

Pediatric Critical Care Medicine Fellowship Training Program

**Mission, Duties, Expectations
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**Vanderbilt
University**
School of Medicine



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1.0 PCCM Fellowship Training Program Mission Statement

“Our goal is to create an environment of collegial scholarship and apprenticeship for trainees in Pediatric Critical Care Medicine that fosters learning and growth for both fellows and faculty. Within this environment, we wish to nurture and promote the development of empathy, respect, professionalism, scholarly inquiry, clinical excellence and effective leadership as traits essential to practitioners of Pediatric Critical Care Medicine.”

2.0 ACGME Statement

“The specialty education of physicians to practice independently is experiential, and necessarily occurs within the context of the health care delivery system. Developing the skills, knowledge, and attitudes leading to proficiency in all the domains of clinical competency requires the resident physician to assume personal responsibility for the care of individual patients. For the resident, the essential learning activity is interaction with patients under the guidance and supervision of faculty who give value, context, and meaning to those interactions. As residents gain experience and demonstrate growth in their ability to care for patients, they assume roles that permit them to exercise those skills with greater independence. This concept--graded and progressive responsibility--is one of the core tenets of American graduate medical education. Supervision in the setting of graduate medical education has the goals of assuring the provision of safe and effective care to the individual patient; assuring the development of the skills, knowledge, and attitudes in the resident required to enter the unsupervised practice of medicine; and establishing a foundation for continued professional growth.”

Common Program Requirements, ACGME.

3.0 Overall General Expectations and Duties

It is expected that all those associated with the Pediatric Critical Care Medicine (PCCM) training program will demonstrate the highest levels of service towards the care of critically ill pediatric patients and their families. This requires dedication to the principles of professional behavior, performance assessment, effective communication, team leadership, scholarly inquiry and state of the art patient care. Our sphere of influence is not limited to the PICU/PCICU within the 5th floor and all must be mindful of our interactions with patients, families and other members of the multidisciplinary Vanderbilt team outside of these walls.

To achieve the goal stated in the mission statement, learners will be exposed to a variety of learning strategies. This includes bedside instruction, didactic lectures, simulation scenarios, case presentations, PM&I conferences and observation of behavior modeled by other members of the

division. The period of training includes 15 months of clinical service inclusive of night-call (night service) and 18 months of research.

The overall governing policies of the program are defined by the office of GME at VUMC (<http://www.mc.vanderbilt.edu/root/vumc.php?site=gme&doc=2802>). Supplements to the policies specific to the PCCM fellowship training program are included in this document.

4.1 Requirements for Certification

The requirements for certification by the ABP include:

- Completion of all clinical training with satisfactory performance certification in each core competency by the program director
- Scholarly Work Product: A project in which the fellow has developed a hypothesis and undertaken scholarly analysis and critical thinking. The scope of this project may include quality improvement and educational projects however they *must be hypothesis* driven research pursuits (some qualitative methods may not be hypothesis driven, but would meet the re). Book chapters, abstracts and review articles do not count! This work must be endorsed by an SOC (see next)
- Scholarship Oversight Committee (SOC): A standing committee that must meet at least once during the first year of training and twice per year subsequently in each of the 2 final years. This committee must contain 3 members of which at least one is outside the division and cannot be the program director.
- Quality Improvement Project: This is a scholarly approach to improving the quality of care through study and changes of the system of healthcare delivery. This is no less rigorous a scholarly project than research, and in fact if outcome data are applied to this project with IRB approval it will also provide scholarly work product. I would hope each fellow could intermingle research interests with a QI project to get a broader understanding of how research and knowledge advancement can be applied directly to patient care systems. This project will need to be written up with Background, Hypothesis or Problem Assessment, methods and plans to collect data to demonstrate efficacy. QI projects do not need IRB approval, but if one wants to publish (abstract or manuscript) then it is required. Dr Maynord will help oversee this process and will be an in-division resource to meet the requirements.
- Certification in General Pediatrics: To sit for the PCCM boards one must be board certified in general pediatrics. For those nearing recertification, there is a requirement for recertification > 6 months prior to subspecialty certification.

5.0 Personnel

5.1 Faculty

The faculty involved in the PCCM Training program are predominantly within the division of Pediatric Critical Care Medicine. Extensive interaction will also occur with faculty intimately involved in the care of critically ill patients such as Pediatric Cardiology, Pediatric Surgery, Pediatric Cardiac Anesthesia, Pediatric Cardiothoracic Surgery and all other subspecialty groups. Faculty are always available for patient care concerns and questions and at no time should the trainee be put in a position

with no faculty supervision. Concomitantly, to provide timely guidance and instruction as well as for patient safety, faculty should never be excluded from ongoing patient care, and it is expected PCCM Fellows will provide sufficient updates to maintain this relationship.

The overall role of the PCCM Faculty in the PCCM Training program is to provide the instruction, guidance, and role modeling central to this apprenticeship. Faculty will be involved in the training of PCCM fellows through bedside instruction, hands-on procedure demonstration and supervision, didactic lectures, systems based problem solving in the ICU and research mentorship. The faculty have individual styles, backgrounds, strengths and weaknesses in this role and fellows should expect to be enriched by this variety. Conversely, trainees have a similar variety in abilities, backgrounds, knowledge, strengths and weaknesses and should expect individualized supervision from faculty that may not exactly match that of their peers.

Fellows should expect the following from faculty:

- Appropriate supervision for level of training
- Instruction in medical knowledge and patient care
- Increasing degree of autonomy in patient care management decisions
- Guidance and role modeling in professional deportment
- Guidance and role modeling in effective communication
- Guidance and role modeling of leadership development
- Fostering and supporting scholarly inquiry
- Honest and objective performance assessment

5.2 Fellow

The primary role of PCCM Fellow is that of learner, engaged in the training and formation of the future of Pediatric Critical Care Medicine. To accomplish this, fellows will learn necessary skills while caring for critically ill patients under the supervision of faculty. It is expected that the PCCM fellows are involved in the care of all patients in the intensive care unit. They are to evaluate new admissions and be involved in the management and resuscitation of all patients in the ICU as well as Rapid Response and STAT requests around the hospital.

As the fellow's experience and skill set grows, they will transition from directly providing this care at the bedside under directly observed supervision to a supervisory role in the multidisciplinary team in the ICU with indirect faculty supervision. The transition and growth of the fellow's supervisory role will further develop medical knowledge, patient care, communication and leadership skills under the guidance of the faculty supervision. The PCCM fellow is expected to participate in the supervision and education of Pediatric Residents, Extern Medical Students, NP students and junior fellows. This supervisory/advisory role will be extended during times of "visiting" fellows from other subspecialties. The PCCM fellow will still be ultimately responsible for directing the care of the patients in the intensive care unit but will teach and advise the visiting fellow.

PCCM Fellows are not considered passive learners and are expected to be active participants in their education and development. By engaging faculty in discussion regarding stylistic approach to patient care, fellows will benefit from the variety of backgrounds within the division. Fellows are expected to advance their education through independent reading and research of the literature. Research and scholarly inquiry are driven by active participation from the fellows by posing questions,

challenging current knowledge and collecting data. And finally, performance evaluation always begins with appropriate self-examination, an open mind and a desire to grow and change.

Faculty should expect from Fellows:

- Reliable and timely updates about patient status including but not limited to:
 - Notification of all Admissions and Discharges from the PICU
 - Notification about all new subspecialty consultations
 - Notification about any change in resuscitation status (DNR/DNI)
 - Notification about any significant increase in cardiopulmonary support
 - Notification of any patient death or withdrawal of care
- Timeliness and attention to detail regarding patient data
- Honesty and precision in all professional matters
- Effective communication with all members of the multidisciplinary team
- Professional deportment with patients, families and all members of the multidisciplinary team
- Willingness to perform self-assessments as well as receive feedback from faculty
- Passion for growth and learning as professionals and leaders

5.3 Fellowship Program Director, Associate PD and Program Coordinator

The roles of Fellowship Program Director, Associate PD and Program Coordinator are the general oversight of the training program. This entails meeting multiple goals simultaneously. First and foremost is dedication to the mission statement. Rules and regulations set by the ACGME are inviolable and the program leadership is responsible for ensuring adherence. Additionally he/she is responsible for creating and implementing an educational curriculum that achieves the goals of the program. The fellowship director plays an integral role in summative and formative evaluation and feedback for each fellow, as well as acting upon programmatic needs identified during the evaluation process. Finally, it is to be a mentor and guide through the training process, facilitating personal growth in trainees, providing assistance during times of struggle and personal crisis, and corrective measures when issues of professional deportment arise.

5.4 Nurse Practitioner

The division of Pediatric Critical Care Medicine is fortunate to have many advanced practitioner nurses as members of the multidisciplinary care team. These highly trained and experienced care givers bring an added dimension to the ICU team. They are involved in many areas of the ICU including bedside patient care, education of the team and oversight of the systems function of the ICU.

The NP team will interface with the PCCM fellows in patient care most predominantly. They will present patients on rounds and write daily notes, perform and teach procedures, respond to crises, interact with consulting services, enter orders and interact with families. These functions will be carried out in conjunction with the PCCM fellow and it is expected that PCCM fellows will provide and receive bidirectional communication in this process. Ultimately it is expected that the PCCM fellow is involved in the care of all patients in the intensive care unit in a supervisory role at minimum.

6.0 Clinical Training

6.1 Service

The term “service” will be used to delineate those clinical responsibilities that occur in a multiday fashion as part of a scheduled rotation. This will include two different types of “on-service” rotations, one daytime and one nighttime. These rotations will be included in the 15 months of clinical training for certification purposes and do not include the anesthesia rotation. The “service” duties are those traditionally thought of as daytime only, but with the move to a more continuous care model it is evident that longitudinal care delivery at night is equally important.

The purpose of night service is exposure to the clinical learning opportunities that occur at night in the ICU. A significant portion of patient admissions occur during “off hours” and offer a unique opportunity for the PCCM fellow to engage in supervised clinical apprenticeship. Additionally, it provides an opportunity for the PCCM fellow to learn about resource utilization within a busy medical system, troubleshoot bed assignment issues and participate in communication with referring institutions and physicians. Although this overnight duty provides an invaluable service to critically ill patients it is primarily to function as a prime clinical learning opportunity including management and procedural skills.

Night service duties include the in-house supervision and management of all patients in the ICU, transfers into and out of the ICU, rapid response and STAT calls. Additionally, “night rounds” are led by the PCCM fellow to maintain continuity of plans and therapeutic interventions for all patients in the ICU. These duties are performed under the immediate supervision of faculty in-house and in conjunction with residents and nurse practitioners with after-hours duties. It is expected that all on-call fellows will be immediately available in the ICU with the exception of patient care duties elsewhere in VCH or picking up food from the cafeteria.

The night service rotations will include ACGME/GME supported amenities such as call room access and provided meals, however the expectation is to provide 5 or 6 continuous shifts of care delivery with an attending faculty and supporting team including NP and residents. Education at the bedside and a small group setting is the expectation with examples such as review of literature regarding a specific patient admission, bedside examination and review of waveforms/findings, short “chalk talk” didactics on specific patient physiology/pathophysiology. Asynchronous learning resources are available on the divisional repository site. Additionally, night rounds will provide an ideal opportunity for this educational opportunity with the faculty.

6.2 Call

The term “call” will be used to differentiate those overnight, in-house shifts that are not part of a multi-day nighttime service structure (Night Service). These occur with low frequency but are identical in duties and expectations to “night service”.

6.3 Pediatric Intensive Care Unit (PICU) And Team X

What follows is a general outline of schedules and duties in the intensive care unit. It is possible small details have been inadvertently omitted from this outline, and in these cases the following doctrine will apply: It is expected that the PCCM fellows are involved in the care of all patients in the intensive

care unit and that state of the art, compassionate, respectful and timely care is delivered to critically ill children regardless of location within the hospital.

6.3.1 Patient Care

Patient care in the PICU is delivered as part of a multidisciplinary team. The PCCM fellow will have primary responsibility to organize admissions to the ICU in conjunction with bed management and charge nurse. This includes contacting referring physicians, obtaining history and data for transfer and evaluating all new admissions to the ICU. For out of VCH transfers this process must occur through the access center. Pediatric and Emergency Medicine Residents, Sub-Intern (Extern) Medical Students and Nurse Practitioners will have the primary responsibility of gathering and presenting data for daily rounds, consulting other services and documenting care. The PCCM fellow is expected to oversee and supervise this care by examining patients, reviewing data (laboratory and radiologic), reviewing consultant notes and discussing care with both the PCCM faculty and resident/NP/extern. There will be times that it is appropriate for the PCCM fellow to contact consulting services at the fellow to fellow or fellow to attending level. Patient handovers will occur at the beginning and ending of each shift, with fellow to fellow handovers in the morning, and group team handover in the evening with both faculty and fellows present. It is expected that the day service fellow will lead the handover process by presenting each patient in an SBAR format. (See https://vanderbilt.app.box.com/files/0/f/3633182383/PICU_Fellowship_Share). The duties of care in the PICU will be shared between the fellow on the primary PICU service and the Team X, however the core responsibilities and expected behaviors are identical regardless of PICU service or Team X service.

6.3.2 Procedures

It is of primary importance that PCCM fellows have sufficient procedural experience for skill acquisition. Hence it is common for the first year fellow to perform the majority of procedures early in training, but it is expected that they will quickly (usually after 6 months) move into a supervisory role for *common* procedures. However, the Fellow has the first right of refusal for all procedures based on their perceived comfort level of individual competence. The PCCM faculty on service should provide guidance when the fellow is ready to supervise other trainees/practitioners performing procedures. This does not include procedures specific to pediatric residency such as lumbar puncture, which should be performed by residents on service. Some procedures remain relatively rare and should be performed by the PCCM Fellow. Ultimately it is up to the PCCM Fellow and Faculty to decide the correct operator for any procedure. All procedures require informed consent, except those performed during an emergency, as well as appropriate documentation in the medical record. All procedures, including deep sedation, CRRT and ECMO, should be logged in New Innovations for later credentialing purposes.

6.3.3 Rapid Response and STAT

PCCM fellows are expected to attend all rapid response and STAT calls on floor 3 and above in Vanderbilt Children's Hospital (with the exception of Cardiac Ward/Unit). STAT calls for outside the doors of VCH, 1st or 2nd floor are attended by the Pediatric Emergency Department. In an ideal situation

the PCCM team would provide guidance and advice to the general pediatric residents in attendance at a STAT call, but often the PCCM team manages the STAT. Please be aware of the Pediatric Resident presence and encourage their participation either as team leader or a member of the code team.

Rapid responses are attended only by the PCCM staff, including the charge nurse and NP/Fellow/Resident/Faculty. These are called when any member of the staff or patient's family perceive a deterioration in status or if the PEWS (Pediatric Early Warning System) score value has exceeded a pre-determined level. Not all rapid responses require immediate transfer to the ICU, but **all rapid responses require a professional, courteous and diligent evaluation of the patient.** It is expected after obtaining history, laboratory data, vitals and examination that a plan is made with the primary medical team. This may involve interventions and further monitoring on the ward or transfer to the ICU. Please update the family and team as to the plan at the end of the rapid response and then document the evaluation in the medical chart.

The RRT mechanism is the primary method that patients are “transferred” to the PICU and now replaces the previous faculty to faculty transfer mechanism that did not include calling an RRT.

Again, it cannot be stressed enough that Rapid Response and STAT calls require the most diligent attention to effective communication and professional deportment. Most of the “complaints” registered against PCCM fellows both in and out of the ICU are for inappropriate communication and professionalism rather than lack of medical knowledge. Whenever you perceive a potential conflict regarding the plan for patients evaluated as part of the rapid response or STAT the PCCM Faculty is always available to provide assistance and guidance.

6.3.4 Education

Fellows are expected to develop skills in the education of families/patients as well as for staff and other trainees. To that end there will be an opportunity for educational interactions (bedside clinical as well as bedside procedural) by the fellows with all trainees in the PICU, including medical students and residents. Specifically, a portion of the resident didactic series will be the responsibility of the fellow on Team X. These interactions should be observed (form in BOX) by faculty for feedback and guidance.

6.4 Pediatric Cardiac Intensive Care Unit (PCICU)

What follows is a general outline of schedules and duties in the intensive care unit. It is possible small details have been inadvertently omitted from this outline, and in these cases the following doctrine will apply: It is expected that the PCCM fellows are involved in the care of all patients in the intensive care unit and that state of the art, compassionate, respectful and timely care is delivered to critically ill children regardless of location within the hospital.

6.4.1 Patient Care

Patient care in the PCICU is delivered as part of a multidisciplinary team. The PCCM fellow will have primary responsibility to organize admissions to the ICU in conjunction with bed management and charge nurse. This includes contacting referring physicians, obtaining history and data for transfer and evaluating all new admissions to the ICU. For out of VCH transfers this process must occur through the access center. Nurse Practitioners will have the primary responsibility of gathering and presenting data for daily rounds, consulting other services and documenting care with the following exception. The PCCM fellow is expected to oversee and supervise this care by examining patients, reviewing data

(laboratory and radiologic), reviewing consultant notes and discussing care with both the PCCM faculty and NP.

6.4.2 Post Operative Patient Plan

In addition to structured sign-out recently instituted, we will now have a structured formulation of the postoperative plan. Every postoperative patient coming back from the OR is seen and accepted by the cardiac fellow. The cardiac attending and nurse practitioner team, and bedside nurse are expected to be present at the bedside as well.

Upon receiving anesthesia sign-out, the fellow will summarize

- a. Patient's lesion
- b. Briefoperative course
- c. Postoperative plan
 - i. Cardiovascular system
 1. Expected physiology
 2. Common postoperative complications
 3. Hemodynamic parameters, and what we'll use to achieve these goals
 - ii. Respiratory system
 1. Goals for gas exchange
 2. Ventilator settings
 3. Extubation trajectory (is this a patient we will be extubating tonight?)
 - iii. Sedation plan
 1. Opiates? Benzos? Which ones and why?
 2. Neuromuscular blockade?
- d. Other pertinent plans depending upon patients current state and operative course

6.4.3 Procedures

It is of primary importance that PCCM fellows have sufficient procedural experience for skill acquisition. The PCCM fellow should expect to perform all venous/arterial catheterizations in the PCICU, however may defer to the NP if the fellow feels they have sufficient experience in the *common* procedures. The PCCM faculty on service should provide guidance when the fellow is ready to supervise other trainees/practitioners performing procedures. Some procedures are the primary responsibility of the CT Surgery team and the fellow and faculty should discuss with the CT Surgery NP the opportunity for the PCCM fellow to perform the procedure. All procedures require informed consent, except those performed during an emergency, as well as appropriate documentation in the medical record. All procedures, including deep sedation, CRRT and ECMO, should be logged by the fellow in New Innovations for later credentialing purposes.

6.4.4 Rapid Response and STAT

RRT and STAT calls to 7a (cardiac unit) will be attended by the PCICU fellow during the day. All nighttime calls will be attended by the on-call PCICU fellow. Please see section 6.3.3 for details.

7.1 Conferences

It is expected that fellows attend scheduled conferences. **Valid reasons for non-attendance include illness, duty hour regulations (including short time between duties), vacation, off-site academic activities.** If the fellow is on call in the evening, and plans to sign in for conference, sign out after conference and then sign in again at the beginning of call this constitutes a duty hour violation for short period between duties if attending conference is a requirement. Attending conference on a day the fellow is on call/or overnight shift **is not a requirement**, hence the short duty period is at the discretion of the fellow and not in violation of the duty hour regulations. Personal or family commitments are valid reasons for non- attendance, but please avoid scheduling activities during conferences whenever possible. While on service, the PCCM fellows are encouraged to give the pager and phone to the on-service attending to facilitate un-interrupted attendance at conference, however fellows may choose the more immediately relevant learning experience, including staying at the bedside for patient care.

The purpose of these academic conferences is to enhance fellow education beyond the bedside clinical experience. These conference series will span a variety of formats including didactic series, case-based conferences, journal club, simulation-based education and board review questions. A variety of topics will be presented, including the core medical knowledge for patient care in critical care medicine. Important adjuncts will include sessions on ethics, leadership, biostatistics, research basics, delivery of bad news and end of life discussion and career development.

The faculty for these conferences will include PCCM faculty, as well as outside or invited speakers. Fellows will give a minor portion of the conferences with the majority prepared and led by faculty. Whenever possible, the handouts and lectures will be preserved on BOX (https://vanderbilt.app.box.com/files/0/f/3633182383/PICU_Fellowship_Share) for further reference. To maximize the effect of these conferences, it is expected that prior preparation (reading etc) will be accomplished by the PCCM fellows. Additionally, fellows should expect adequate notification of pre-conference reading materials.

The schedule: (* indicated highly suggested but not required conference)

Monday	Tuesday	Wednesday	Thursday	Friday
	Grand Rounds 745-845 am	PCICU PM&I 7-8am q month 2 nd Wed	Cardiac Cath Conference*7-830 am	
Department Research Conference 12-1pm	Service Review* 12-1pm		Journal Club 1 st and 3 rd Th 12-1pm	
	PCCM Education Series 1-2pm	PCCM Case Conference 1-2pm	PCCM Education Series 1-2pm	
PICU PM&I 4-5pm q month 2 nd Monday		Cardiac Service Review 2pm-3pm	Bedside Cardiac Education Series (2pm-3pm)	

7.1 Individual Progress Meetings

Individual progress meetings will be held quarterly with PCCM fellows to review evaluation and progress data. These progress meetings are required and will occur approximately during the months of October, January, April, July (June for Graduating Fellows). These will be scheduled through the program coordinator.

7.1.1 Clinical Competency Committee (CCC)

The CCC will be composed of a minimum of 4 core division faculty in addition to the program director. This committee will meet semi-annually to map each fellow's individual progress along the sub-competencies outlined by the ACGME. This committee will make recommendations to the program director regarding progress along these milestones in written format. Data available for these CCC meetings will include all evaluation data collected in the program as well as the individual faculty members' experience in the clinical realm with the trainee.

7.2 Scholarship Oversight Committee

The fellow will arrange scholarship oversight committee (SOC) meetings and meet once during the first year (by June 30) and then 2 times per year after that. See section 8.1.3

7.3 PM&I Conferences

The goal of this conference series is to provide the PCCM fellow with experience in the systems analysis required to ensure high quality error free medical care within a complex medical system. The PCCM fellow will play an integral and central role in identifying and correcting systems errors through this conference.

The first level of participation will be that of presenter of quality improvement, infection control and performance measure data such as Veritas data, Pharmacy Data, Infection Control data. Additionally, patient morbidities and mortalities will be reviewed from the prior month by the presenter and medical director of the PICU/PCICU respectively. These morbidities and mortalities will be reviewed for evidence of system errors or deficiencies including errors, lack of medical knowledge, adherence to perceived standard of care, professionalism and ethics. Brief reporting of all deaths will occur even in those without identified systems error. Data to be presented will include autopsy results when performed. If autopsy results are not available, the presenting PCCM fellow will present these data at a future conference.

The second level of participation is the discussion in the group setting regarding the systems errors. The goal of this discussion is to further identify modifiable components of the system as well as identify appropriate work groups for modification of these errors. This discussion will occur in a multi-disciplinary format with the highest regard for professionalism including lack of "personalization" of the issues at hand.

The highest level of participation will occur as the PCCM fellow reports data from standing quality improvement committees such as infection control, pharmacy and respiratory care. In these committees the fellow will participate in the further evaluation and correction of systems errors and report the findings to the PM&I conference. During the 3 years of training it is expected fellows will lead a QI project which will likely originate in discussion in PM&I conference.

These conferences occur once per month for each of the units (PICU/PCICU)

Conference Specific Expectations:

PICU PM&I: It is expected that the fellow presenting and Dr Wendorf will chose cases to discuss at PM&I which highlight systems issues and educational opportunities for discussion. The fellow is expected to meet with Dr Wendorf at least 1 week before the conference.

PCICU PM&I: It is expected that the fellow presenting and Dr Smith will meet to discuss the cases to be presented, both morbidity and mortality. Key points for PCICU PM&I:

- We will typically discuss the hospital course of every patient who dies in the preceding month,

as well as pertinent morbidities time-permitting (the morbidity slides are typically put together by the CICU Quality/Safety Committee)

- While these are typically complex cases, in the interest of brevity it is the presenting fellow's responsibility to distill these courses into no more than 5 slides per patient.
 - Slide 1: Original cardiac anatomy and comorbidities (to avoid redundancy, not acquired morbidities accrued in the unit, but those preceding their encounter in the unit... eg prematurity, chromosomal anomaly etc.)
 - Slide 2: Procedural history: Procedures preceding the hospitalization pertinent to the case, as well as procedures (both cardiac and non) during the hospitalization
 - Slide 3: Hospital course by systems
 - Slide 4: Hospital course by systems cont'd and terminal narrative (autopsy yes/no?) etc.
 - Slide 5: Timeline for discussion (many already have the template)
- NEW: It is the presenting fellow's responsibility to schedule a time with me to meet by the Friday before the conference to review the pertinent content of slides together so that we may discuss well in advance of the meeting.

7.4 Case Conferences

The goal of this conference is to provide a case based discussion of medical knowledge, patient care and systems based practice. During this conference patient cases from the ICU will be presented by PCCM fellows. This presentation should be an informal recounting of appropriate history, physical exam, laboratory and radiologic findings. The goal is to identify aspects of physiology, pharmacology anatomy and pathophysiology that underlie the overall care of the patient in question. It is also an opportunity to discuss ethics and end of life care issues as a group. PCCM faculty will moderate the conference to ensure maximum educational experience. The majority of conferences will include the presentation of one patient from the PICU and one from the PCICU during the hour. The conference will occur every Wednesday.

7.5 PCCM Education Series

The goal of this conference is to provide the basic education necessary to complement bedside clinical learning with the goal of becoming a board certified independent practitioner of critical care medicine. Hence this series will include a variety of formats including didactic lectures, question based group discussion board review, small group learning activities and simulation based learning. The majority of learning strategies will be created and delivered by faculty, both within and without the division of pediatric critical care medicine. However, some didactic lectures and the majority of journal club conferences will be created and delivered by PCCM fellows.

These education conferences occur 2 times per week. Notable subsets of this education series are presented below.

7.5.1 Boot Camp

The goal of boot camp is to provide PCCM fellows with a rudimentary foundational education of medical knowledge and patient care issues that are common and likely to be faced in the care of PCCM patients. This series will include both didactic lectures and simulation based learning. Although the majority of educational activities will occur during the month of July, some component of the anesthesia

rotation will be revisited later in the year. Although some first year fellows will be on night service and unable to attend, slides and recordings of the lectures are available in BOX.

The topics to be addressed include:

- Physiology of Hypoxia
- Airway and Intubation
- Our Ventilators
- Shock
- Trauma
- Disclosure training
- Sepsis
- Cardiopulmonary Interactions
- CPR and ECMO in the PCICU
- Electricity in the PCICU
- Pre and Early postoperative management of HLHS
- Routine Post Op Cardiac Care/SPC
- Feeding Protocol
- Line Kits
- Abx in the ICU
- Professionalism/Managing Conflict
- ICU Sedation/Protocol
- Cardiac Anesthesia
- ARDS
- Brain Death
- Mechanical Ventilation Mode Basics including APRV
- Deep Sedation
- Comatose Child
- Traumatic Brain Injury
- Cardiac Vasoactive Medications
- Asthma
- Cardiac Physiology
- Sleep and Fatigue

In July all fellows will attend a procedure simulation day to review and practice basic PICU/PCICU procedures.

7.5.1.1 Anesthesia Rotation

Embedded in the initial year of fellowship training is a portion of the anesthesia rotation. The goal of this rotation is to provide PCCM fellows with the basic skills of airway management and anesthetic induction. This education will begin in the boot camp lecture series and continue to the bedside in the OR for hands on training for necessary skills. The evaluation will occur through a series of checklist performance evaluations which the fellow will be responsible to complete and have signed. **These checklists may be found in BOX (https://vanderbilt.app.box.com/files/0/f/3907291547/Anesthesia_Rotation_Documents) under the Administration documents, in the Anesthesia Rotation folder.**

This rotation will be lead by Dr. Matt Kynes who has identified a core group of dual trained (PCCM and Anesthesia) attendings who will perform the skills evaluation. He has also identified a core group of CRNA and attendings who will guide the PCCM fellows through the skill acquisition.

7.5.1.2 Pediatric Emergency Medicine Elective

PCCM fellows may spend one month in addition to 15 months of clinical training. The rotation schedule and administration will be directed by the Pediatric Emergency Medicine faculty. See details in the Goals and Objectives document.

7.5.1.3 Pediatric Deep Sedation Elective

PCCM fellows may spend 2-4 weeks in addition to 15 months of clinical training pursuing skills in procedural sedation. The rotation schedule and administration will be directed by the Pediatric Deep Sedation faculty. See details in the Goals and Objectives document.

7.5.2 Journal Club

The goal of this conference is to provide PCCM fellows with the necessary knowledge and experience to effectively and critically evaluate the scientific literature. The conference will have two forms: One faculty Led, One fellow Led. The faculty led format is meant to provide a broader overview of articles appearing in our relevant literature and to place some contextual framework around these articles. The Fellow led format is meant to provide an in depth review of an article or articles (around a single subject) using the AMA Guide to the Medical Literature outline for each article type. Dr Murphy will be an in-division resource for this component of the curriculum.

7.5.3 Pediatric Core Curriculum Series

To achieve the goals set by the ABP for subspecialty certification and scholarly activity requirement as well as to meet the ACGME core competency requirements, the department of pediatrics provides an education series for all first year fellows in the department. Topics covered include basics of research and adult learning. This conference is a required course element for all first year fellows, and meets quarterly for 2 hours.

8.0 Scholarly Activity

The ACGME regulations call for resident scholarly activity and the details of this activity are set by the American Board of Pediatrics, the certifying group for pediatric sub-specialists. To achieve the goals outlined in the following paragraphs the division and department will provide support to PCCM fellows to include faculty oversight and mentorship of projects, access to appropriate resources, a core curriculum series and assistance in preparation of scholarly product for publication/presentation. It is expected PCCM fellows will concentrate on hypothesis driven scholarly work. Second and Third year fellows are expected to present data at the Department of Pediatric Research Retreat in May, with the goal of presenting data at a national meeting by the end of third year of training.

8.1 Expectations Responsibilities

- 8.1.1 Scholarly activity will encompass the activities of non-clinical days not otherwise occurring outside the duty hour regulations. This will include 18 months interspersed over the course of 36 months of training and time will be logged as “research” in new innovations. Each first year fellow will be assigned an advisor in the division with whom to work toward identification of a research mentor and project.
- 8.1.2 The fellow and their advisor will work together to identify a research mentor in an area of interest during the first 6-8 months of training. The fellow will present a hypothesis and

research plan to the division during conference in Jan-March of the first year of training. Additionally, projects and mentors should be chosen with the goal of application for T32 funding mechanism (march application) in the first year, although application is not required. The following timeline will be followed:

- Identify a faculty scholarship mentor by **Jan 1** (this will be your SOC Chair). Report this to Program Director. (Year 1)
- Outline a project idea/concept identified by **February 15**. Report this to Program Director. (Year 1)
- Submit a research proposal in the T32 format (see below) by **March 15**. Submit this to the Program Director (and to the T32 program if you intend to apply). (Year 1)
- First SOC meeting will need to occur before **June 30**. Submit meeting minutes to Program Director. (document is in BOX). (Year 1)
- Submit written research progress report to Program Director including minutes from most recent SOC meeting in **December** and **May** (Year 2), **December** (Year 3)

8.1.2.1 Resources for Fellows: There are numerous resources around the department and school of medicine available to fellows. The first was the Department of Pediatrics Research retreat in May prior to beginning, giving fellows an opportunity to see what research is done around the institution. Second will be the advisor assigned by the program to assist the fellow in the search for a scholarly project.

- Milestones for first year fellows:
<https://vanderbilt.box.com/s/cr7qac5drxsatptce3vmprn1b9ivmdfd>
- Department of Pediatrics: A listing of resources available to fellows :
<http://pediatrics.mc.vanderbilt.edu/interior.php?mid=4809>
- Department of Pediatrics: The Office of Pediatric Clinical Research:
<http://pediatrics.mc.vanderbilt.edu/interior.php?mid=6937>
- VICTR: Vanderbilt Institute for Clinical and Translational Research:
<https://victr.vanderbilt.edu/pub/index.html>
- Department of Pediatrics: A simple listing on the site of research done by division around the department.: <http://pediatrics.mc.vanderbilt.edu/interior.php?mid=4719>
- Pediatric Department T32:
<http://pediatrics.mc.vanderbilt.edu/interior.php?mid=6174>

- 8.1.3 The fellow will organize and schedule Scholarship Oversight Committee meetings. The SOC consists of a chair (often the faculty mentor of the project) and two faculty one of which is from outside the division. This group will meet once at the end of the first year of training then 2 times per year over the remaining 2 years of training. The documentation template is available on BOX in Administration Documents folder (<https://vanderbilt.box.com/s/4swyna0w0avbn6t4du4p7604uw2naxhb>) and should be completed and turned into the PD for logging.
- 8.1.4 The Fellow will consider arranging a VICTR Studio for study design by/at the completion of the first year of training.
- 8.1.5 The fellow will meet 2-3 times per year with their faculty advisor to review scholarship progress.
- 8.1.6 All second and third year fellows are expected to present an abstract at the Department of Pediatrics Research Retreat (May).
- 8.1.7 The final work product of scholarly activity should be prepared for submission to the American Board of Pediatrics during the final SOC committee meeting.
- 8.1.8 A “personal statement” outlining the development of the scholarly project, the fellow’s role in the project and the impact the project had on professional development and future plans. This personal statement must accompany the final ABP packet due in early June of the final year.
- 8.1.9 Travel to an academic meeting will be funded for each fellow who has an accepted abstract/presentation/workshop of first authored research/scholarly work at a national society meeting. Approval of the submission and travel is at the discretion of the division chief. Limitations will include one meeting per year, and may include two meetings in 3 years.

The following paragraphs are taken directly from the ABP Subspecialty Certifying Requirements document:

8.2 Scholarly Activity Overview from the ABP

“In addition to the core curriculum described, each program is expected to engage fellows in specific areas of scholarly activity to allow acquisition of skills in the critical analysis of the work of others; to assimilate new knowledge, concepts, and techniques related to the field of one’s practice; to formulate clear and testable questions from a body of information/data so as to be prepared to become effective sub-specialists and to advance research in pediatrics; to translate ideas into written and oral forms as teachers; to serve as consultants for colleagues in other medical or scientific specialties; and to develop as leaders in their fields.

All fellows will be expected to engage in projects in which they develop hypotheses or in projects of substantive scholarly exploration and analysis that require critical thinking. Areas in which scholarly

activity may be pursued include, but are not limited to: basic, clinical, or translational biomedicine; health services; quality improvement; bioethics; education; and public policy. Fellows must gather and analyze data, derive and defend conclusions, place conclusions in the context of what is known or not known about a specific area of inquiry, and present their work in oral and written form to their Scholarship Oversight Committee (see below) and elsewhere.

The Scholarship Oversight Committee in conjunction with the trainee, the mentor, and the program director will determine whether a specific activity is appropriate to meet the ABP guidelines for scholarly activities. In addition to biomedical research, examples of acceptable activities might include a critical meta-analysis of the literature, a systematic review of clinical practice with the scope and rigor of a Cochrane review, a critical analysis of public policy relevant to the subspecialty, or a curriculum development project with an assessment component. These activities require active participation by the fellow and must be mentored. The mentor(s) will be responsible for providing the ongoing feedback essential to the trainee's development. "

➤ American Board of Pediatrics Sub-Specialty Training Requirements

8.3 Work Product of Scholarly Activity

"Involvement in scholarly activities must result in the generation of a specific written "work product," which may include:

- A peer-reviewed publication in which a fellow played a substantial role*
- An in-depth manuscript describing a completed project*
- A thesis or dissertation written in connection with the pursuit of an advanced degree*
- An extramural grant application that has either been accepted or favorably reviewed*
- A progress report for projects of exceptional complexity, such as a multi-year clinical trial"*

➤ American Board of Pediatrics Sub-Specialty Training Requirement

8.4 Quality Improvement Activity

The American Board of Pediatric Sub-Specialty training requirements include the documentation of a quality improvement project as a component of fellowship training. At this juncture the contents of the project are not fully defined by the ABP, trainees are required to complete a QI project during their 3 years of subspecialty training. For the purposes of this program, the QI project will be derived from the primary scholarly activity where appropriate, include faculty mentorship and result in a written report of the scope of problem, methods of quality improvement and measures of efficacy. This report is due to the program director at the completion of training. Dr Neal Maynord will meet with trainees to assist with the process. Resources may be found at the Institute for Healthcare Improvement (IHI) in the OpenSchool education section: <http://www.ihl.org/education/>

9.0 Administration

Leadership is an inherent component of effective practice in Pediatric Critical Care Medicine. To develop experience in this arena, PCCM fellows will be expected to participate in administrative duties. These duties will include administration of the program in the form of a Chief Fellow who will work with the program director on administrative duties. Additional administrative work will be required as committee members for the VUMC Housestaff Committee as well as quality improvement committees within Vanderbilt University School of Medicine. PCCM fellows are encouraged to seek committee

membership at a national level through professional organizations such as the AMA, SCCM, AAP, ACGME etc.

9.1 Policies

A separate document is available on Knowledge Map outlining the program policies on the following topics. It is the expectation that the fellow will refer to these policies for details regarding each specific topic.

9.1.1 Recruitment and Selection

9.1.2 Evaluation, Promotion and Dismissal

9.1.3 Supervision

9.1.4 Vacation and Sick Time

9.1.5 Leave Policy

9.1.6 Moonlighting Policy

9.1.7 Fatigue and Impairment Policy

9.1.8 Grievance and Due Process Policy

9.2 Evaluation Committees

9.2.1 Clinical Competency Committee (CCC)

The CCC will be composed of a minimum of 4 core division faculty in addition to the program director. Trainees are not eligible for this committee position. This committee will meet semi-annually to map each fellow's individual progress along the sub-competencies outlined by the ACGME. This committee will make recommendations to the program director regarding progress along these milestones in written format. Data available for these CCC meetings will include all evaluation data collected in the program as well as the individual faculty members' experience in the clinical realm with the trainee. The results of this committee will inform the Program Director regarding promotion and advancement of trainees. These findings will be documented by the fellowship program director in New Innovations.

9.2.2 Program Evaluation Committee (PEC)

The PEC will be composed of the entire division faculty in addition to the entire roster of currently enrolled fellows. This committee will meet annually to map the program strengths, weaknesses, areas for improvement and action items for improvement as outlined by the ACGME. Data for this programmatic self-study will include the fellow and faculty surveys from the ACGME as well as the program specific evaluations. Additional data will include ITE exam performance, board pass rates, and any other data that informs the process of the growth and nurturing of the program. This meeting will generate a yearly program review report with supporting data as well as action items and assigned roles in leading the efforts.

10.0 Documentation of Activities

To appropriately evaluate and monitor progress in training, it is necessary to document a variety of activities. Documentation requirements are driven by the ACGME and the needed application for clinical privileges at the completion of training. Hence it is expected the PCCM fellows maintain current and correct documentation of activities. This will be accomplished using New Innovations®. This documentation will include scholarly activity (giving talks, presenting at meetings, Scholarship Oversight Committee Meetings), Quality Improvement (sitting on committees in the hospital, QI projects). Time documentation will occur on New Innovations with documentation of Clinical Service (both daytime and nighttime service), Call, Research, Vacation.

Documentation of activities and maintenance of professional records is a key and inherent component to professionalism. It is expected that the fellow will maintain timely records, not only of clinical care delivered, but of professional activities as outlined below. Failure to maintain these records will result in a graded administrative response from the Program director, including an eventual official notification of probationary status that becomes a permanent part of the record.

Documentation Overview

	Frequency	Site of Documentation	Number needed
Duty hours	Weekly	New Innovations	100%
Procedures	Each one	NI, Star Panel	100%
Committee Meetings	Each meeting needs documentation	NI	100%
Family Evaluations	2 Per Quarter	Family Eval form on BOX, turn in to PD	8 per year
Evaluations (of faculty, peer and program)	2 per year	NI	100%
SOC Meetings	1 in the First Year 2 per year in Second and Third Years	Form Template in BOX, turn in to PD	Minimum 3 in 3 years, with at least one at the end of the first year
Scholarly Work	Each lecture given, meeting with research mentor, work presented	NI	At least 1 per year
Reflection/Journaling	Quarterly	NI	4 per year, prepared for quarterly performance review with PD
Individualized Learning	Yearly	NI	1 per year

Plan			
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10.1 Duty Hours

It is expected that PCCM fellows adhere to and accurately document duty hours per ACGME regulations. This includes the adherence to published limits including:

- Maximum of 80 hours per week averaged over a four week period, inclusive of all in-house call activities and all moonlighting.
- Residents/fellows must be scheduled for a minimum of one day free of duty every week (when averaged over four weeks).
- Continuous duty periods must not exceed 24 hours with an additional 4 hours allotted for didactic activities, transfer care of patients, maintain continuity of medical and surgical care. The resident/fellow may not accept a new patient for whom they are the primary care giver after 24 hours of continuous duty. (patients may be admitted to the PICU/PCICU with NP and resident providers and faculty oversight)
- Residents/fellows must be provided with 1 day in 7, averaged over 4 weeks, completely free from educational and clinical responsibilities. Additionally 10 hours must be provided between duty shifts during which the resident is free from all duties, and this may be shortened in the senior or final years of training to simulate transition to post training rigors.

10.2 Performance Evaluations

It is expected PCCM fellows will provide documentation of performance evaluation in the form of Individualized Learning Plans, Peer Evaluations, Program Evaluations and Faculty evaluations all through New Innovations ®. Fellows will also need to obtain evaluations of themselves from families. A form in both English and Spanish is available for this purpose, and fellows will provide this to families, explain its intent and then collect the completed evaluation and return it to the program director. Two evaluations per Quarter will be required throughout the 36 months of training. This evaluation is available on BOX under the Admin Documents section

(<https://vanderbilt.box.com/s/49bi02axqsefhw8hq8hrbotc8jrowh71>).

10.3 Procedures

It is expected all procedures will have appropriate documentation in the patient chart. Additionally, PCCM fellows are expected to document procedures in New Innovations ®. These procedures will include common ICU procedures. Additionally fellows will track initial exposure to CRRT, IHD and ECMO as a “procedure” as many facilities now require documentation of this proficiency.

10.4 Presentations/Lectures

It is important for us to document when PCCM fellows present a lecture, invited talk, research abstract, plenary session talk etc. Hence, New Innovations ® will be used to track these activities. Additionally, documentation of the activity (handouts, slide show handouts, abstract etc..) will be uploaded in conjunction with the activity log.

10.5 Committee Membership

Participation in quality improvement committees is an important component of training and is required by the ACGME core competencies. PCCM fellows will log activity on any committee using New Innovations ®, including duration of meeting.

10.6 Reflection and Journaling

In preparation for each quarterly performance review fellows will complete a self-reflection in the journal section of New Innovations. In this reflection the fellow will detail two areas identified for improvement in performance (knowledge, skills, communication, leadership etc) and a plan to achieve the goal (specific readings, supervised skill acquisition for procedures etc.) Additionally, the fellow will provide updates on the outcome of the previous quarter's plan.