



WCCNEP
Winnipeg Critical Care Nursing
Education Program

A Square Peg into a Round Hole:

Creating a Neonatal and Pediatric Nursing Education Stream within an existing Adult Critical Care Framework



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Objectives

- To share our lived experience in establishing, developing and operationalizing a new Neonatal and Pediatric stream within an existing Adult Critical Care Program
- Provide the audience with background, layout, implementation strategies
- Discuss challenges/ hurdles experienced
- Share the end result



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Background

- Neonatal and pediatric intensive care units (NICUs and PICUs) are staffed by a highly specialized group of doctors, nurses and allied health staff who care for critically ill newborns and children
- Undergraduate and diploma nursing programs do not provide the specialized Pediatric and Neonatal critical care education needed
- In the past only experienced nurses worked in critical care. Currently new and recent graduates work in ICU's and must be trained to care for these critically ill patients



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Background

- Closure of existing stand-alone Neonatal and Pediatric Critical Care Program in 2001
- Decreasing enrollment
- Resource intensive
- MONEY
- Despite efforts to administer quality critical care orientation for new nurses, leadership recognized need for more intense, dedicated education specific to critical care



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Background

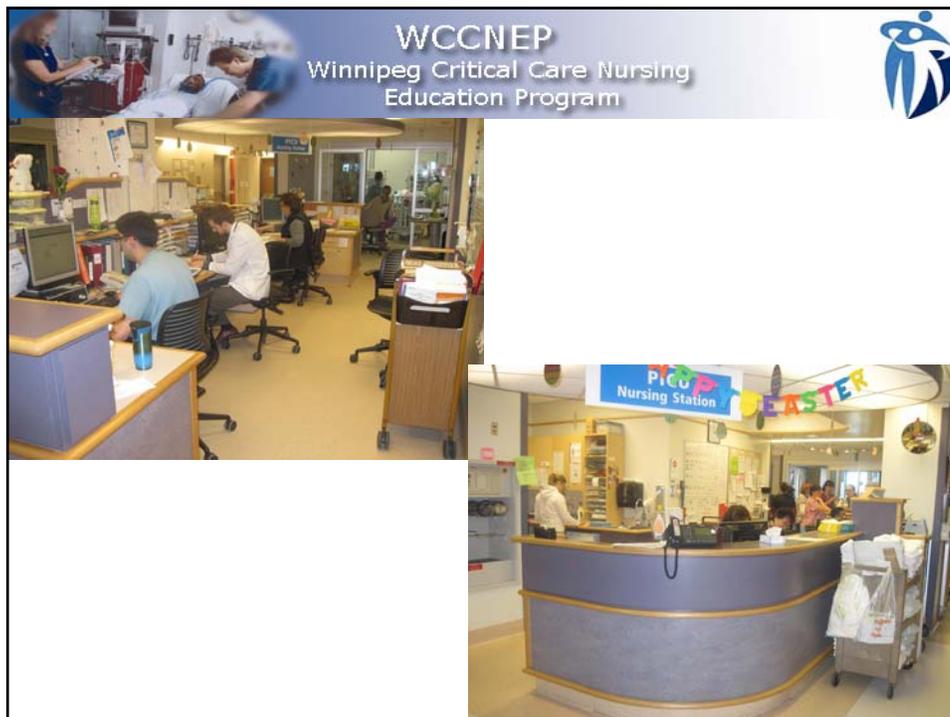
- Well established Adult Critical Care Program already in place
- No new money in a poor fiscal climate
- Leadership advocated for inclusion of Neonatal and Pediatric Critical Care Stream in the existing adult program



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Background

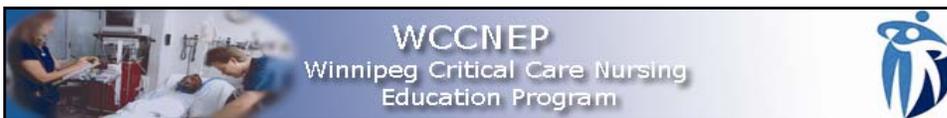
- Fall 2009 agreement reached
- One educator seconded from NICU to be solely dedicated to the neonatal and pediatric stream for, eventually NICU duties backfilled (but always a moving target)
- One educator from PICU- responsible for ongoing orientation/education in PICU, PHDU and WCCNEP- no backfill



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Background

- Fall of 2010 first class of the Neonatal and Pediatric Stream of the Winnipeg Critical Care Nursing Education Program commenced studies
- 6 students from PICU, NICU St. B and HSC accepted the challenge of being the first class to enter into this stream

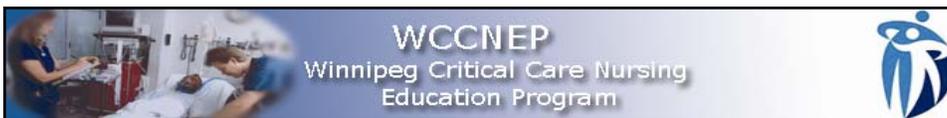


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Layout

- Criteria
- 1. Graduation from an approved diploma school of nursing or a baccalaureate program in nursing
- 2. Current active practicing membership in a Canadian provincial or territorial association/college of registered nurses



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Layout

- 3. A minimum of 1125 hours of nursing experience as defined by the CRNM
- Preference will be given to applicants with acute care nursing experience.



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Layout

- 24 week program with theory/lab and clinical components
 - 8 weeks “Core” critical care theory with adult critical care students, aligned with respective skills labs 2-3 afternoons per week



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Core Curriculum

- Anatomy and Physiology
- Arrhythmias
- Pharmacology
- Cardiovascular
- Hemodynamic Monitoring
- Targeted Temperature Management
- Acute Coronary Syndrome
- 12 Lead EKG
- HITT/Coagulation
- Pain and Sedation
- Organ Donation
- Acute Heart Disease
- Respiratory
- Mechanical Ventilators
- ARDS
- Renal
- Fluids and Electrolytes
- Endocrine
- GI
- Neuro
- Sepsis
- Early Mobility



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Layout

- 1 week of education specific to neonatal and pediatric critical care prior to entering the clinical area
 - This was added in Sept 2012 in response to student evaluations



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Neonatal and Pediatric Theory

- Airway Management
- Neonatal Respiratory Pathophysiology
- PPHN
- Pediatric Respiratory Pathophysiology
- Congenital Heart defects with Pediatric Rhythm analysis
- Neonatal HIE/ Cooling
- Neuro- Management of increased ICP
- DKA
- Sepsis
- Management of hemodynamics in NICU/PICU

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Layout

8 weeks of “Buddied Clinical” time, split between NICU and PICU



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Layout

- Two days of specialized (either NICU or PICU) education prior to 7 week clinical placement in unit of employment.
- Learn while you earn
- Students paid full time wage while in program in exchange for return of service



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Layout

- How do we make this work?
- Educators facilitate lab sessions that are specific to neonatal and pediatric critical care
- Support neonatal and pediatric students by providing supplemental theory and helping students apply core theory to the pediatric and neonatal population
- Deliver one week of neonatal and pediatric theory



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Layout

- Once students are in clinical rotations, educators select individualized patient assignments, appropriate preceptor
- Educators present in units to monitor and seeking opportunities to engage students in their learning experience



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Layout

- Post conference
- Daily written assignments
- Facilitate “Special experiences”
 - OR
 - Neonatal Transport
 - High Risk Newborn Resuscitation Room
 - Pediatric Acute Pain Service
 - Pediatric High Risk Anesthesia



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Implementation Strategies

- Student body largely comes from within units themselves with varying experience (6 months to 1 year)
- Hard sell at first!!!
- Now it sells itself
- New nurses are introduced to the idea in orientation
- Exposed to students in the units
- See the change
- Be the change



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Implementation Strategies

- Listen and respond to feedback
- Inclusion of week of neonatal and pediatric theory prior to clinical has been key



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Challenges

- Do more with less- No new MONEY
- Meeting the needs of neonatal and pediatric critical care nursing students within an adult framework
- Tailoring experiences for students with a wide variety of previous skills, knowledge and experience



Results

- Evaluations from students positive
- Currently into 11th class
- 65 Graduated to date
- 78% retention rate since Sept 2010



Retention

Unit	Total Student Numbers (2010 – present)
NICU HSC	18 (11 employed in critical care)(4 enrolled)
NICU St B	14 (8 employed in critical care) (2 enrolled)
IMCN	9 (6 employed in critical care) (2 enrolled)
PICU	28 (23 employed in critical care) (1 enrolled)
CHER	3
CH Relief team	1
Withdraw	4 (NICU HSC (2), PICU, NICU St B)
Currently enrolled in program	9
Total enrolled since Sept 2010	78
Total Graduated	65
Not currently working in critical care	14
Total Employed in Peds/Neo Critical Care (Wpg) as of Sept 2015	51 (includes 1 CH Relief Team) 78% of graduates working in neonatal or pediatric critical care



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Conclusions

- Critical care concepts are very transferrable
 - Cardiac output
 - Mechanical ventilation
 - Invasive pressure monitoring
- Important differences - Recognize what is different and make adjustments
 - Equipment and skills
 - Normal values
 - Disease processes

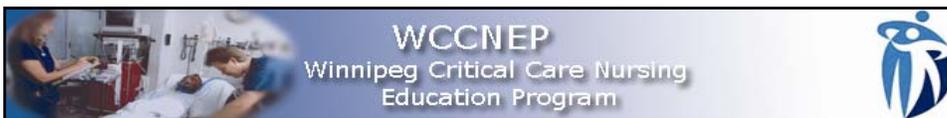


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What we learned

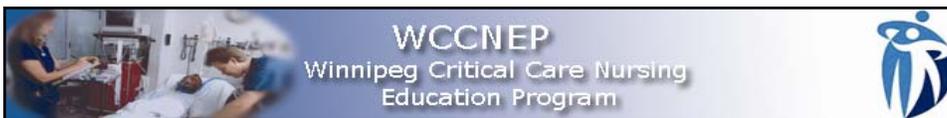
- Be prepared to mentor and support
- Must assist students to translate concepts
 - How is this the same in kids?
 - How is it different?
- Help students “discover” using critical thinking and inquiry
- Building confidence and developing communication skills is a primary goal



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Future Directions

- ? Entry to practice in NICU/PICU
- ? Increase number of students we can accept into the program each intake
- Incorporate more adult learning strategies



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Thank You!