Alfred I duPont Hospital for Children
PICU Resident Rotation


And

Plans July 2003-June 2004

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Between 7/1/02 and 6/30/03, 60 medical trainees participated in the PICU rotation experience. Most voiced a desire to learn how to recognize and stabilize a critically ill child. Critical Care physicians, clinical pharmacists, respiratory therapy instructors, nursing staff development devoted 1476 hours to the resident educational effort. In addition a radiologist daily discusses XRAY studies. Residents ranked their overall satisfaction with the PICU rotation as 3.2 on a Likert scale (4=Exceeds expectations, 3=Meets expectations, 2=Needs Improvement and 1= Major Area of deficiency). Residents scored an average of 86% on a national on-line multiple choice test designed for residents completing a PICU rotation. Residents’ self reported comfort level with critically ill children improved after their PICU rotation.

We participate in two Nemours Foundation Education Innovation Grants: Mechanical Ventilation Learning Laboratory for Residents and Promoting PICU Evidence Based Clinical Practice.

The Thomas Jefferson University Pediatric Residency Program awarded the 2003 Division Teaching Award to Critical Care.


We are challenged to maximize the individual resident’s PICU experience following the suggestions of the Society of Critical Care Medicine while paying close attention to patient safety and effective care, new ACGME resident hospital work hours, ACGME resident competency based training requirements and an ever changing health care economics.

Enclosed is a brief overview of the PICU resident educational efforts for the 2002-2003 academic year as well as plans for 2003-2004.
PICU Rotation Participants 2003

- Pediatric: 21
- MedPeds: 3
- ER: 1
- Student: 1
- ER Fellow: 4
- Nurse Pract: 30

Legend:
- Pediatric
- MedPeds
- ER
- Student
- ER Fellow
- Nurse Pract
Resident Previous ICU Exposure

Intensive Care Unit

Percent

PICU NICU MICU SICU CCU Adult Trauma
Resident Previous Intubation Experience

- Intubation <1: 70%
- Intubation child: 30%
- Intubation adult: 65%
Residents Previous Pediatric Code Experience

- Run Pediatric Code
- Pediatric chest compressions
- Pediatric Ventilation
- Pediatric Mouth-to-Mouth (Barrier)
Resident Learning Preferences

- Lectures
- Formal reading plan
- Check textbook
- Medline searches
- Mock Drills
- Patient Care
- Give Talk
- Interactive Rounds
What do Residents anticipate learning during their PICU rotation?

Management of critically ill pediatric patients.

Recognition of life threatening problems and initial management.

Resuscitation skills. Severity of illness that requires PICU level of care. How to manage emergent situations independently.

Management of acute issues. Response to critical care issues in the acute setting. Delivering bad news.


I hope to gain experience in managing acutely ill children both in initial assessment and in ongoing management. I would like to familiarize myself with the appropriate diagnostic studies, indications, physical exam and be able to organize my daily plan.

Care of an acutely ill pediatric patient. Stabilization of unstable pediatric patient.

Coordinating all issues in a critically ill child, become more comfortable with ventilators especially in children.

Resuscitation and stabilization of acutely ill children with experience in various emergency room procedures.

Understand more about ventilators-settings/types etc. Most of my procedures have been in NICU babies, would like to be more comfortable with procedures on older children. Learn more about sedation.

How to manage critically ill patients. Run pediatric codes. Procedures.

Complex pediatric codes.


Use of sedation / paralytic drugs. Central venous line placement. How to manage a code. Increase procedure skill.


Care of acutely ill children.

hope to learn about the management of critically ill children. In specific I hope to become more familiar with mechanical ventilation, the use of pressors and different procedures-such as lines, ABG, intubation. I hope to enter the field of pediatrics and thus far all of my ICU encounters have been with adults.

Common pediatric emergent situations that I may encounter in the outpatient world. Common pediatric emergencies that may arise on the floor that I will first handle as a 3rd year team leader such as sepsis, seizure, airway issues, acute respiratory distress.

Pediatric procedures and PALS resuscitation techniques (codes, arrhythmias, intubation, lines). Pediatric disease process, critical care medicine. Comfort level with sick children.

Intubation/drugs for intubation. Pediatric medical resuscitation. Pediatric procedures.

More procedures. Better ventilation management of pediatric patients.

Pediatric resuscitation.

Manage acuity. Learn critical pediatric values / formulas.

How to run a code-respiratory or cardiac in origin. How to care for critical situations.

Pediatric resuscitation.


Pediatric Airway/vent management, approach to common management issues, Pediatric code situations

Ventilation, 2) Pediatric Codes, 3) Management of complicated patients (I.e. trach, sepsis, V-P shunts)

Pediatric critical application in trauma in Pediatric

Pediatric Resuscitation, 2) procedures - lines, tubes, etc., 3) proper antibiotic choices, 4) management of routine critical medical presentation

Exposure to communicable respiratory diseases, 2) , 3) airway

Peds intubation, 2) difficult ped. Airway techniques, 3) ped schock management - hem/septic/cardiac, 4) ped resuscitation, 5) ped procedures - LP, central lines, chest tubes, pacing, defib/cardiovert, 6) peds OD management

Increase level of comfort with critically ill patients, 2) increase level of skill with procedures, 3) increase techniques for streamlining and organizing multiple tasks on sick patients

Pediatric Codes.

How to recognize and find info on how to manage emergent pediatric situations.
Resident Evaluation of PICU Rotation

Average Likert scale score

- Introduction: 3.25
- Clinical Responsibility: 3.15
- Helpful learning process: 3.2
- Evaluation process: 2.9
- Overall evaluation: 3.15

11
Overall evaluation of PICU Rotation

Encouraged about a career in critical care.

Great rotation, interesting cases. Great attendings. Got procedures (central line, intubation).

I felt that the continuity of attendings is an area that needs improvement.

Where the Critical Care Attendings helpful?

Stryjewski is a wonderful teacher, great interaction with residents and students.

Costarino good source of information during rounds. Cullen could improve on teaching skill during rounds. Great teacher for computer and evidence based medicine. Penfil excellent didactic teaching skills during rounds. Allows independence with procedures. Stryjewski excellent didactic teaching skills during rounds and good mentor for procedure skills.

Penfil is an absolutely wonderful teacher. Stryjewski is a superb teacher.

All of the attendings were great teachers. They were always willing to answer my questions and involve me in patient care.

Costarino helped me understand a difficult patient. Cullen very nice, very patient. McCloskey likes to teach. Penfil likes to teach, really explains things thoroughly, wonderful role model, wonderful with patient family. Positive experience with attendings, nursing very helpful / friendly.

All the attendings involved were excellent.

Glenn & Scott both love to teach & I really appreciated it.

Costarino didn't let resident try intubation first. Penfil is excellent.

Attendings very patient/helpful in walking me through procedures I had not done before.
Resident Participation in PICU Procedures

- Intubations: 45
- Change Tracheostomy: 7
- Femoral venous: 23
- IJ: 11
- Subclavian: 38
- Radial Aline: 2
- Femoral Aline: 8
- Thoracentesis: 1
- Chest tube: 1
- Defirillation: 1
- Participate pediatric code: 3
- Deliver Bad News: 1

Legend:
- Intubations
- Change Tracheostomy
- Femoral venous
- IJ
- Subclavian
- Radial Aline
- Femoral Aline
- Thoracentesis
- Chest tube
- Defirillation
- Participate pediatric code
- Deliver Bad News
Hours Devoted to Resident PICU Rotation
Hours Provided for Resident Rotation

- Bradford
- Costarino
- Cullen
- Hertzog
- Lawless
- McCloskey
- Penfil
- Stryjewski
- Tejani
- Harrison/Selhorst
- Blackburn
Evaluation of Residents

Average Score

- Patient Care
- Medical Knowledge
- Practice Based Learning and Improvement
- Communication/Interpersonal Skills
- Professionalism
- Systems Based Practice
Evaluation of PICU Resident

- Concern for patient safety: Average Likert Scale Score 3.5
- Concern for patient quality of care: Average Likert Scale Score 3.0
Residents’ Pre-Test
5 PICU Scenarios, Multiple Choice questions
Aimed to sensitize residents to the problems they may encounter in a PICU.

Average score 78.5%

Residents’ Post-Test
National on-line multiple choice test designed for residents completing a PICU rotation.

Average score 86%

Residents Suggestions To Improve the PICU Rotation

I would like the opportunity for more didactic attending-resident interaction during the day or even occasional presentations by either me or one of the residents to the group. For example, Dr Strewjewski took some time one afternoon to go over cardiac anatomical abnormalities and their surgical repairs—this was extremely helpful and interesting for me. I would have also benefited from more feedback since I am still learning how to present and manage patients.

Unfortunately, I think that experience would be much improved by fewer chronic patients and more acute ones, but this isn’t something that can be controlled.

More lectures, more opportunities to attend noon lectures, morning report and other educational lectures in the hospital.

Residents should not be responsible for chronic borders (>30 days) in PICU. I had no educational value from patients who remained in the PICU for disposition issues and long term vent support. Kudos for the exposure to procedures.

The amount of material of "extra" things to do with journal clubs, powerpoint etc is really too much. I would have preferred to have time to read on the diseases of my patients.

Omit order entry. Optimize reading / discussion.

More interactive teaching / learning on rounds.

No more computers! Maybe a couple of more formal lectures.

Over Christmas, New Year it was difficult to keep up with educational program. Overall great month.

Overall great. Learned a lot. Great teaching by all attendings. Easy to work with.

Lunch conference, shortened rounds during education times.

More Didactics. Teaching on rounds is great, but often having chronic pts the topics are limited. The books/computer resources are helpful but I felt there is no substitute for…

Brief, scheduled didactic sessions.

More formal lectures & mock codes

More mock & mini mock codes. PICU attending case presentations specific to choosing vent & vent settings would be more useful than the current resp tech vent lab.
Comfort Level With Critically Ill Child
ACGME (1999)

Competency Based Residency Training

General Competencies
Specialty Specific
  Patient care
  Medical knowledge
Across all disciplines
  Practice-based learning and improvement
  Interpersonal and communication skills
  Professionalism
  System-based practice

Learner Based
  Need to prove that resident actually accomplishes that which is set forth in curriculum

Learning objectives have to be outcome based.

SCCM (1995)


Recommendation 1

On completion of residency training, the physician should have achieved proficiency in the recognition and initial management of problems commonly encountered in the intensive care unit. This proficiency includes, but is not limited to:

- Acute respiratory failure
- Hemodynamic instability
- Sepsis
- Acute neurologic insults
- Acute electrolyte and endocrine disorder
- Acute renal failure
- Coagulation disorders
- Overdoses and poisonings

For less common problems, the trainees gain a knowledge base that allows them to formulate a differential diagnosis, initiate a management plan, and request appropriate consultations.


It is evident, after examination of the comprehensive list of ICU problems outlined in the guidelines (Crit Care Med 1995;23:1920-1923), that general residents cannot develop proficiency in the complete management of all pathophysiologic states noted. Residents should, however, be able to recognize, stabilize and begin resuscitation of critically ill patients until a critical care specialist is available.
ACGME Work Group on Resident Duty Hours (June 2002)

Duty Hours

- 80 hours per week, averaged over 4 weeks. May increase by 10% in some circumstances.
- One day off out of seven, averaged over 4 weeks
- No in-house call more than once every three nights, averaged over 4 weeks
- 24 hours on call, maximum, with up to six additional hours to hand off patients and attend educational activities.
- 10 hours off between duty periods and after in-house call.
- Probation or accreditation withdrawal for facilities that do not comply

Institutional Oversight

- Details available if desired

High Quality Education and Safe and Effective Patient Care

- Priority of clinical and didactic education in the allotment of residents’ time and energies
- Schedules of teaching staff structured to provide ready supervision and faculty support/consultation to residents on duty
- Duty hour assignments that recognize that faculty and residents collectively have responsibility for patient safety and welfare
- Monitor residents for the effects of sleep and fatigue by Program director and faculty with appropriate action when it is determined that fatigue might affect safe patient care or learning.
- Education of faculty and residents in recognizing the signs of fatigue and in applying preventive and operational countermeasures
- Appropriate backup support when patient care responsibilities are difficult and prolonged, and if unexpected needs create resident fatigue sufficient to jeopardize patient care.
Integration of Residents into Patient Care

Residents are members of a multidisciplinary team caring for critically ill or injured children and adolescents. They also are responsible for the provision of safe and effective patient care. Residents are supervised by Critical Care Physicians (Day & Night) during their training period in the PICU.

• It is expected that residents will interact professionally with the nurses, respiratory therapists, unit clerks, consultants and families in the ongoing care of the children in the PICU.

• It is expected that residents will know the history and main clinical issues for each patient in the PICU.

• It is expected that residents will examine assigned patients before formal rounds.

• It is expected that residents will examine their patients frequently throughout their hours in the PICU and that they will interact with the critical care physician with any changes in the patients’ clinical course.

• It is expected that residents will learn and use our process for presenting patients on formal rounds.

• It is expected that residents be prepared for and fully participate in patient care rounds.

• It is expected that residents will have a basic knowledge of the medical issues affecting the patient they are presenting on rounds.

• It is expected that residents will exchange up-to-date patient information with on-coming day or night resident(s).

• It is expected that residents will not give verbal orders.

• It is expected that residents will learn and utilize the PICU Order Entry Algorithm.

• It is expected that residents will learn and utilize the PICU Transfer Algorithm.

• It is expected that residents will complete and document H&Ps on patients admitted to the PICU from the ER, Transport, home or Acceptance Notes for children transferred from OR, PACU or general hospital area.

• It is expected that residents will complete a daily progress note and if appropriate procedure notes on assigned patients.

• It is expected that residents will review indications, landmarks, procedure and complication risk for all procedures before they undertake procedures under the supervision of critical care physicians.

• It is expected that residents will assist with discharge of patients to other facilities or home.

• It is expected that residents will assist in communicating patient updates to referring physicians.

• It is expected that residents will be acquainted with hospital Code responsibilities and review PALS algorithms for pulseless arrest, bradycardia, tachycardia with poor & adequate perfusion.

• It is expected that residents will be acquainted with the PICU Difficult Airway Cart.
PICU Resident Educational Process

Duration

4 to 6 weeks

Outcomes

On completion of the PICU rotation, the physician will achieve proficiency in the recognition and initial management of a critically ill or injured child or adolescent with the following problems:

- Acute respiratory failure
- Hemodynamic instability
- Sepsis
- Acute neurologic insults
- Acute electrolyte and endocrine disorder
- Acute renal failure
- Coagulation disorders
- Overdoses and poisonings

Outcomes Measurement

Outcomes are measured by resident self-reported comfort level scores which describe their ability to recognize and stabilize a child or adolescent with the problems listed under Outcomes.

In addition, critical care physicians' give their comfort level for individual residents that reflect their observation that residents will be able to recognize and initially stabilize a child or adolescent with the problems listed under Outcomes.

Residents also participate in a national post-rotation test designed for residents who have just completed their PICU rotation.

Resources

- Bedside teaching and supervision by critical care physicians
- PALS algorithms pocket card
- The following textbooks are available in the PICU
  Pediatric Intensive Care, Third Edition
  Mark C. Rogers

  Pediatric Critical Care
  Fuhrman/Zimmerman
  2nd Edition

  The Difficult Pediatric Airway
  Anesthesiology Clinics of North America
  Jalil Riazi, MD, Editor
  1999

  Management of Pediatric Trauma
  Buntain

  Critical Heart Disease in Infants and Children
  Nichols, Cameron, Greeley, Lappe, Ungerleider, Wetzel
Pediatric Cardiac Intensive Care  
Chang, Hanley, Wernovsky, Wessel

Illustrated Textbook of Pediatric Emergency and Critical Care Procedures  
Dieckmann, Fiser, Selbst

Supportive Care of Children with Cancer  
Current Therapy and Guidelines from the Children's Cancer Group  
Edited by Arthur R. Ablin MD

Textbook of Pediatric Emergency Medicine  
Ludwig Fleisher

Toxicologic Emergencies  
Lewis R. Goldfrank

Toxicology  
Frodo/Delaney/Ling Erickson

The Pharmacologic Approach to Critically Ill Patients  
Chernow, Third Edition

Principles and Practice of Intensive Care Monitoring  
Tobin

Smith's Recognizable Patterns of Human Malformation  
5th edition, 1997

- Computer access to  
  PICU Resident Rotation  
  http://www.nemours.org/no/aidhc/picu/index.html  
  Username: picu    Password: resident

  PICU topics for Residents (Powerpoint slide presentations compiled by the Pediatric Critical Care Education Committee, Society of Critical Care Medicine)  
  http://www.picucourse.org

  Nemours Users' Guides Interactive Desktop (Nemours Education Grant)  
  Evidence Based Clinical Practice resources / Search Engines/ Journals/ Educational resources  
  Nemours UGI Desktop introduction and password provided

- Patient Care Scenarios

- Journal Club participation

- Multidisciplinary interactions with clinical pharmacists, nurses, respiratory therapists, nursing staff development and medical librarian.
Curriculum

During their first day in the PICU, all residents will receive an introduction session that will review:

Administrative Issues

- Patient care responsibilities of the resident
  (this will include copies of the Order Entry and Transfer algorithms)
- Presenting Patients on PICU Rounds
- Review of Information sources that need to be available and referenced during rounds
  - Bedside Nursing Flow Sheet
  - Bedside Respiratory Flow Sheets
  - Bedside computers
    - Cerner
      - Order Entry
      - Lab and XRAY Reports access
  - Nemours UGI Desktop
    - Evidence Based Clinical Practice resources
    - Educational material
    - Library resources
    - Stentor Radiology access
- Code Blue response responsibilities
- PICU Difficult Airway Cart

Educational Issues

- Outcome Expectations
- Resources
- Overview of Curriculum
- Introduction to Computer resources
  - Nemours Users’ Guides Interactive Desktop
  - PICU Resident web site
  - Pediatric CCM web site
  - Picucourse.org

Alfred I duPont Hospital for Children

Residents

- Are given a Visitor Educational Orientation Packet and are required to sign a Confidentiality Policy
- Visiting residents will take a 2-3 hours Cerner Order Entry class during their first day in the PICU
- Visiting residents will obtain a hospital photo ID at the Personnel Office
- Visiting residents will complete HIPAA training unless documentation is received from the resident’s primary program
Residents are asked to participate in Continuous Quality Improvement efforts for the PICU rotation

Residents are asked to participate by completing pre and post rotation tests and questionnaires.

Tests
  Pre-rotation
    PICU scenario /multiple choice questions
  Post-rotation
    On-line SCCM multiple choice questions

Questionnaires
  PICU Pre-rotation
  Evaluation of PICU

Residents are asked to participate in Nemours Education Innovation Grants

- Promoting PICU Evidence Based Clinical Practice
  Pre and post rotation brief questionnaire about evidence based clinical practice experience

- Mechanical Ventilation Training
  Pre and post rotation questionnaire and test about pediatric mechanical ventilation

ACGME

Residents are ask to voluntarily keep track of hospital hours while participating in the PICU rotation. A general form is provided.
PICU 4 week Educational Experience

Bedside teaching

The majority of teaching is through bedside teaching by critical care physicians during formal patient care rounds or interacting in the care of individual patients.

Radiology Teaching Rounds

Using Stentor intranet resources, a radiologist reviews PICU patients’ xray films with the medical staff daily Monday through Friday in the PICU area.

Patient Care Scenarios

Mock patient care scenarios require the active evaluation and decision making skills of residents in solving patient care issues that are routinely seen in a PICU:

- Acute respiratory failure
- Hemodynamic instability
- Sepsis
- Acute neurologic insults
- Acute electrolyte and endocrine disorder
- Acute renal failure
- Coagulation disorders
- Overdoses and poisonings

Interactive Sessions

Residents are presented with a focused clinical question on a PICU general patient problem associated with ARDS, septic shock or acute neurologic deterioration. Residents are required to find an article pertaining to the question and evaluate the article using evidence-based clinical practice principles. The session will incorporate the residents’ reviews of best literature and the critical care physician’s discussion of the topic (ARDFS, septic shock or acute neurologic deterioration).

Multidisciplinary Sessions

Mechanical Ventilator Introduction – Respiratory Therapy (Nemours Education Grant)
TPN in the PICU – Clinical Pharmacists

Journal Club

Article(s) prepared by critical care physicians

Self Paced Learning

Readings from PICU Textbooks on issues related to the patients you are caring for.

Review of powerpoint slide presentations that have been prepared specifically for residents on PICU rotations by the Pediatric Critical Care Resident Education Committee of the Society of Critical Care Medicine (http://www.picucourse.org)

- Airway
- Mechanical Ventilation
- ARDS
• Near Drowning
• Hypothermia
• Asthma
• Shock
• Vasoactive Drugs
• Post-op cardiac physiology and management
• DIC
• Head Injury
• Status epilepticus
• Renal failure
• Renal Replacement therapy
• Fluid & Electrolyte Emergencies
• DKA
• Poisoning
• Sedation/Analgesia and Neuromuscular Blockade in the PICU
• Enteral and Parenteral nutrition
• Blood Gas Analysis
• Hepatic Failure
• Stabilization and Transport
• Ethics in PICU
• Multiple Organ Dysfunction

Review of powerpoint slide presentations that have been prepared by Alfred I duPont Hospital for Children staff and visitors on the following topics
• Respiratory Failure
• Pharmocologic Perspective on Immunosuppression for Patients with Organ Transplants
• Poisoning
• DKA
• Multiple Organ Dysfunction
• Septic Shock & Multiple Organ Dysfunction in Newborns & Children

PICU 6 week Educational Experience

During the last two weeks of a 6 week PICU experience, residents will identify a patient issue during PICU patient rounds. Using Nemours UGI Desktop resources, they will formulate a focused clinical question, search the medical literature, evaluate the validity, results and patient applicability of the pertinent literature found. They will integrate this evidence with an overview of the patient’s main medical issues (ARDS, sepsis, asthma, etc). They will present a summary of their findings to the PICU team during PICU clinical rounds.
Integrating PICU Patient Care, Resident Education and Restricted Work Hours

Complicated Patient Care Day / Night

During times of acute emergencies and stabilization of patients who require continued resuscitative efforts, routine patient care rounds and resident education will occur as permitted. It is then appreciated that the day’s or night’s general patient care and education plans may not then fit neatly into resident restricted duty hours.

An Ideal Scenario that integrates Resident Duty Hours, Resident Education and Patient Care would include:

Patient quality of care.

Patient safety.

Resident as an integral part of a multidisciplinary team that cares for critically ill and injured children and adolescents.

Night person involved in morning patient rounds

Distribution of residents for “usual busiest times”, that is AM and late afternoon with post-ops

Residents will know the medical history and general medical problems of all patients.

Residents will have time to exchange patient information with new resident(s) as they change time periods (they are allowed 6 extra hours beyond duty hour restrictions to exchange the info).

Resident conforms to ACGME Resident Duty Hour Guidelines.

- 80 hours per week, averaged over 4 weeks. May increase by 10% in some circumstances.
- One day off out of seven, averaged over 4 weeks
- No in-house call more than once every three nights, averaged over 4 weeks
- 24 hours on call, maximum, with up to six additional hours to hand off patients and attend educational activities.(No patient care during this check off time)
- 10 hours off between duty periods and after in-house call.

Prioritizes the resident’s clinical and education experience as opposed to having them spend time on activities that detract from the clinical and educational experience.

Maximize the number of residents who can be at formal educational sessions.

Schedules teaching staff in such a way that they are available for supervision and clinical back-up support for residents in the PICU.
Resources for 2003-2004 PICU Resident Education Curriculum

Depending on the clinical acuity and number of patients in the PICU at a particular time, the on-call critical care physician will decide if it is necessary to be in-hospital overnight in order to assist with patient care and provide more immediate resident supervision (1 resident for 18-22 patients).

Continued support from critical care physicians, clinical pharmacists, nurses, nursing staff development, respiratory therapists and respiratory therapy instructors are crucial to the PICU resident rotation program. Their continuing presence for PICU resident education depends on their desire to teach residents and also the time and financial resources provided by their respective departments. There is presently no formal PICU Resident Rotation education budget.

Critical care physicians provide bedside teaching. Also as a group, they provide the following minimum educational hours each 4 week block:

- Introduction (1-2 hours)
- Alfred I duPont Hospital for Children PICU Mock Code-Patient Care Practice Sessions (4 hours)
  (Christiana Care Health System Mock Codes will be discontinued January 2004 since pediatric residents will no longer cover in-patient pediatrics there)
- Alfred I duPont Hospital for Children PICU interactive evidence-based clinical practice sessions (ARDS, Sepsis, Neurointensive Care) (3 hours)
  Preparation time for Interactive Session (3-6 hours)
- Data entry from questionnaires / tests (3 hours)
- Maintenance of process (7 hours)

Clinical pharmacist attend morning rounds and give lectures on TPN in the PICU as well as Immunosuppression for Organ Transplant Patients.

Nurses attend and participate in patient rounds (day/evening)

Nursing Staff Development and PICU Nurses continue to provide their expertise for multiple Patient Care Scenarios

Respiratory therapists attend and participate in patient rounds (day/evening) as well as participate in Patient Care Scenarios.

Respiratory therapy instructors take the residents through a mechanical ventilator lab.

4 additional copies of Manual of Pediatric Critical Care. (Narendra Singh, WB Saunders 1997) and 10 PALS pocket handout (algorithms,etc) were recently purchased for resident use.

Passwords for Nemours Users’Guides Interactive Desktop are presently covered by a Nemours Education Grant.

A request for a patient simulator has been submitted by the PICU. If a simulated patient teaching lab develops, then procedure practice can also be added to curriculum as time permits. A simulated patient lab could substitute for the Patient Care Scenarios, freeing up PICU personnel involved in patient care. A dedicated lab could also serve as a tool to evaluate the Outcome Measures by examining individual residents during a Patient Care Scenario.