"A Dedicated Education Unit and Long Term Acute Car[e] Hospital: An Innovative Partnership"

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RESURRECTION UNIVERSITY
NURSING & HEALTH SCIENCES

Dedicated Education Unit

A Dedicated Education Unit (DEU) is an innovative, instructional model where a nursing college and a healthcare delivery system collaborate to provide students with immersive clinical experiences.

In 2016, Resurrection University opened a DEU within a Long Term Acute Care Hospital (LTACH) setting.

Current: Fall 2018 – We have 6 DEU's and 1 Dedicated Education Partnership (Hospice)

- In 2016, 134 students navigated through the program with excellent results as demonstrated by the exceptional student experience, patient safety, and quality outcomes measured through evaluations and audits.

- Students responded with higher satisfaction rates, higher confidence levels, and improved coursework.

What is unique about DEU ?

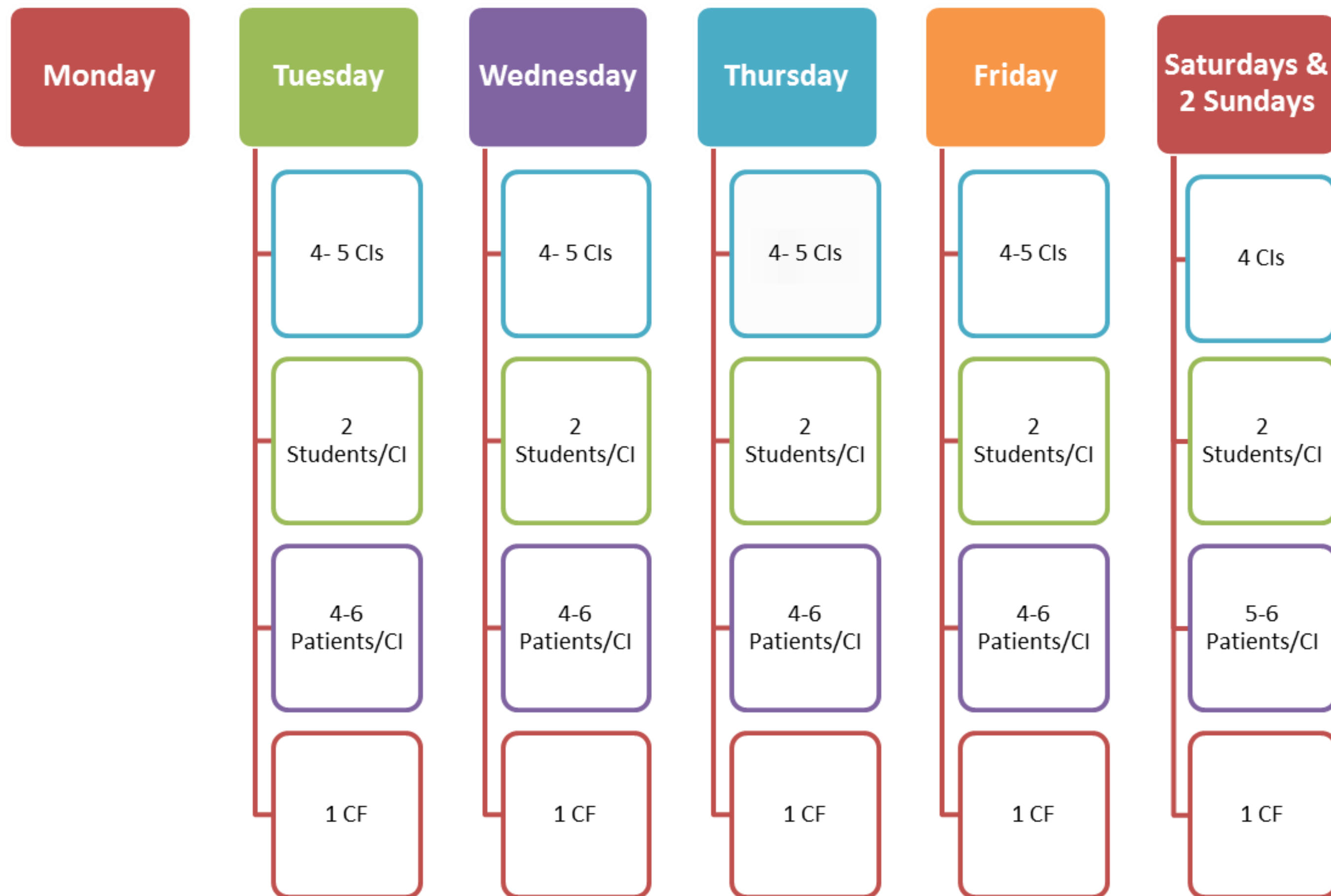
Traditional Model

- Focus on academic achievement
- Limited real hands on experiences
- Clinical faculty / 8-10 students
- Patient safety is a concern
- Lack of consistency
- Lack of working experience with clinical staff

DEU Model

- Integrate academic learning with practical experience
- Real life experience with a ‘bedside expert’ RN
- Clinical Faculty /4-6 Clinical Instructors / 2 students each
- Improved Patient safety
- Consistency of instruction

2016 Sample Staffing



THE CLINICAL/FACULTY TEAM

Why a DEU in an LTACH ?

Innovation in Learning experience	• Medically Complex , Critically Ill Long Term patients
Patient Care Outcome	• Increased Patient Satisfaction, Improved Quality /Safety Metrics
Professional Development	• Grooming of Future Staff ,Team Building & Leadership Development of LTACH Staff
Enhanced Collaboration	• Focused Learning Environment & collaboration with Multidisciplinary Care Team
Innovation in Technology	• Electronic Rounding Boards/ Precaution Board / Room communication screens

Benefits to the Multidisciplinary Care Team

- ➢Enhanced collaboration
- ➢Professional Development
- ➢Recognition
- ➢Job Satisfaction

Benefits to the Students

- Advanced Clinical Skills
- Mimic RN roles & responsibilities
- Peer support
- Experience Progression of Care & Discharge Planning
- Sense of belonging
- Increased confidence

POSTER PRESENTATIONS

Presence℠
Holy Family Medical Center

Prevention of *Clostridium difficile*-Associated Diarrhea (CDAD)

Nursing Student
Presence Holy Family Dedicated Education Unit (DEU)
Resurrection University

Clinical Issue

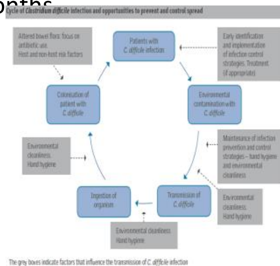
In the United States in 2011, the estimated incidence of community-acquired *C. difficile* infection was 51.9 cases per 100,000 population, whereas the incidence of *C. diff* infection associated with health care was 95.3 cases per 100,000 population

Between 2000 and 2002, the estimated hospital cost in the United States for *C. diff* infection alone was more than $3.2 billion per year. In the clinical setting, *C. diff* infection is the leading cause of healthcare-associated infections

(Liubakka & Vaughn, 2016)

Pertinent to the Unit

Statistics from the Infection Control Department shows an increase in incidence of *C. difficile* infections in the past months



The grey boxes indicate factors that influence the transmission of C. difficile infection

Literature Review of Topic

- *C. difficile* infection may have a significant effect on health services because of prolonged length of stay in hospital. Mortality at 30 days has been shown to be between 5.7% and 6.9%.
- The incidence and severity of *C. difficile* infection has increased in health care settings over the past decade with increases in patient transfer to the intensive care unit, colectomy, and deaths.
- Patients also spends an extra one to three weeks in the hospital compared to non-infected patients, which contributes for an increased cost in the hospital.

Risk Factors for *C. difficile* infection

- Antibiotic exposure including: clindamycin, ampicillin, amoxicillin, and cephalosporin
- Older age >65 years old
- Severe underlying disease
- Nasogastric tube in place
- Longer hospital stays
- Patients taking proton pump inhibitor or histamine receptor antagonist

(Leal, Heitman, Conly, Henderson, & Manns, 2016)
(Mitchell, Russo, & Race, 2014)
(Liubakka & Vaughn, 2016)

Literature Review of Intervention

- Careful prescribing of antibiotics to patients, avoiding unnecessary antibiotics, and using appropriate duration of therapy
- Close monitoring for patients using antibiotics
- Discontinuing antidiarrheal and antibiotics causing the bacteria and initiate proper regimen
  - Metronidazole or vancomycin therapy (orally)
  - Fidaxomicin (orally)
- Probiotics use in addition to antibiotic therapy
- Besides standard precaution, institute special contact precaution
  - Use of gown and gloves during direct contact with patient care
- Proper hand hygiene after patient care
- Single rooming or cohorting with other patients with *C. diff* infection
- Implement environmental cleaning and disinfection strategy
- Fecal Microbiota Transplant (for recurrent *C. diff* infection)

(Liubakka & Vaughn, 2016)
(Mitchell et al., 2014)

Solutions

- Continuation of precaution until discharge of patient
- Proper hand hygiene education
- Early instigation of special contact precaution and use of single rooms
- Educate patients and visitors about proper use of personal protective equipment and where to perform hand hygiene
- Monitoring the frequency and consistency of stools of patients with *C. diff* infection

(Mitchell et al., 2014)

Future Implications

Keep patient on special contact precaution until KPC screen resulted
Provide sani-cloth disinfectant in rooms occupied by patients with *C. diff* infection
In-service for environmental staff regarding proper cleaning of rooms
Increasehand hygiene compliance

CAUTI Prevention

COLLEGE OF NURSING & COLLEGE OF ALLIED HEALTH

ResU Nursing Student Holy Family
DEU, Medical Surgical 2NR

Clinical Issue

- Catheter-Associated Urinary Tract Infections (CAUTI) refers to patients who develop a urinary tract infection (UTI) with an indwelling urinary catheter in place or within 48 hours of the catheter removal.
- Among UTIs acquired in the hospital, approximately 75% are associated with a urinary catheter

Literature Review: Issue

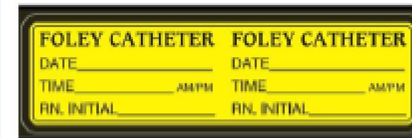
- CAUTIs are the most common type of nosocomial infection, accounting for 40% of all infections in the hospital per year.
- CAUTI cause discomfort to the patient, prolonged hospital stay, increased cost, and mortality.
- More than 13,000 deaths are associated with UTIs
- If catheterization lasts more than 6 days, it increases the risk of CAUTI by nearly 7-fold.
- Each episode is estimated to cost an additional $1000 in care for each patient, which increases if Bacteremia develops.
- Medicare and Medicaid will not reimburse
- Can progress to further complications such as prostatitis, epididymitis, cystitis, and gram-negative bacteremia.

Literature Review: Solution

- A systematic review in hospitalized patients reported that the use of an intervention including a reminder to staff that a catheter was in place and or a stop order to prompt removal of unnecessary catheters reduced the CAUTI rate by 53%.
- Reeducation of nurses in urinary catheter management has shown to have a modest decrease in catheter days.
- A weekly rounding process included infection control management along with the clinical nurse going to each room and assessing all catheters on a consistent basis to determine if criteria is met.
- Proper detailed documentation and catheter label with insertion date placed on the tubing to be reminded of the duration of the placement showed to increase removals.
- Cather care bundle checklist includes:
  - Closed drainage system
  - Keep bag lower than bladder
  - Securement of drainage tubing to the patient's thigh
  - Drainage bag off the floor
  - Drainage bag not overfilled
  - Tubing not kinked or twisted
  - Maintain catheter if criteria is met based on recommended guidelines
  - Assess daily and monitor need of continuation

Interventions

- Using a bundle approach that includes: a rounding process, a bedside checklist, urinary catheter labeling tags, and education sessions for all staff including nurses and assistants.
- The rounding process includes thorough assessments by nurse in every shift.
- Nurse or assistant will perform proper hygiene by cleansing perineal area and catheter tubing at every shift, documenting task afterwards.
  - Catheters cleaned in circular motion from insertion site
- Checklist tool will include the items previously mentioned in care bundle.
- Urinary catheter labeling tags will be required to be placed on the tubing above the bag
- One week mandatory educational sessions for nurses:
  - Sterile insertion techniques
  - Proper cleaning methods
  - Bladder scans
  - Practicing insertion skills on mannequins.



- The University and Clinical Partner:

Dedicated to best patient, family, student, staff and community outcomes.

DEU Patient Care Outcomes

	2015	2016
CLABSI	31	18
CAUTI	33	24
C DIFF	38	32
FALL with injury	4	0

Financial Impact To Hospital Unit

START UP COST

Sample Budget $20,000

- STAFFING RATIO ADJUSTMENTS
- SALARY ADJUSTMENTS (RN-I to RN-II)

Holy Family 2016: ACTUAL COST SAVINGS

$301,031.00

- REDUCE TURNOVER BY 50%
- HIRING GRADUATES OF DEU -8 FTE ($115,000 as orientation cost)

2018 Outcome Slice

Resurrection University Dedicated Education Units - Quality Data Report - March/ April 2018

Holy Family – March 2018

- Targets exceeded:
- Experience - Press Ganey Overall Satisfaction – Target 55% - Actual 99%
- Safety and Quality – Health Outcomes Index – Target 100 – Actual 130

Resurrection Medical Center 4 NW – March 2018

- Above benchmark (nursing):
- Communication with Nurses - 90%
- Responsiveness of Hospital Staff - 81.2%
- Discharge Information – 88.2%

Resurrection Medical Center 4 South – April 2018

- Received hospital award for most improved Press Ganey Scores

St. Mary's Hospital 7th and 8th floor

- Metrics staying high in all areas.
- Remarkable to note the overall nurse statistics:
- 80% BSN, 13% MSN and 7% ADN
- Resu Alumni on nursing staff = 110

Student demand for a DEU experience is consistently reported:

"All nursing students should have the opportunity to be assigned to a DEU!"

Student Clinical Evaluation Statement Analysis

A random student clinical evaluation was chosen for the DEU and a traditional clinical course.

- Likert Type Scale: 1 = Strongly Agree, 2 = Agree, 3 = Neutral, 4 = Disagree, 5 Strongly Disagree

Clinical staff are supportive of ResU students.

- Traditional clinical mean(n = 7) = 2.14 DEU mean(n = 23) = 1.39

This clinical site fosters an environment of personal and professional growth.

- Traditional clinical mean = 2.43 DEU mean = 1.48

This clinical experience has enriched my professional knowledge and skills.

- Traditional clinical mean = 1.86 DEU mean = 1.43

Student Classroom Performance

- **Term C 2017**
- **Level 1 Foundations in Nursing**
- Overall Course Average: (4 sections) 92.81%
- DEU Student Course Average (4 sections) 92.82%
- **Level 3 Adult Health II**
- Overall Course Average: (4 sections) 80.88%
- DEU Student Course Average: (4 sections) 81.5%
- NOTE: Of the 4 sections Evening/Weekend DEU students scored higher than the course average.
- (FON 93.1% vs 90.8% & AHII 82.7% vs. 81%)

Lessons Learned

- LTACH to strategize position control to maximize hiring of DEU graduates
- Consideration coverage of Clinical Instructors (staff RN’s) during vacations/unplanned absences
- Provide Clinical Instructors scheduling based on patient volume and to meet student assignments
- Identified physician/provider champions in initial stage
- Role clarity: Clinical Instructor vs Preceptor
- Engage Multidisciplinary Team earlier

BRIDGING THE GAPS

Bibliography

BENNER, P., & WRUBEL, J. (1989). *THE PRIMACY OF CARING: STRESS AND COPING IN HEALTH AND ILLNESS*. CALIFORNIA: ADDISON-WESLEY.
BURKE, K.M., CRAIG, C. (2011). THE DEDICATED EDUCATION UNIT: INNOVATING WITHIN THE REGULATORY FRAMEWORK. *JOURNAL OF NURSING REGULATION*, 1(4), 9-12.
CAMPBELL, I.E., LARRIVEE, L. FIELD, P.A., DAY, R.A., & REUTTER, L. (1994). LEARNING TO NURSE IN THE CLINICAL SETTING. *JOURNAL OF ADVANCED NURSING,* 20, 1125-1131.
CASTNER, J., CERAVOLO, D., TOMASOV, & MARIANO, K. (2012). DEDICATED EDUCATIONAL UNITS: WHAT'S THE IMPACT ON PATIENT SATISFACTION? *NURSING MANAGEMENT,* APRIL. DOI:10.1097/01.NUMA.0000413101.71371.CE
DAVIS, L., & BARHAM, D. (1989). GET THE MOST FROM YOUR PRECEPTORSHIP PROGRAM. *NURSING OUTLOOK*, 167-191.
DELUNAS, L. R., & ROODA, L. A. (2009). A NEW MODEL FOR THE CLINICAL INSTRUCTION OF UNDERGRADUATE NURSING STUDENTS. *NURSING EDUCATION PERSPECTIVES*, 30(6), 377-380.
EDGECOMBE, K., WOTTON, K., GONDA, J., & MASON, P. (1999). DEDICATED EDUCATION UNITS: 1. A NEW CONCEPT FOR CLINICAL TEACHING AND LEARNING. *CONTEMPORARY NURSE*, 8(4), 251-259.
EDMOND, C.B. (2001). A NEW PARADIGM FOR PRACTICE EDUCATION. *NURSE EDUCATION TODAY*, 21, 251-259.
HANNON, P.O., HUNT, C.A., HALEEM, D., KING, L., DAY, L., CASALS, P. (2012). IMPLEMENTATION OF A DEDICATED EDUCATION UNIT FOR BACCALAUREATE STUDENTS: PROCESS AND EVALUATION. INTERNATIONAL JOURNAL OF NURSING EDUCATION, 4(2), 155-159.
JACKSON, D., & MANNIX, J. (2001). CLINICAL NURSES AS TEACHERS: INSIGHTS FROM STUDENTS OF NURSING IN THEIR FIRST SEMESTER OF STUDY. *JOURNAL OF CLINICAL NURSING,* 10, 270-277.
KOWALSKI, K. ET AL. (2007). NURSING CLINICAL FACULTY REVISITED: THE BENEFITS OF DEVELOPING STAFF NURSES AS CLINICAL SCHOLARS. *JOURNAL OF CONTINUING EDUCATION IN NURSING*, 38, 69-75.
LINDEMAN, C. (1989). CLINICAL TEACHING: PARADOXES AND PARADIGMS. IN *CURRICULAR REVOLUTION: RECONCEPTUALIZING NURSING EDUCATION*. (PP. 55-69). NEW YORK: NATIONAL LEAGUE FOR NURSING.
NELSON, D., GODFREY, L., & PURDY, J. (2004). USING A MENTORSHIP PROGRAM TO RECRUIT AND RETAIN STUDENT NURSES. *JOURNAL OF NURSING ADMINISTRATION*, 34, 551-553.
NISHIOKA, V.M., COE, M.T., HANITA, M., & MOSCATO, S.R. (2014). DEDICATED EDUCATION UNIT: NURSE PERSPECTIVES ON THEIR CLINICAL TEACHING ROLE. *NURSING EDUCATION PERSPECTIVES*, 35(5), 294-300.
NOLAN, C.A. (1998). LEARNING ON CLINICAL PLACEMENT: THE EXPERIENCE OF SIX AUSTRALIAN STUDENT NUSES. *NURSE EDUCATION TODAY*, 18, 622-629.
PACKER, J. (1994). EDUCATION FOR CLINICAL PRACTICE: AN ALTERNATIVE APPROACH. *JOURNAL OF NURSING EDUCATION,* 33(9), 411-416.
PARTNERSHIP. (2009). DEDICATED EDUCATION UNIT: PURPOSE, FEATURES, & ROLES. UNIVERSITY OF PORTLAND WEB SITE. RETRIEVED FROM HTTP://NURSING.UP.EDU/DEFAULT.ASPX?CID=7744&PID=2959
RANSE, K., & GREALISH, L. (2007). NURSING STUDENTS' PERCEPTIONS OF LEARNING IN THE CLINICAL SETTING OF THE DEDICATED EDUCATION UNIT. *JOURNAL OF ADVANCED NURSING*, 58(2), 171-179.
ROBERT WOODS JOHNSON FOUNDATION. (2011). THE DEDICATED EDUCATION UNIT. INITIATIVE ON THE FUTURE OF NURSING. RETRIEVED FROM HTTP://THEFUTUREOFNURSING.ORG/RESOURCE/DETAIL/DEDICATED-EDUCATION-UNIT-0.

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