the development of a strong platform for the creation of an improved quality management system. The creation of an accountability framework for this system will be defined by annual quality management system audits in every department, development of a process for management reviews, an improved process for control of records and documents and corrective/preventive actions.

Associates will begin to hear more about the implementation of ISO 9001 in the coming months!

ISO 9001 Certification Process



As always, if you have questions or would like more information on DNV or ISO 9001, please feel free to contact Ernesto Flores, manager of regulatory compliance at 41-5239, or Colleen A. Perez, director of quality and regulatory compliance at 41-5067. ▼

CMS Restraint Requirements

Ernesto Flores, MT (ASCP), CIC, manager of regulatory compliance

At the beginning of calendar year 2012 the Advocate Christ Medical Center restraint committee made the recommendation to limit the availability of the vest restraint. This decision was partly based on ND-NQI data that suggest overuse at Christ Medical Center when compared to teaching hospitals of similar size and patient demographics. The next step to provide a safer environment for our patients is to no

longer make the vest restraint available for use. The Posey vest restraint was removed from Christ Medical Center and no longer available for use beginning December 3, 2012. It has been well documented in the medical literature that the vest restraint poses a significant risk of strangulation and injury when applied to an agitated patient. All Advocate sites except Christ Medical Center have removed the vest restraint

from use and they have had great success in implementing alternatives that have reduced restraint usage significantly. These techniques can be found in the system policy for Restraint and Seclusion, 90.017.031 Attachment A- Avoiding Restraints and Seclusion, Alternative Considerations. Alternatives to restraints should always be attempted prior to restraint usage.

Continued on next page

LEARN Model:
Environment



Exemplary Professional Practice

A Near Miss Challenge

Martha Winter, RNC, MJ, CPHRM, director, risk management

LEARN Model:
Environment



Exemplary Professional Practice

Take a minute to personalize the patient experience. Picture yourself in a fashionable but drafty patient gown. Think about all the eyes and hands that have crossed your path. Think about how you wanted to ask "Did you wash your hands?" but the words just would not come out. Do you want your clinical outcome to be driven by the luck of the draw or the competence and vigilance of those providing your care? Do you want the nurse caring for you to maintain a potential for error in the forefront of his/her thinking? Do you want your nurse to be alert to identifying any possibility of harm and not let the opportunity to learn from a "near miss" slip away?

"Near miss" is a term and concept inherently understood by the health care team. By definition a near miss is a safety event that did not reach the patient, but only because of a 'just in time' intervention. The event could have been close enough to actually cause harm but luck prevented the occurrence. Near misses are very common events and occur more frequently

than actual adverse events. Yet, the adverse event is more likely to be reported. Only a fraction of near misses are captured, just the tip of the iceberg. It is very important to understand that we can be poised to take a lead in promoting patient safety by becoming more involved in near miss error reporting. Colleagues should be encouraged to do the same. A near miss is a free lesson in error prevention.

Think about the near misses you have recently become aware of. Examples may include: unlabeled containers on a table; equipment in a procedural room noted to be defective on inspection; an incorrectly applied LET bracelet; discrepancies in scheduling; an alarm that failed to signal; a drug concentration stored in the wrong bin or incorrect labeling on a medication. Would you take the time to report a near miss in the incident reporting system on the Advocate homepage? If you do not, are you truly a patient safety advocate?

Today health care is more complex, more demanding and offers more opportunities for mistakes. It is essential that those taking care of patients realize that the only way to trend errors and identify commonalities that could result in harm, is if the near misses are reported in the computerized incident reporting system (MIDAS) on a patient safety event form. The concern you identify may indicate a breakdown in a system leaving the door wide open to cause harm to a patient. Move away from a focus on preventing errors to a focus on preventing harm. First line staff have an opportunity to make a change. If you have questions, remember the Risk Management department is an associate resource available 24/7 by calling 41-RISK (7475); our office at 41-5588; or through the page operator on off shifts.

The challenge is to you, front line caregivers: Will you identify and report any event that has a potential to cause harm to a patient as a "near miss" in the incident reporting system? ▼

CMS Restraint Requirements *continued*

The roll belt has been and will continue to be available in the Omnicell. In order to maintain compliance with Centers for Medicaid and Medicare Services (CMS) some important changes have been made to the Advocate System policy for Restraint and Seclusion, 90.017.031. The changes have been summarized in the attached table, **Key Points for Associates**. This table

can be accessed at <http://advocateonline.advocatehealth.com/page.cfm?ID=14924>. The most notable change has been made to the timeframe for assessment and reassessment of a patient that is in restraints for violent or self-destructive behavior. This documented assessment should occur no less than every 15 minutes upon initiation of restraints for violent or self destructive

behavior. The Restraint for Violent Behavior order will post a continuous task to remind the nurse that reassessments are needed every 15 minutes. The effective date for reassessments every 15 minutes is January 23, 2013. As always, please feel free to contact Irene Tranowski 41-3374 or Ernesto Flores 41-5239 with questions regarding restraints. ▼

3rd Quarter Daisy Award Winners



Barbara Mayher, ADN, RN, nurse clinician II, neonatal intensive care unit (NICU)

A family once wrote, "We truly loved that Barb was our daughter's nurse. She is down to earth, easy to talk to and extremely great at what she does. We are so thankful we had the privilege of getting to know her." Barb is a shining example of what it means to be a Daisy nurse. She has mentored many new RNs on nights and teaches phlebotomy class to the new NICU RNs.

She has always been a team player. Recently, Barb was called to 4 Hope to start an IV on a 4 month old child that was a difficult IV start. She went to 4 Hope immediately and was successful in her attempt.

Barb always makes sure little things are done for the family. On one occasion she made a mobile for a long term child with her family and the nurses' faces that cared for their daughter. Barb always listens to her families and makes their stay special in the NICU. Many surveys come back with Barb's name highlighted as a compassionate, caring nurse.

Continued on next page

4 East/West Gives Back

Amy Gill, BSN, RN-BC, clinical practice partner, 4 east/west

Ryan was born October 9, 2009 at Advocate Christ Medical Center. Katie, a patient care associate on 4east/west, soon after delivery of her son, found out he had a heart defect called transposition of the great arteries (TGA). Ryan spent over a month in the hospital and at only 10 days old had open heart surgery.

Ryan's journey was a long one, but now at three years old he is doing wonderfully. He is full of life as if nothing ever happened. Ryan is the reason Katie decided to start donating to Advocate Children's Hospital

because of the wonderful staff who all helped Ryan with his recovery process. He was in the hospital until right before Thanksgiving and Katie saw firsthand how many children spend the holidays in the hospital. Katie and her son feel that donating toys for Christmas was a way to "give back" to the people who work and save lives every day. Toys brighten a child's holiday season. This past Christmas with the help of 4 east/west, Ryan was able to donate many gifts to Advocate Children's Hospital in hopes to make these children's holiday a little brighter. ▼



LEARN Model:
Environment



Structural Empowerment

Fall Legislative Forum

Joan Kelley, BSN, RN, TNS, clinical information analyst



The annual Fall Forum was held on October 1, 2012, in the auditorium at Advocate Christ Medical Center. The event which

was sponsored by the Nurse Advocacy Committee (NAC), offered the promise of lively debate and interactions between

Christ Medical Center staff associates and the legislators whom govern the surrounding communities. The auditorium was packed with associates for a town hall meeting format facilitated by NAC members. In attendance for the event were state representatives Kelly Burke 36th district, Bill Cunningham 35th district, Renee Kosel 81st district, and Al Riley 38th district. Topic discussions included the critical need to increase trauma services in other nearby hospitals to help alleviate

the trauma congestion for the emergency department (ED), and incentives to lure nursing professionals into teaching positions at nearby community colleges and universities. These political allies embraced the enthusiasm of the crowd and input that the associates offered. Ken Lukhard, president and Lynn Hennessey, chief nurse executive and vice president nursing services were on hand to offer a warm welcome to everyone in attendance. ▼

LEARN Model:
Autonomy



Structural Empowerment

3rd Quarter Daisy Award Winners *continued*



Josephine Montilla-Fernald, BSN, RN, nurse clinician III 8 east/west

Submitted by a patient's family member: I want to thank the entire team on 8 east/west. Recently my husband was admitted to this unit with a newly diagnose disease. Most notably, I would like to give special thanks to Nurse Joy who took care of him. She took her time to discuss and educate the family on how to deal with my husband's situation. Her kindness and compassion made her a stand out amongst others. It was as if she made it her mission to be there for us. She exhausted all resources in providing us with pamphlets and available information. She made me feel as if my husband was her only patient. We truly and deeply appreciated her effort, compassion and mostly dedication. Thank you very much Nurse Joy!

Cathy Pacholik, BSN, RN-BC, care management

Cathy is a true reflection of a Daisy nurse.

There is a patient in our unit who has been hospitalized for eight months who is battling heart failure. Cathy has faithfully visited this patient to share a funny story or give him comforting words of encouragement and look for ways to help him cope with the daily challenges he faces.

Just to bring a little love into his heart Cathy put together a Christmas in Hawaii in the adult surgical heart unit (ASHU). She rounded up every service involved in his care from ASHU nurses, doctors, transplant and VAD coordinators, PT/OT, respiratory, physicians, perfusion, cardiac rehab, and so many more. Cathy, along with so many others, turned the ASHU conference room into a Hawaii getaway filled with food, decorations, music, fun, and laughter. What she did for this particular patient not only touched his life but the nurses in ASHU who needed something to lift their spirits. We are truly blessed to have her and so are our patients. Cathy is the brightest daisy amongst daisies.



Overlap of Quality Improvement Methodologies with Evidence Based Practice

Linda Covey, RN, Performance Improvement Coordinator

LEARN Model:
Research

New Knowledge,
Innovations & Improvements



During a recent Nursing Research Council meeting the article, *The Intersection of Evidence-Based Practice with 5 Quality Improvement Methodologies* by Seidl and Newhouse (2012) was reviewed with discussion of the performance improvement methods utilized within our medical center. A summary of the presentation is provided below.

In this article, (Seidl & Newhouse, 2012) five quality improvement methodologies were described: Plan Do Check Act (PDCA), Six Sigma, Lean, Root Cause Analysis (RCA), and Failure Mode Effects Analysis (FMEA). The authors also demonstrated how the improvement methodologies intersect with evidence-based practice. The article states, "Nurses play an important and significant role in promoting positive patient outcomes. Because of this direct effect on patients, nurses must have a constant awareness and a diligent effort to identify and correct problem-prone processes." (p. 299)

Quality improvement (QI) is defined as a process by which individuals work together to improve systems and processes with the intention to improve outcomes. Data based methods are used to bring about immediate improvements in health care delivery.

Evidence-based practice is a problem solving approach to clinical decision making that integrates the best available scientific evidence with the best available patient and practitioner evidence. There are many models for evidence-based practice but they all include five distinct steps.

- Asking important questions
- Acquiring the evidence
- Appraising the evidence
- Applying the evidence to practice
- Assessing the results and adjusting the process, if needed

This article discusses how evidence-based practice is central to the five improvement methodologies.

PDCA – Plan Do Check Act

PDCA is also known as Plan Do Study Act which is the process improvement model utilized at Advocate Christ Medical Center and Children's Hospital. The elements are defined as:

Plan - a specific change aimed at improvement is designed and a plan for implementation is recommended

Do - implementation of the planned change

Check (Study) – analysis or examination of the results

Act – a decision to adopt, adapt or abandon the planned change is made based on the data obtained in the check stage

Ideally multiple PDCA cycles are utilized. An example would be the development of an evidence-based falls prevention strategy. The modifications to the process are monitored and more than one cycle of change may be tried with the ultimate goal to reach the desired outcome of zero falls.

Six Sigma

Six Sigma was developed as a QI strategy by Motorola in the 1980's. If a process is operating at the Six Sigma level, one can expect 99.9996% perfection or 3.4 defects per million opportunities. There are five steps in the process:

- Define – defining the goals of the improvement activity and defining who the customers, process owners and stakeholders are.
- Measure – this is the quantitative measurement of the current system or process.
- Analyze - data analysis to focus on identifying ways to eliminate the gaps between the current state and the desired state.
- Improve – the planned change is implemented and evaluated.
- Control – this phase requires the identification of formal plans and processes for maintaining and controlling the new system or process.

The define and measure steps can lead to clinical practice questions that require a review of the evidence. The primary difference between PDCA and Six Sigma is the control phase. The goal of Six Sigma is to limit process variation, thereby improving efficiency and outcomes. Performance is continually monitored to achieve significant long-term improvements.

Lean

Lean methodology was developed by Toyota in the 1940s. The goal of Lean is to eliminate non-value-added steps and processes by identifying exactly what defines

"value" to the customer (i.e. the patient).

A value stream map is developed to identify the flow of the work but also the value associated with each step in the process. Each step is identified as value added or non-value-added from the perspective of the customer (the patient or family). Then the process is revised or created.

At the medical center both Lean and Six Sigma are driven by the operation improvement team. Matt Lloyd and Minni Marwaha are two of our operation improvement consultants. Project requests ultimately come from our executive team. Some of the current or completed projects are:

- Clinical Decision Unit – Value Stream Analysis
- Emergency department (ED) Optimization / FirstNet
- Hope Children's Hospital Outpatient Registration
- Surgical Service Capacity Improvement

Root Cause Analysis - RCA

Root cause analysis (RCA) is a retrospective, systematic process that uses information obtained during the investigation of an event to identify and understand the underlying causes of an event. The goal of an RCA is to understand the contributory factors that create an environment where an error is likely to happen. The RCA process is designed to focus on systems and processes not individuals. In the evidence-based practice process, RCA is useful for identifying clinical problems and questions that can be answered using evidence-based practice.

At the medical center a team reviews critical events to determine if further investigation is needed utilizing an RCA, apparent cause analysis (ACA) or common cause analysis (CCA). A member of the performance improvement department and a clinical leader facilitate RCAs.

Failure Mode Effects Analysis – FMEA

RCAs are a retrospective tool but a FMEA is a prospective risk assessment tool. This tool was developed by the military and NASA to evaluate potential failures and unrecognized hazards. FMEA involves identifying all the potential failures within a specific process and anticipating the effect that each failure might have on the process outcome in an attempt to correct

Continued on next page

Quality Improvement Methodologies *continued*

QI Method	Brief Definition	Steps	Intersection with EBP	ACMC	ACMC Clinical Example
PDC(S)A	Flowchart for process improvement	Plan Do Check (Study) Act	Apply Assess Adjust	PDSA, Plan-Do-Study-Act is the process improvement model utilized at the medical center	Falls prevention strategies have been designed, implemented and evaluated utilizing PDSA (i.e. Hendrich II inter-rater reliability, post fall huddles and increased bed alarm usage)
Six Sigma	Minimization of variation in process; 3.4 defects per million	Define Measure Analyze Improve Control	Ask Apply Assess Adjust	Six Sigma and Lean Methodology are utilized by the Operation Improvement team based on project requests from the executive team	Following a Six Sigma project to identify and overcome system barriers and improve care processes normal newborns are seen within 3 days of discharge 80% of the time.
Lean	Process development method with focus on value-added steps and elimination of non-value-added steps	Voice of the customer Value stream mapping Determination of value-added and non-value-added steps Create or revise process	Ask Apply Assess Adjust	See above	The staff's transition of care patient safety concerns were addressed through the development of a checklist/handoff tool
RCA	Retrospective analysis of an untoward event	Ask a series of why questions Determine root causes	Ask	RCA Teams are lead by the Performance Improvement Department in response to critical events	The RCA process is utilized to review and understand medical errors and adverse events that have been identified as sentinel events focusing on systems and processes and not individuals
FMEA	Prospective risk assessment	Process map current state Identify all potential process failures Estimate the effect of each identified failure Identify top 1 or 2 failures and prospectively mitigate risk	Apply Assess	FMEA Teams are lead by the Performance Improvement Department when high risk processes are identified for analysis	Universal Protocol for bedside procedures: "It's in the bag" <i>Table adapted from Seidl & Newhouse (2012), p. 300</i>

or mitigate the failures before they occur. This tool is most effective when new processes are being designed and can be useful during the application and assessment phases of evidence-based practice.

At the medical center FMEAs are facilitated by a member of the performance improvement department. Selecting a high risk process for a FMEA can be identified in various ways:

- Joint Commission Sentinel Event Data
- Our own patient safety data from reported events

- Self assessment
- Occurrences noted by media or literature

Universal Protocol for bedside procedures, "It's in the Bag", was the result of a FMEA team exploring wrong site and wrong patient procedures on bedside procedures. Currently a FMEA team is reviewing the outpatient chemotherapy process with infusion center and pharmacy participation.

Advocate Christ Medical Center and Advocate Children Hospital's pursuit of top decile performance in patient outcomes

and patient experience has involved and will continue to involve utilizing all of the quality improvement methodologies to analyze and modify processes to meet current evidence-based practice. Performance is continually monitored to ensure these revised processes are followed for sustainable improved patient outcomes. ▼

References:

Seidl, K.L. & Newhouse, R.P. (2012). The intersection of evidence-based practice with 5 quality improvement methodologies. *JONA*, 42(6), 299-304.

Perceptions of Family Centered Care in an Inpatient Pediatric Setting

Kimberly M. Duback, BSN, RN, CPN, clinical practice partner, pediatric hematology/oncology, Advocate Children's Hospital - Oak Lawn

LEARN Model:
Research

New Knowledge,
Innovations & Improvements



A growing body of research indicates that family centered care (FCC) is an ideal model of delivering care to patients and families. Unfortunately, there is currently a limited body of research that compares family and nurse perceptions of FCC delivery in the pediatric setting. A team comprised of Ginny Fowler, APN; Kim Duback, RN and Denise Angst, PhD, RN, director of pediatric research was formed with the goal of creating and carrying out a research project that addressed this gap in the literature. This team, as well as the research process, was supported in conjunction with the Advocate Julie Schaffner Research Fellowship.

FCC is defined as delivering care with an emphasis on supporting family decision-making, sharing health information with patients and families, and fostering respect for family preferences and decisions. FCC further recognizes and supports the family as a critical member of the health care team. The aims of the study were: (1) to examine both parent and nurse perceptions about FCC in one

inpatient unit at Advocate Children's Hospital-Oak Lawn, and (2) to determine current levels of FCC delivery which would serve to guide best practices by indicating areas of strength and areas for improvement. Parents and nurses were the participants in the study and data was collected via parent and nursing specific surveys using the Measure of Processes of Care (MPOC) instruments. The MPOC tools have previously been developed and validated with psychometric testing and have been used in studies investigating FCC perceptions. Item responses on the surveys were on a Likert scale and ranged from "not at all" to "to a very great extent," and fell into one of four or five domains that have been identified to represent FCC. The domains included: "Enabling and Partnership/Showing Interpersonal Sensitivity," "Providing General Information, Respectful and Supportive Care," "Providing Child Specific Information," and "Coordinated and Comprehensive Care" (exclusive to the parent tool). For parents, FCC perceptions were dichotomized as low versus high using their score on the Family Centered

Services subscale of the parent specific MPOC tool [Cronbach's alpha= 0.927]. The response rate for nursing was 82 percent and 55 percent for parents and the final sample included 100 parents and 41 pediatric nurses.

Results of the research revealed that families consistently rated the delivery of FCC higher than nurses across all domains. These differences were statistically significant in the domains "Enabling and Partnership," "Providing General Information" and "Respectful and Supportive Care". Both nurses and parents identified mutual areas of strength in the delivery of sensitive and respectful care. Opportunities for improvement were also identified by both nurses and families and included providing general and specific information. The results of the study have opened our eyes to how we deliver FCC and have provided valuable guidance and insight in improving how we deliver FCC to children and families at our pediatric institution. ▼

Nursing Recognition

LEARN Model:
Novice to Expert



Structural Empowerment

In addition to recognizing STEPS promotions and nursing certifications, the nurse recognition ceremony recognizes nurses who have recently completed their nursing degree, institutional review board application approval and nurses acknowledged for other reasons.

NCIII STEPs Promotions

Centralized Telemetry Center
Therese Tew, BSN, CCRN

MICCU
Christine Kosinski, BSN

4 east/west
Jacklyn Mason, BSN, RN

8 east/west
Josephine Montilla, BSN, RN

2 Hope
Angela Boomsma, RN

4 Hope
Kristine Hoelle, RN, CPN



Grateful Patient Program

Emergency Department
Salimah Muhammad, RN

9 south
Mary Wojnarowski, RN

Newly Certified Nurses Critical Care

MICCU
Kalina Dziadkowiec, BSN, CCRN
Nicole Pozdal, BSN, CCRN

SINI
Maribeth Churak, BS, RN, CCRN
Danielle Litro, BSN, RN, CCRN
Laurie Malkowski, BSN, RN, CCRN
Paul Maze, BS, RN, CCRN
Patrick Moyles, RN, CCRN

8 east/west
Michael Hartman, BSN, CVRN

9 south
Gilda Alising, BSN, RN, CDN
Vicky Rieck, RN, PCCN



Daisy Award

Barbara Mayher, ADN, nurse clinician II - NICU
Josephine Montilla, BSN, RN, nurse clinician III - 8 east/west
Cathy Pacholik, BSN, RN-BC - care management

Continued on next page

Nursing Recognition *continued*

Emergency Department

Catherine Simonek, BSN CEN
Molly Sokolowski, BSN CEN
Amy Stack, AD, CEN

Pediatric Emergency Department

Cassandra Rumpf, BSN, RN, CPEN



Heart & Vascular Institute

Cardiac Rehab

Mary Everett, BSN, RN, CVRN
Laura Rosner, BSN, RN, CVRN
Pamela Wolf, BSN, RN, CVRN

EP Lab

Caren Dempsey, BSN, CCRN
Troy Smith, BSN, CCRN

Heart & Vascular Quality

Patricia Christophersen, CVRN

9 east/west

Lorraine Newman, MSN, PCCN
Emilia Stoia, ADN, PCCN
Rae Stuczynski, BSN, PCCN



Medical Surgical

7 south

Candace Michaels, CMSRN
Katelyn Sauve, MSN, CMSRN
Nancy Sliwa, BSN, CMSRN

7 west

Melissa Thibault, MSN, FNP-BC
Ashley Wayne, MSN, WHNP-BC

Procedure Recovery

Patricia Gutchewsky, BSN, RN-BC
Kimberly Hartman, RN, RN-BC



Neurosciences Institute

6 east/west

Gail Orlino, BSN, RN, ONC
Tamika Wilson, BSN, RN, ONC

8 south

Christine Nicol, ANCC, ADN, BC

Surgical Services

PACU

Yvonne Gabryel, RN, CAPA
Michael Gricus, BSN, RN, CPAN
Johanna Magtoto, BSN, RN, CCRN
Susan Shinnick, BSN, RN, CPAN

Surgical Services

Surgery

Suzy Czerwonka, BSN, RN, CNOR
Susan Dziobas, BS Health Arts, RN, CNOR
Sherrie Jensen, BSN, RN, CNOR
Tracy Haberkorn, MSN, RN, CNOR
Molly Higgins, BSN, RN, CNOR
Kathy Lassandrello, BS, RN, CNOR
Andrea Lucas, RN, CNOR
Clarise Montinola, BSN, RN, CNOR



Pediatrics/Hope

Neonatal Pediatric Transport Team

Karen Termuende, CCRN

4 Hope

Dana Johnson, BSN, RN, CPN

NICU

Dora Candelaria, ADN, NIC-BC
Carol Gaston, ADN, NIC-BC
Dee Gdalkan, BSN, NIC-BC



Women & Infants Health Services

Family Centered Care

Kathleen Dickinson, BSN, RNC

Labor & Delivery

Melissa Bohling, BSN, RN-C
Karin Hutchings, RN-C
Jean Kowalewicz, BSN, RN-C
Stephanie Rzepka, BSN, RN-C

3 east/west

Kathi Filipiak, RN-BC
Katy Kingma, BSN, RN-BC
Jaime Sulit, RN-BC



Cancer Institute

3 south

Lori Cordes, RN, OCN
Mary Niemiec, RN, OCN



Care Management

Jane Venus-Nocentelli, MA, BSN, RN-BC

Degree Completion

Critical Care - CDU

Tammy Boll, MSN
Miyako Streeter, BSN

Pediatrics/Hope

NICU

Melissa Calhoun, BSN, ADN

Continued on next page

Nursing Recognition *continued*

Medical Surgical

7 south

Evelyn Kadia, MSN, RN
Michelle Stoklosa, MSN, RN

7 west

Heidi Mesa, BSN, RN
Melissa Thibault, MSN, FNP-BC
Ashley Wayne, MSN, WHNP-BC

Procedure Recovery

Loretta Magee, BSN, RN



Neurosciences Institute/Bone & Joint Institute

8 south

Elizabeth Wright, MSN, RN



Clinical Education

Christine Wyka, MSN, FNP-BC

Radiology

Interventional Radiology

Kmisha Brand, MSN, RN



Nursing Research - IRB Submission

Clinical Trial Awareness Survey

Principal Investigator

Gloria Lalezas, BSN, RN, OCN

Treatment Times: A retrospective evaluation of clinical protocols in an overcrowded emergency department.

Principal Investigator

Gail Gill, BSN, RN, CEN

Sub-Investigators

Eman Karim, BSN, RN, CEN

Bernadette Hill, MS, RN, CEN

Madonna Scatena, MSN, RN, APN



A Reflection of Professional Practice: Where We Were and Where We are Headed

Irene Tranowski, MSN, CRRN, clinical practice partner, 6 south

Wendy Tuzik Micek, PhD, RN, NEA-BC, director of nursing science and Magnet



Exemplary Professional Practice

Advocate Christ Medical Center (ACMC) and Advocate Children's Hospital- Oak Lawn (ACH-OL) is celebrating their eighth year as Magnet designated hospitals! 2013 marks our second redesignation and with each designation the bar of excellence raises for both ACMC and ACH-OL. Since 2000, our Professional Practice Model (PPM) and Care Delivery Model (CDM) have stayed the same. It was time to update the PPM and CDM to reflect the professional progress and clinical sophistication of the campuses. In addition, many of you may remember that during our 2009 Magnet Redesignation site visit, our appraisers identified that our staff were able to describe our care delivery model but unable to state its name – Patient Centered Care. Our 2013 Magnet document, under the Exemplary Professional Practice Magnet manual source of evidence, requires us to write a narrative that describes and demonstrates:

- **how nurses and clinicians develop, apply, evaluate, adapt, and modify the Professional Practice Model and**
- **the result(s) of applying the Professional Practice Model. Include (2) examples related to nursing practice, collaboration, communication, or professional development activities.**

Therefore, last year, a group of clinicians made up of many clinical disciplines from the Professional Clinical Practice Council (PCPC) and the Magnet Advisory Council (MAC), began working on the PPM and CDM. This team of committed clinicians developed three models and we would like to introduce them to you. Ta Da!

Model	ACMC/ACH-OL Model Name	Same or New	Focus
Practice Environment	Advocate Experience	NEW	Patients, Physicians and all associates
Professional Practice	LEARN	SAME Theorist NEW detailed description of the elements that support professional practice	Licensed Professionals
Care Delivery	Patient & Family Centered Care	SAME concept NEW addition of the Family	Patients

Continued on next page

A Reflection of Professional Practice *continued*

Advocate Experience – Practice Environment Model

The Practice Environment Model describes “Who we are”; the organizational characteristics of our professional practice at ACMC and ACH-OL. This foundation of our practice environment model is the mission statement of Advocate Healthcare and ACMC/ACH-OL. This foundation also includes our MVP (Partnership, Compassion, Excellence, Equality and Stewardship); Behaviors of Excellence (“be” responsive, “be” respectful, “be” professional, “be” accountable, “be” collaborative); our LEARN – PPM; the Key Result Areas (KRAs) (Health Outcomes, Advocate Experience, Coordinated Care, Safety, Growth and Funding our Future); Advocate Experience defined as Safety, Quality and Service. Directly in the center is our Patient & Family Centered Care CDM.

LEARN - Professional Practice Model

LEARN is the newest model to support our Magnet environment and stands for **L**eadership, **E**nvironment, **A**utonomy, **R**esearch and **N**ovice –to- Expert. LEARN drives practice and outcomes that embrace six core principles: Professional Values, Shared Governance, Collaboration, Professional development, Care Delivery system and Reward and Recognition. Patricia Benner’s nursing theory, Novice to Expert, is its’ foundation.

LEARN	Core Statement	Exemplified by
Leadership	Commitment to transformational leadership at all levels with structures to support the development, participation and contributions of individuals as well and inter professional teams.	<ul style="list-style-type: none"> advocating for resources to support unit, division and organizational goals recognition and reward
Environment	Maintain a safe, accepting and innovative atmosphere for patients, families and associates in order to promote healing, learning, physical and spiritual well- being.	<ul style="list-style-type: none"> promoting and understanding the culture of safety focusing on Patient & Family Centered Care through shared governance
Autonomy	Enhance clinician’s control over decisions pertaining to patient care and the professional practice environment through shared governance.	<ul style="list-style-type: none"> protecting our patients from harm (First do no harm) being accountable for best practices
Research	Apply current scientific findings, implement evidence-based practice (EBP) and conduct nursing and inter-professional research in order to improve patient outcomes across the continuum care and the professional practice environment.	<ul style="list-style-type: none"> developing and reviewing policies and procedures designing research and EBP projects that explore innovative interventions and support alternative interventions
Novice to Expert	Deliver safe, evidence based and effective care through interactions with patients, families, clinical colleagues, nursing leadership and professional organizations.	<ul style="list-style-type: none"> integrating care through a collaborative and comprehensive plan of care committing to professional engagement e.g. continuing education, certification and competency

Patient and Family Centered Care – Care Delivery Model

Patient and Family Centered Care is the structure and processes by which responsibilities for patient care are assigned and work is coordinated among members of the nursing staff. The guiding principles of the care delivery model are nurse accountability for the continuum of care, patient/family focused care and alignment with appropriate standards of care and evidence based practice (EBP). The care delivery model serves the unique needs of the patient population versus organizational goals or PPM. The CDM begin with the patient and family encircled by the Nurse ring followed by the Inter-Professional team, Support team and the Community and the Continuum. All of these rings work effectively, efficiently and collaboratively to deliver the best Advocate Experience for our patients.

Implementation Next Steps

Our Magnet Redesignation application is due August 1, 2013. Our next Magnet site visit is anticipated to be in January, 2014. In an effort to prepare staff for the site visit, we have outlined below some key activities that will be taking place to help you embrace the new models and get you comfortable with them prior to our Magnet Redesignation site visit when you will be discussing them with our appraisers.

STEP ONE: Complete Practice Model CBT – First Quarter, 2013

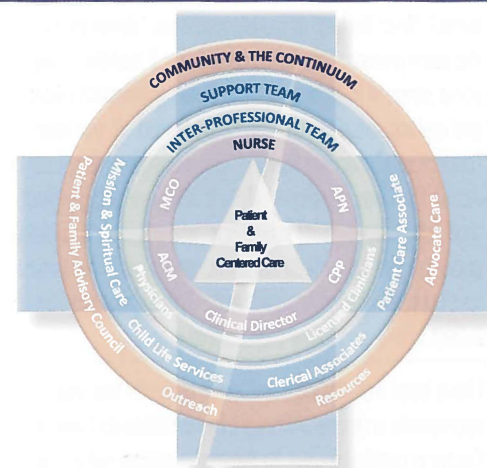
STEP TWO: The Models will be framed and placed on every clinical unit

STEP THREE: PCPC members will present PPM Stories at each PCPC meeting during 2013. The PCPC PPM Stories will be brought back to the units and shared during staff meeting with the expectation that unit staff will also begin to participate by completing a PPM Story. The first PCPC

PPM Story by Eileen Burnson, BSN, RN-BC is included in this issue.

STEP FOUR: The Nurses Week Magnet Day, May 7th, will focus on the unit application of the LEARN PPM. PCPC members will lead the development of a unit poster. More details will be available in March.

STEP FIVE: A Magnet Newsletter will be developed dedicated to understanding the three new models. The Magnet Tracer Team will engage staff in discussions about



the new models.

STEP SIX: TV screens will display the new models during the year.

STEP SEVEN: Incorporate LEARN by using it as a framework for peer interview questions, co-worker feedback, Magnet Clinical Division Awards and Nursing Now.

STEP EIGHT: Use some of the PPM Stories in the Magnet Document submission.

Continued on next page

A Reflection of Professional Practice *continued*

LEARN Personal Professional Practice Model (PPM)

PPM Story	LEARN PPM Connections
I transferred from the Pain Center at Good Sam to the Pain Center at Christ. It was quite a change in practice. The Pain Centers function very differently. I had lots to learn. I was on orientation for about one month. I learned how to do admit and discharge patients, give moderate sedation, write scripts, adjust to the flow of the unit, and how to "communicate" with the 4 Pain MDs. It was a humbling experience. I was impressed by the expertise and use of critical thinking by all the nurses I worked with. Even in the fast paced, sometimes stressful environment, they worked collaboratively with the doctors, and were all so calm and collected. It took awhile, but I began to feel comfortable in my new position. Within a short time of being in the Pain Center, the position of Unit Council (UC) Chair opened. I was asked if I would be interested in the position. The manager knew my passion for teaching and thought this would be a good fit with my professional goals; I eagerly accepted.	Leadership Autonomy Novice to Expert
Dr. Jido days in the Pain Center are often very busy and fast paced. There are usually a lot of procedures, especially with sedation. Patients receiving IV sedation need to have a saline lock started for the procedure. Since all of our doctors are anesthesiologists, the nurses relied on the doctors to start the line before the procedure. This practice had a tendency to delay the start of the procedure and slow the flow of patient care. This is where I felt I had something to offer. I had many years of experience starting IVs from my IV Therapy and nursing education days. As part of UC, I suggested we change practice and have nursing start the IVs. We received staff and physician support. This change in practice has been a satisfier for the patients and doctors and has improved the flow of patient care. Currently, only myself and one other nurse is able to start IVs, so I plan to develop a program to train all the nurses at Christ & Lockport Pain Centers on how to start IVs.	Leadership Environment Autonomy Novice to Expert
One common complaint is the long wait times in the Pain Center. This was another opportunity for UC to look at our current practices and policies and find ways to improve patient satisfaction. The first idea was to do a time study; where were we "losing" time in the daily flow of our patients? With the help of the UC members, I developed a "Time Flow" worksheet for each step of the paint process. We collected data for 2 months. It was my job to compile the data and make some sense of it. I consulted the Nursing Research Department for help in compiling the data and making sense of what the data showed. It was later determined that this issue was a bigger "opportunity" than we thought. Our manager enlisted the help of a PI Consultant and a VSA Action Plan was developed. This is still an ongoing project. However, we have made changes in staff schedules, patient scheduling, and scheduling guidelines for making appointments for our patients. We have made some improvements in our patient wait times, although, there is still a lot of opportunity for improvement. This experience showed me how we can translate data we collect into changing our professional practice.	Leadership Environment Autonomy Research
I have been a practicing Pain Center nurse for four years so I guess the title of "Novice" my not appropriate anymore. Although, by no means do I feel like an "Expert". Every Nurse in the Pain Center is certified except for me and a registry nurse. I was intimidated about taking such a "big test" especially since it's been such a LONG time since I have had to take such a comprehensive test. I was afraid to fail and I thought I was "too old" plus I would be mortified if I didn't pass. Then the initiative for all RNs who met criteria to get certified by December 31, 2012; I had to face my fears. I went on the ANCC website to investigate what all was involved in getting certified. It actually looked like I met all the criteria. So, I "quietly" applied and got notification that I was eligible to "sit" for the exam. So I started studying. I took the test on Dec. 3rd, and am happy to say I PASSED. As much as I hate to admit it, I have a sense of pride when I say, "I am certified in Pain Management". I don't think I would have done it on my own; I needed a push. The next day at work when I was with my patients I felt a different level of confidence caring for them. I didn't expect that, but it felt good.	Autonomy Novice to Expert

PRACTICE ENVIRONMENT MODEL

ADVOCATE EXPERIENCE



Thanks to everyone who participated on this journey. You can certainly be proud of the excellent clinical care you provide and now our models reflect that consistent level of professional practice.

Model Committee Members

Geanette Barry, 3 east/west
Maureen Craigmile, 5 south
Tamara Ditter, 3 south
Anna Eaton, Therapy
Beth Folliard, Therapy
Ryan Gagnon, Peds ED
Lorena Gilbert, 2 east/west
Marie Kole, 4 Hope
Debra Marks, respiratory therapy, adult
Wendy Tuzik Micek, Magnet & Nursing Science
Patricia Morgan, graphic design
Laura Rosner, Cardiac Rehab
Irene Tranowski, 6 south

Congratulations

Jessica Mancari, RN
radiology patient care center

Kathy O'Kane
clinical bed management

They both have won one month of Tower Parking for submitting the winning entry in the Name the Newsletter contest.

Contact Hour Education

Think Delirium

Fely Ong, MSN, APN, RN-BC, CCNS, APN-Geriatrics, NICHE coordinator

HOW TO EARN CONTACT HOURS

1. Read the Contact Hour article and take the test at the end of the article.
2. Complete the entire answer form. (Answer forms may be photocopied.) **DEADLINE:** Answer forms must be received in the Clinical Education Department no later than, June 1, 2013.
3. Return the answer forms through in-house mail or fax to:

MAIL: Clinical Education Room 1030

FAX: Ext. 41-5640

SCORES: To earn 1 contact hour of continuing education, you must achieve a score of 80% (8 of 10 correct). Certificates indicating successful completion will bear the publication date of Nursing Now. If you do not pass the test, your answer sheet will be returned for you to correct and resubmit prior to deadline.

ACCREDITED: Advocate Health Care (OH-368, 10/1/2014) is an approved provider of continuing nursing education by the Ohio Nurses Association (OBN-001-91), an accredited approver by the American Nurses Credentialing Center's Commission on Accreditation.

CONTACT HOURS: This CNE activity is being offered for 1.0 contact hour.

The provider of the activity has disclosed in writing or verbally there is no conflict of interest declared by the planners and presenters/content specialists.

QUESTIONS: Contact Sue Barry at Ext. 41-4409 or e-mail her at: Sue.Barry@Advocatehealth.com

Answers to the 2012 Volume 12, Issue 4 Contact Hour Quiz: "Diabetes"

1. According to the standards from the American Diabetes Association what is the desired goal for HgbA1c?
 - a. **less than 7.0%**
 - b. less than 8%
 - c. less than 6%
 - d. less than 6.5%
2. What is the site of action of all sulfonylurea agents?
 - a. the gastrointestinal system
 - b. the alpha cells of the pancreas
 - c. the liver
 - d. **the beta cells of the pancreas**
3. Your patient's HgbA1c is 10% on the current regimen of metformin and a sulfonylurea. Which diabetes medication is likely to be added to the treatment to achieve an improvement in Hgb A1c?
 - a. GLP1 agonist
 - b. DDP4 inhibitor
 - c. TZD
 - d. **Insulin**
4. Hypoglycemia is less commonly seen in patients using alpha glucosidase inhibitors. Why?
 - a. many foods interfere with the action of the drug
 - b. the effect of the drug is weak
 - c. **the glucose lowering effect is only active in the presence of carbohydrates**
 - d. slow release of the drug in the GI tract prevents hypoglycemia
5. What is the method of action of thiazolidinedione medications?
 - a. increase first phase insulin secretion
 - b. **increasing the sensitivity of tissues to insulin**
 - c. decreasing normal circadian glucose production
 - d. increasing renal secretion of glucose
6. The most common side effect of sulfonylurea medications is
 - a. renal failure
 - b. nausea and vomiting
 - c. facial flushing
 - d. **hypoglycemia**
7. GLP-1 agonists and DDP4 inhibitors decrease blood glucose by what action?
 - a. **increase insulin secretion in the presence of food**
 - b. decrease hepatic glucose production
 - c. increase glucose uptake in the skeletal muscle
 - d. increase insulin secretion
8. Metformin decreases blood glucose levels by what action?
 - a. suppressing appetite resulting in decreased carbohydrate intake
 - b. **decreasing hepatic glucose production**
 - c. increasing insulin production
 - d. decreasing absorption of carbohydrate from the GI tract
9. When is a rapid acting insulin, such as aspart and lispro most likely to cause hypoglycemia?
 - a. a meal is missed or delayed
 - b. 1-2 hours after injection
 - c. when given 10 minutes before a meal
 - d. **a & b**
10. Evaluation of the treatment plan is best done by
 - a. measuring weight loss and blood glucose
 - b. evaluating patient reports of hypoglycemia
 - c. **evaluating glucose monitoring logs and HgbA1c level**
 - d. reviewing self blood glucose monitoring logs for glycemic trends.

Think Delirium

Volume 13, Issue 1 Contact Hour Quiz

1. The incidence of delirium in hospitalized older patients with hip fracture is approximately 50 percent.
 - a. True
 - b. False
2. Delirium is characterized by:
 - a. Hopelessness, somatic complaints, delusions noticed by family
 - b. Impaired judgment, depression, conceal deficits noticed by family
 - c. Altered consciousness, inattention with acute onset and fluctuating course
 - d. Self deprecation, perceptual disturbances, self-neglect
3. Predisposing factors for delirium include:
 - a. Advanced age, history of dementia, severe illness
 - b. Young adults, history of hypertension, obesity
 - c. Advanced age, history of diabetes, obesity
 - d. Young adults, severe illness and well-nourished.
4. Precipitating factors for delirium include:
 - a. Quiet environment, gentle lighting, supportive family
 - b. Structured environment, bed alarm, proper lighting
 - c. Consistent caregiver, structured activities, quiet environment
 - d. Use of indwelling bladder catheter, physical restraints, polypharmacy
5. The Confusion Assessment Method (CAM) is a standardized screening tool for delirium that addresses:
 - a. Predisposing factors, polypharmacy and nutritional habits
 - b. Functional ability, inattention and social support
 - c. Nutritional status, polypharmacy and functional ability
 - d. Altered level of consciousness, inattention and psychomotor agitation
6. A class of medications known to precipitate delirium include:
 - a. Antibiotics
 - b. Anticoagulants
 - c. Chemotherapeutic agents
 - d. Narcotics
7. An environmental intervention that may prevent delirium include:
 - a. Use of chair or bed alarm
 - b. Discourage family visits
 - c. Promote sleeping during daytime hours
 - d. Reorient patient frequently
8. The hallmark of delirium is an abnormal mental status examination.
 - a. True
 - b. False
9. A multicomponent approach that addresses identified risk factors is an effective method for the prevention and management of delirium.
 - a. True
 - b. False
10. There are two important aspects in the management of delirium: the recognition of delirium and the treatment of underlying cause.
 - a. True
 - b. False

Your Answers: Please submit to Clinical Education

INA CE # _____
Delirium: Early Identification and Prevention Improves Outcomes

1. a. ☐ b. ☐
2. a. ☐ b. ☐ c. ☐ d. ☐
3. a. ☐ b. ☐ c. ☐ d. ☐
4. a. ☐ b. ☐ c. ☐ d. ☐
5. a. ☐ b. ☐ c. ☐ d. ☐
6. a. ☐ b. ☐ c. ☐ d. ☐
7. a. ☐ b. ☐ c. ☐ d. ☐
8. a. ☐ b. ☐
9. a. ☐ b. ☐
10. a. ☐ b. ☐

(Please print clearly)

Name: _____ Credentials: _____

Unit/Department: _____

Hospital Name: _____

Address: _____

City: _____ State _____ Zip _____

Phone #: _____

E-mail: _____

Cost Center: _____

Evaluation

At the end of this article

1. Describe the hospitalized older adults at risk for delirium yes ☐ no ☐
2. Discuss the importance of early recognition of delirium yes ☐ no ☐
3. Describe the key features of Confusion Assessment Method (CAM) yes ☐ no ☐
4. Develop a plan to prevent or treat delirium yes ☐ no ☐
5. Were the objectives relevant to the goal of this program? yes ☐ no ☐
6. Was the teaching method effective? yes ☐ no ☐
7. Did this offering meet your objectives? yes ☐ no ☐
8. Content was presented without bias of any commercial product or drug. yes ☐ no ☐

Additional comments/suggested future topics: _____

Think Delirium

Fely Ong, MSN, APN, RN-BC, CCNS, APN-Geriatrics, NICHE coordinator

Objectives:

1. Describe the hospitalized older adults at risk for delirium
2. Discuss the importance of early recognition of delirium
3. Describe the key features of Confusion Assessment Method (CAM)
4. Describe the development of a plan to prevent or treat delirium

In 2012, Advocate Christ Medical Center conducted a Geriatric Institutional Assessment Profile (GIAP) survey as part of the implementation of NICHE (Nurses Improving Care for Healthsystem Elders) program. Registered nurses caring for hospitalized patients aged 65 years and older participated in the survey with a 46 percent response rate. "Confusion" was identified by 50 percent of the respondents as the most pressing issue they face in caring for the older patients. In her study, Timmins (2012) also identified the hyperactive subtype of delirium as the most challenging patients for nurses. What is this condition called "confusion"? This syndrome is also known by many terms such as metabolic encephalopathy, ICU psychosis, organic psychosis, toxic metabolic state, organic brain syndrome and cerebral insufficiency; however, delirium is the preferred term for this syndrome for clarity, recognition and management.

Delirium is a common syndrome in hospitalized older adults and is one of the major contributors to poor outcomes of health care and institutionalization for older patients (Siddiqi 2006). Even after discharge, a patient who had delirium in the hospital is more likely to have poor functional and cognitive recovery and is at increased risk for death for up to two years (Marcantonio, 2011). With the aging of the United States population, delirium has assumed heightened importance because persons aged 65 years and older presently account for more than 49 percent of all days of hospital care. Delirium also increases hospital cost by \$2,500 per patient, so that about \$6.9 billion (value in U.S. dollars in 2004) of Medicare hospital expenditures are attributed to delirium (Inouye, 2009). Post discharge costs are attributed to nursing home placements, rehabilitation services, home health care and informal caregiving. Numerous studies had shown that delirium could be prevented by 40 percent when modifiable risk factors were identified and a standardized nursing practice protocol was implemented.

Definition

The definition of delirium by DSM-IV TR (Diagnostic and Statistical Manual of Mental Disorders (Fourth Edition, Text Revision) remains the standard.

Delirium is a disturbance of consciousness with impaired attention and disorganized thinking that develops rapidly and tends to fluctuate with a variable course. There is evidence of an underlying physiologic or medical condition. Delirium is characterized by the following:

- reduced ability to focus, sustain, or shift attention
- memory impairment, disorientation, and/or illusions

- visual or other hallucinations
- perceptual disturbances or misperceptions of environmental stimuli
- delusional (paranoid) thinking accompany perceptual disturbances adding to behavioral and emotional manifestations

Clinical Subtypes:

Based on the motor activity, delirium can be classified into three subtypes; 1) hyperactive, 2) hypoactive, and 3) mixed. According to Maldonado, the most common type is the mixed form (45 percent), followed by the hyperactive (30 percent) and the hypoactive (25 percent).

1. Patients with hyperactive delirium are the most clear and recognizable because of their extreme behavioral changes. They show increased psychomotor activity such as restlessness, agitation and rapid speech. They may be paranoid, and often with delusions and hallucinations. Nurses typically associate these patients as disruptive, harmful and time-consuming. These patients are easily identified and treated.
2. Patients with hypoactive delirium are lethargic, drowsy, apathetic, staring and slow to respond. These patients do not disrupt care or disturb other patients. They are the least likely to be identified and treated by clinicians as compared with the hyperactive or mixed subtypes. This subtype is also associated with poorer prognosis.
3. Patients with mixed delirium have the classic "waxing and waning" pattern. They may appear agitated and combative at times, with alternating episodes of drowsiness and hypo activity. When this happens, staff may assume that the patient's condition has improved when in reality it has worsened.

Nocturnal Delirium (Sundowning)

According to Mittal, persons with dementia often exhibit increased agitation and wandering in the late afternoon or evening. This has been labeled as "nocturnal delirium," "sundowning" or "sundowning syndrome". This has been associated with fatigue and sensory deprivation in dementia. Certain environmental factors have shown to worsen the behavioral symptoms of sundowning. These include:

- Changes in the environment
- Amount of daily light exposure
- Activities during the day
- Noise level
- Disruptions at night
- Medications
- Patient's medical comorbidities

The symptoms of sundowning in dementia are usually chronic and occur at the same time of the afternoon or evening; however, if there is delirium, these symptoms may fluctuate, both in timing and severity.

The onset of delirium usually occurs shortly after admission or after surgery, has an unpredictable course, and may persist for several days to weeks after discharge. The duration of delirium depends on how quickly its causes are identified and treated (Tullman 2012).

Etiology and Epidemiology

Prevalence and Incidence

Delirium is the most common complication of hospitalized older patients. The prevalence and incidence of delirium depends on the patient population and care setting. According to Marcantonio, about one third of patients aged 70 years or older admitted to the general medical service of an acute care hospital experience delirium. One half of these are admitted with delirium while the other half develops during hospitalization. In the surgical units, postoperative delirium rates range from 15 percent to 25 percent after elective surgery such as total joint replacement, to over 50 percent after high-risk procedures, such as hip fracture and cardiac surgery. The highest rates occur to patients admitted in intensive care units (ICUs) and those at end of life as high as 75 percent and 85 percent respectively.

Pathophysiology

The exact pathophysiology of delirium is not well understood. Girard et al describe four current hypotheses that may explain delirium.

1. The first hypothesis relates to an imbalance in the neurotransmitters dopamine and acetylcholine. These neurotransmitters may be working in opposition with dopamine acting as an excitatory neurotransmitter and acetylcholine, inhibiting activity. If one of these overbalances the other, delirium may result.
2. The second hypothesis suggests an inflammatory process. In such cases, systemic inflammatory response leads to the increased production of cytokines, which can, in turn, activate microglia to produce an inflammatory reaction in the brain. Aside from the harmful effect on neurons, cytokines can also impair the synthesis and release of neurotransmitters.
3. The third hypothesis is related to cerebral oxidative metabolism that results in neurotransmitter imbalance.
4. Finally, there is a relationship between the availability of plasma amino acid, which also may result in neurotransmitter imbalance.

Maldonado suggests that there is an anticholinergic mechanism that induces delirium. Studies suggest that sedative agents can contribute to the development of delirium by disruption of sleep patterns, cerebral acetylcholine inhibition and disruption of melatonin circadian rhythms.

Etiology

The cause of delirium is multifactorial (Inouye 1996). The development of delirium involves the interrelationship between a vulnerable patient (one with predisposing factors) and exposure to precipitating factors or noxious insults.

Predisposing factors are chronic conditions that increase a patient's vulnerability to delirium. Increasing age and a pre-existing cognitive deficit are thought to be the two most common predisposing factors for delirium (Saxena, 2009). Inouye and Charpentier demonstrated in their study that a predictive model based on four predisposing factors: visual impairment, severe illness, cognitive impairment and BUN/creatinine ratio > 18, can identify high risk older adults at admission.

Predisposing factors (chronic conditions that make a patient vulnerable to delirium) are:

- Dementia or underlying cognitive impairment
- Severe illness (infections, hip fracture, hypotension and hypoperfusion, hypoxia, hypo/hyperthermia)
- Comorbidity
- Depression
- Sensory impairment
- Advanced age
- Male gender
- Poor functional status
- Alcohol abuse

Precipitating risk factors are those that trigger the pathophysiological mechanisms (acute insults) resulting in delirium. Inouye and Charpentier identified five independent precipitating factors for delirium in the hospitalized older adults: use of physical restraints, malnutrition, more than three medications added, use of indwelling bladder catheter and any iatrogenic events.

Precipitating factors (acute conditions that initiate delirium) are:

- Polypharmacy
- Malnutrition
- Physical restraints
- Immobilization
- Dehydration
- Iatrogenic events (infection)
- Metabolic derangements (hypo/hyponatremia, hypo/hyperglycemia, hypo/hyperkalemia)
- Untreated pain
- Prolonged sleep deprivation
- Relocation, especially to ICU

The proportion of patients developing delirium increases progressively with the number of risk factors present at admission: the more predisposing factors, the fewer precipitating events required to cause delirium (Marcantonio, 2011)

For example, patients who are highly vulnerable (advanced age with dementia or severe illness) may experience delirium after exposure to mild insult, such as a single dose of pain medication. On the other hand, older patients with few predisposing factors may develop delirium only after exposure to multiple insults, such as major surgery, general anesthesia and immobilization.

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High Risk Medications

A systematic review by Clegg on the association of medications and delirium concluded that 12 to 39 percent of delirium was caused by medications. It is important that nurses familiarize themselves with the high risk medications for delirium and collaborate with the pharmacists and physicians to minimize the effects of these medications. These include but are not limited to:

- Anticholinergics
- Antihistamine (diphenhydramine, hydroxyzine)
- Antispasmodics (belladonna, Lomotil)
- Heterocyclic antidepressants (amitriptyline, imipramine, doxepin)
- Neuroleptics (chlorpromazine, thioridazine)
- Narcotics (meperidine)
- Sedative hypnotics (benzodiazepines)
- Histamine (H2) receptor antagonists (cimetidine, ranitidine, famotidine, nizatidine)
- Corticosteroids (prednisone)
- Centrally acting antihypertensives (bêta-blockers, methyl dopa)
- Antiparkinsonian drugs (benztropine, oral; trihexyphenidyl)

Identification of Risk Factors and Prevention of Delirium

The most effective, proven approach to prevent delirium is proactive, multifactorial, nonpharmacologic interventions for high-risk patients. (Marcantonio, 2011). Bedside nurses are in key position to recognize risk factors for delirium and the earliest cognitive changes heralding the onset of delirium. Once it has been determined that the patient is at risk for delirium, the nurse must implement these evidence-based interventions immediately (Tullman, 2012). See Table 1.

Clinical Presentation

Patients may manifest some of the following symptoms: easily distracted, inattentive, delusional, having hallucinations and illusions, incoherent speech, rambling thoughts, inability to do ADLs, agitated, restless, slow to respond and disturbance in the sleep/wake cycle.

These symptoms of delirium can be difficult to distinguish from other pathologic conditions of cognitive impairment. It is important for the bedside nurse to become familiar and skilled in recognizing different assessment parameters so that a correct identification can be made and treatment is implemented in a timely manner (Tullman, 2009). See Table 2.

These are some examples of complex clinical presentations:

1. When a patient with dementia has a sudden change in mental or functional status as reported by a family member or by observation, it suggests that there is delirium superimposed on dementia.

Delirium Risk Factors and Tested Interventions	
Risk Factor	Intervention Protocol
Cognitive Impairment	Orienting communication, including orientation board Therapeutic activities program
Immobilization	Early mobilization (e.g. ambulation or bedside exercises) Minimizing immobilizing equipment (e.g., restraints, bladder catheters)
Psychotic Medications	Restricted use of PRN sleep and psychoactive medications (e.g., sedative-hypnotics, narcotics, anticholinergic drugs)
Sleep Deprivation	Noise-reduction strategies Scheduling of nighttime medications, procedures, and nursing activities to allow uninterrupted period of sleep
Vision Impairment	Provision of vision aids (e.g., magnifiers, special lighting) Provision of adaptive equipment (e.g., illuminated phone dials, large-print books)
Hearing Impairment	Provision of amplifying devices; ensure hearing aids are working Instruct staff in communication methods
Dehydration	Early recognition of dehydration Encourage oral intake Volume repletion

Table 1: Delirium Risk Factors and Tested Interventions

2. Patient with depression who is withdrawn, slowed speech, apathy may appear similar to a patient with hypoactive delirium.
3. Patient with acute psychosis can resemble delirium though acute psychosis usually has a history of psychiatric illness. Hallucinations associated with acute psychosis tend to be auditory and delusions are more elaborate.

Evaluation of Delirium

There are two important aspects to the evaluation of delirium: recognizing that the syndrome is present and identifying the underlying cause (medical condition, medications etc.) of delirium.

Confusion Assessment Method (CAM)

The diagnosis of delirium is primarily clinical and is based on careful bedside observation of key features (Inouye, 2006). There are about 11 bedside instruments available in the diagnosis of delirium; however, the best evidence supports use of CAM, which takes five minutes to administer (Wong, 2010).

CAM is a standardized screening tool developed to enable non-psychiatrically trained clinicians to identify delirium quickly and accurately in both clinical and research settings. It has high sensitivity 94 to 100 percent and specificity of 89 to 95 percent and is the most widely used delirium screening tool in hospitalized older patients (Inouye, 1996).

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Characteristic	Delirium	Dementia	Depression	Acute Psychosis
Onset	Acute (hours to days)	Progressive, insidious (weeks to months)	Either acute or insidious	Acute
Course over time	Waxing and waning	Unrelenting	Variable	Episodic
Attention	Impaired, a hallmark of delirium	Usually intact until end-stage disease	Decreased concentration and attention to detail	Variable
Level of consciousness	Altered from lethargy to hyperalert	Normal, until end-stage disease	Normal	Normal
Memory	Impaired commonly	Prominent short-and/or long-term memory impairment	Normal, some short-term forgetfulness	Usually normal
Orientation	Disoriented	Normal, until end-stage disease	Usually normal	Usually normal
Speech	Disorganized, incoherent, illogical	Normal, until end-stage disease	Normal, but often slowing of speech (psychomotor retardation)	Variable, often disorganized
Delusions	Common	Common	Uncommon	Common, often complex
Hallucinations	Usually visual	Sometimes	Rare	Usually auditory and more complex
Organic etiology	Yes	Yes	No	No

Table 2: Differential Diagnosis of Altered Mental Status

The short version of CAM has four features:

- **Feature 1: Sudden onset or fluctuating course**
This feature is usually obtained from a reliable reporter, such as a family member, caregiver, or nurse and is shown by positive responses to these questions.
 - o Is there an evidence of an acute change in mental status from the patient's baseline? One key element of assessment is to determine the timeline of the mental status changes – acute onset is most consistent with delirium.
 - o Did the abnormal behavior fluctuate during the day, that is, tend to come and go, or did it increase or decrease in severity?
- **Feature 2: Inattention**
This feature is shown by a positive response to this question:
 - o Did the patient have difficulty focusing attention, for example, being easily distractible, or have difficulty keeping track of what was being said?

Commonly used tests of attention (Marcantonio, 2011)

 - o Digit span-up to five forwards and four backward
 - o Days of the week, months of the year backwards
 - o Continuous performance task-raise hand when hears a certain letter in a list
 - o Spell W-O-R-L-D backwards

If both features 1 and 2 are positive, proceed to feature 3 or 4; if one of feature 1 or 2 is negative, STOP, patient does not have delirium

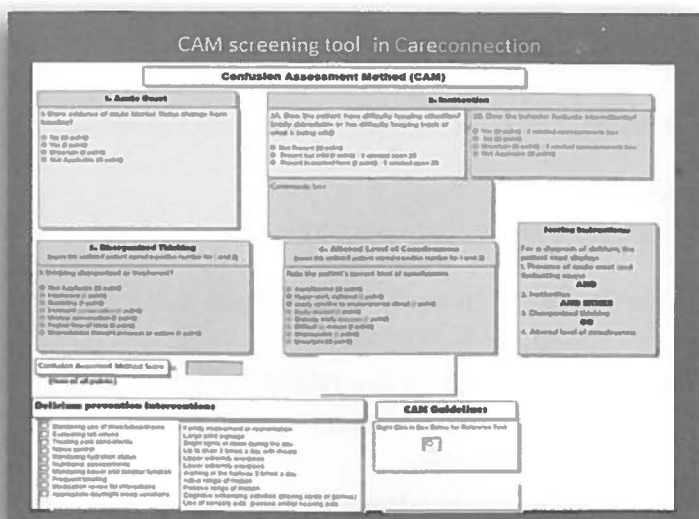
- **Feature 3 Disorganized thinking**
This feature is shown by a positive response to this question:
 - o Was the patient's thinking disorganized or incoherent such as rambling or irrelevant conversation, unclear or illogical flow of ideas, or unpredictable switching from subject to subject?
- **Feature 4 Altered level of consciousness**
This feature is shown by any answer other than "alert" to this question:
 - o Overall, how would you rate this patient's level of consciousness? (alert [normal], vigilant [hyperalert], lethargic [drowsy, easily aroused], stupor [difficult to arouse], or coma [unarousable])?

Features 1 and 2 must be present plus either Feature 3 or 4 for a positive score for delirium.

A version of the CAM for patients in intensive care units (CAM-ICU) is recommended for use with critically ill older patients.

CAM in Powerform will be available in CareConnection in the near future. Nurses will be able to screen patients using CAM and document results and interventions implemented in CareConnection.

Sample CAM Powerform



According to Francis, the conditions noted most commonly in prospective studies of delirium include:

- Fluid and electrolyte disturbances (dehydration, hyponatremia and hypernatremia)
- Infections (urinary tract, respiratory tract, skin and soft tissue)
- Drug or alcohol toxicity
- Withdrawal from alcohol
- Withdrawal from barbiturates, benzodiazepines, and selective serotonin reuptake inhibitors
- Metabolic disorders (hypoglycemia, hypercalcemia, uremia, thyrotoxicosis)
- Low perfusion states (shock, heart failure)
- Postoperative states, especially in the elderly

- Complete blood count – infection, anemia
- Electrolytes – electrolytes abnormalities, especially hyper- and hyponatremia, dehydration,
- Urinalysis, culture – urinary tract infection
- Chest x-ray – pneumonia or congestive heart failure
- Electrocardiogram – myocardial infarction and arrhythmia

Nonpharmacological approaches are the mainstays of treatment for delirium. These approaches include:

1. Treat or remove the cause.
2. Educate patient's family about delirium; that it is a medical condition.
3. Create a familiar environment by encouraging family to visit and to bring familiar objects from home, maintaining consistent caregiver and minimizing room changes if possible.
4. Avoid use of physical restraints
5. Discontinue or remove all unnecessary catheters and other "tethers" such as intravenous line.
6. Mobilize the patient as soon as possible and obtain rehabilitation referral when needed.
7. Address nutritional needs, including assistance with meals and possible hand-feeding
8. Provide adequate sensory input including the use of eye glasses and hearing aids, provision of clocks, calendars and adequate lighting
9. Provide frequent orientation and structured interpersonal contact to facilitate cognitive "reconditioning"
10. Adopt healthy sleep-wake cycles, encouraging night sleeping by reducing environmental stimuli, reducing staff noise, eliminating waking for vital signs except if essential, reducing hospital lighting and turning off televisions and radios.
11. Treat pain. Most clinicians assume that opioids are the cause of delirium and the first response is to discontinue the opioids. Recent studies show that inadequate pain management can cause delirium. Two systematic reviews by Ersek (2004) and Fong (2006) indicated minimal to no significant cognitive changes associated with opioid use.

Nurses play a vital role in recognizing and preventing delirium in high risk patients. They are at the bedside assessing their patients and providing care to meet their needs. Clinicians have to listen to family members when they report that the patient "is not quite right" and should be taken seriously. Delirium is a common geriatric syndrome among hospitalized older patients and clinicians must think delirium when there is a sudden change in the patient's mental status. The most effective, proven approach to prevent delirium is proactive, multifactorial, nonpharmacologic interventions for high-risk patients. (Marcantonio, 2011). The cause of delirium is multifactorial and requires multicomponent interventions for the management of delirium. Think delirium for those high risk patients when there is a sudden change in mental or functional status among hospitalized older adults.

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