Overview of Goals and Objectives of Rotation
Portland VA Medical Center
Medical & Cardiac Critical Care Services

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Director, Medical Critical Care: William Holden, M.D.
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The Portland VA Medical Center (PVAMC) Medical and Cardiac Critical Care Services rotation was developed with the goal of providing PCCM and CCM Fellows experience in the administration, management, and organization of Critical Care Units. Fellows are expected to use this opportunity to develop: (1) leadership skills; (2) an understanding of the role of regulatory agencies in shaping ICU care; (3) a culture of safety; and, (4) the skills necessary for technology assessment and guideline implementation.

Medical Knowledge: ***Fellows are expected to demonstrate knowledge of established and evolving biomedical, clinical and social sciences, and the application of their knowledge to patient care and the education of others.***

Critical Care Unit Organization

- Review The Joint Commission's *Specifications Manual for National Hospital Quality Measures – ICU*.
- Provide a conceptual framework for Critical Care Unit evaluation based on and defined by 3 different types of variables: performance (eg, appropriateness of care, effectiveness of care), outcome (eg, resource use, mortality), and process (eg, timeliness of treatment, work environment)
- Understand the principles and practices of performance improvement, including: (1) case management; (2) clinical practice guidelines; (3) critical pathway development; (4) electronic data base.
- Understand the ethical, economic, and legal aspects of critical illness.
- Develop skills required to organize, administer, and direct a Critical Care Unit and to work effectively as a member of a multidisciplinary team

Safety/Human Error

- Contrast Error-Prone and High-Performing Organizations
- Describe risk factors for "line, tube, and drain (LTD) incidents." Explain how to minimize these incidents (placement, maintenance, or removal)
- Define "Prompt" physician visits and the effect they have on patient outcome.
- Define the following terms: medical error, serious medical error - intercepted and nonintercepted, adverse event – preventable and nonpreventable
- Define incident, harm, near miss, adverse event & system factor and characterize the latter into patient, task, provider, ICU environmental, and institutional environment factors.
- Review the basic principles underlying the "100,000 Lives" campaign of the IHI.
- Review 2007 National Patient Safety Goals

Patient Care: ***Fellows are expected to provide patient care that is compassionate, appropriate and effective for the promotion of health, prevention of illness, treatment of disease and at the end of life.***

- Develop a working knowledge of a fully integrated Critical Care Unit clinical information system and comprehensive electronic medical record including electronic physician order entry.
- Pre-round on Medical & Cardiac Critical Care patients and review all radiographic, laboratory and microbiologic studies of each Medical Critical Care patient
- Meet and evaluate all new Medical Critical Care admissions, discuss assessment and plan with house staff and review the patient with the appropriate Critical Care Attending
- Review angiographic studies of each Cardiac Critical Care patient
- Oversee the care provided to Medical & Cardiac Critical Care patients by the residents, students and other trainees of the Medical & Cardiac Critical Care Team
- Participate in all Patient Care Conferences of Medical Critical Care patients.
- Implement Respiratory Therapy driven protocols and work collaboratively with Respiratory Therapists to facilitate early AM weaning and/or extubation of patients receiving mechanical ventilation.
- Work with the Critical Care Clinical Pharmacy Specialist to develop cost-effective medication strategies and prospectively/retrospectively identify potential or actual adverse drug effects and drug-drug interactions.
- Write an attending-level daily progress note in CPRS for each Medical Critical Care patient focusing on a problem-based (not system-based) assessment and plan.
- Insure the delivery of high-quality patient 24 hours a day.
- Notify the Attending of the following:
    1. Changes in status of unstable patients.
    2. Patients who may require intubation or an invasive procedure.
    3. New admissions.
- Ensure timely: (1) completion of Transfer Orders; and (2) verbal communication with floor house staff for patients leaving the Critical Care Unit.
- Personally contact the accepting ward attending to discuss complex or worrisome patients.
- Review indications for all invasive procedures with residents and students.
- Teach procedural skills to residents and students, provide appropriate level of supervision for all invasive procedures, and determine most appropriate operator for the procedure
- Ensure informed consent is obtained and documented in the medical record of all patients.

Code Team and Rapid Response Team:

- Respond to all calls.
- Supervise Team performance - insure the highest level of patient care.
- After the patient has been cared for, provide Team members with performance feedback.

Practice based Learning: **Fellows are expected to be able to use scientific evidence and methods to investigate, evaluate, and improve patient care practices.**

Fellows are expected to: (1) identify areas for improvement and implement strategies to enhance knowledge, skills, attitudes and processes of care; (2) analyze and evaluate practice experiences and implement strategies to continually improve the quality of patient practice; (3) develop and maintain a willingness to learn from errors and use errors to improve the system or processes of care; and, (4)use information technology or other available methodologies to access and manage information, support patient care decisions and enhance both patient and physician education. Requirements for this competency include:

- Participate in quality improvement and patient safety activities in the Critical Care Unit.
- Prepare a monthly report of procedures for presentation at monthly Critical Care Morbidity and Mortality Conference
- Maintain a list of patients experiencing an untoward event (morbidity and mortality) during their ICU stay

- Review relevant literature surrounding occurrences and present findings to fellows and faculty at monthly M&M conference
- Provide limited “root cause” analysis of significant errors and developing relevant action plans
- Review key articles in the literature related to patient safety (see section on conferences) and presenting synopsis at M&M conference
- Demonstrate ability to access critical event and adverse drug reporting forms and participating in surveillance
- Use data from Administrative Quality Improvement projects to analyze care, identify areas for improvement, and implement practice reform
- Support ongoing basic and clinical science protocols in the Critical Care Unit by participating in candidate identification or in proposing future projects
- Contribute to and support process improvements in the Critical Care Unit by meeting with nursing or physician staff to assess current practice
- Participate in creating Critical Care Unit specific data related to ventilator/ sepsis bundles and pulmonary improvement project
- Participate in development of protocols and guidelines pertinent to Critical Care Unit care
- Participate and directing multi-disciplinary rounds and be responsible for completion of daily goal sheets
- Participate in ICU-related committee activities (if not already serving on other committees)

Professionalism: **Fellows are expected to demonstrate behaviors that reflect a commitment to continuous professional development, ethical practice, an understanding and sensitivity to diversity and a responsible attitude toward their patients, their profession, and society.**

- Demonstrate respect, compassion, integrity, and altruism in relationships with patients, families, and colleagues
- Demonstrate sensitivity and responsiveness to the gender, age, culture, religion, sexual preference, socioeconomic status, beliefs, behaviors and disabilities of patients and professional colleagues
- Adhere to principles of confidentiality, scientific/academic integrity, and informed consent
- Recognize and identify deficiencies in peer performance
- Teach junior colleagues or peers
- Admit to and seek help in remedying errors
- Interact with nursing staff and other professionals as two-way educational opportunities when current approach does not appear to be effective
- Participation in relevant hospital committees

Interpersonal and Communication Skills: **Fellows are expected to demonstrate interpersonal and communication skills that enable them to establish and maintain professional relationships with patients, families, and other members of health care teams.**

- Provide effective and professional consultation to other physicians and health care professionals and sustain therapeutic and ethically sound professional relationships with patients, their families, and colleagues.
- Use effective listening, nonverbal, questioning, and narrative skills to communicate with patients and families
- Counsel and educate patients and families
- Communicate effectively in times of dynamically changing conditions
- Interact with consultants in a respectful, appropriate manner
- Communicates clearly, correctly, and concisely in a written report, stressing the important issues and an articulate plan.
- Maintain comprehensive, timely, and legible medical records

- Use nomenclature and writing standards consistent with that of the institution
- Transfer care of the patient in a manner that ensures patients safety, comfort and continuity of care
- Display support & empathy to patients and their families, as witnessed by attending staff or reported to staff
- Demonstrate respect for and recognition of particular skill sets possessed by other Critical Care practitioners, such as Critical Care nurses, Respiratory Therapists, Physical Therapists, Occupational Therapists, Dieticians, Pharmacists.
- Considers ethical issues and patient wishes in treatment decisions
- Organize and coordinate a teaching conference program for house staff and Critical Care staff; learn how to prepare a high-quality presentation.

Systems-Based Practice: **Fellows are expected to demonstrate both an understanding of the contexts and systems in which health care is provided, and the ability to apply this knowledge to improve and optimize health care.**

- Understand, access and utilize the resources, providers and systems necessary to provide optimal care
- Understand the limitations and opportunities inherent in various practice types and delivery systems, and develop strategies to optimize care for the individual patient
- Apply evidence-based, cost-conscious strategies to prevention, diagnosis, and disease management
- Collaborate with other members of the health care team to assist patients in dealing effectively with complex systems and to improve systematic processes of care
- Demonstrate the Critical Care Practitioner's role as patient/quality care advocate
- Establish multidisciplinary relationships needed to effect quality care
- Participate actively in coordinated multidisciplinary patient care plans
- Utilize established quality management procedures to facilitate care (e.g., , standing order sets, ventilator pathway, etc.)
- Participate actively in PCCM, multidisciplinary M&M or case conferences
- Develop and coordinate multidisciplinary patient care plans
- Interpret drug costs in context of outcomes (e.g., activated Protein C, rVIIa)
- Discuss the issues of patient safety including the medical systems that put patients at risk, medication, operations, transfusions & nursing ratios.
- Recognize, describe and ensure compliance with institutional and unit policies and procedures as well as regulatory policies from accreditation agencies, regulators, and payers

Instructional Methods:

Introductory Lecture Series, Web-Based Curriculum (RICU), Weekly Critical Care Fellows Conference, Multidisciplinary Critical Care lecture Series.

Methods of Assessment:

- Competency-based staff evaluations
- Ancillary care provider evaluations
- Critical incident reporting
- Conference attendance and participation
- Structured evaluations of airway management, central line placement, and fiberoptic bronchoscopy
- Completion of PACEP / ATS Primer on Hemodynamic Monitoring (First year Fellows)
- Web-Based Instruction on Bioterrorism (Second Year Fellows)
- Participation in quality improvement project (Second Year Fellows)

References

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Improving the ICU: Part 2. Garland A, Chest 2005; 127:2165–2179.

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Rotondi AJ, Sirio CA, Derek C. Angus DC, et al, *Journal of Critical Care 2002;* 17(1) :16-28

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Critical care delivery in the United States: Distribution of services and compliance with Leapfrog recommendations, Angus DC, Shorr AF, White A, et al, Crit Care Med 2006; 34:1016–1024

Improving Quality in the Intensive Care Unit Setting, Gallesio AO, Ceraso D, Palizas F, Crit Care Clin 2006;22:547–571

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Intensive care unit quality improvement: A "how-to" guide for the interdisciplinary team, Curtis JR, Cook DJ, Wall RJ, et al, Crit Care Med 2006; 34:211–218

Human Performance/Education

Smith WR. Evidence for the effectiveness of techniques to change physician behavior. Chest 2000; 118:8S–17S

Improving Patient Safety in Critical Care Environments

What Did the Doctor Say?:" Improving Health Literacy to Protect Patient Safety, Joint Commission

Critical care organization, Chang SY, Multz AS, Hall JB, Crit Care Clin 2005;21:43– 53

Defining and measuring patient safety, Pronovost PJ, Thompson DA, Holzmueller CG, Crit Care Clin 2005;21:1 – 19

An irreplaceable safety culture, Render ML, Hirschhorn L, Crit Care Clin 2005;21:31– 41

Failure mode and effects analysis application to critical care medicine, Duwe B, Fuchs BD, Hansen-Flaschen J, Crit Care Clin 2005;21:21– 30

Managing infection in the critical care unit: how can infection control make the ICU safe? Shulman L, Ost D, Crit Care Clin 2005;21:111 –128

Medication safety and transfusion errors in the ICU and beyond. Hussain E, Kao E, Crit Care Clin 2005;21:91– 110

Safety in training and learning in the intensive care unit. Heffner JE, Ellis R, Zeno B, Crit Care Clin 2005;21:129– 148

Five System Barriers to Achieving Ultrasafe Health Care, Amalberti R, Auroy Y, Berwick D, et al, Ann Intern Med. 2005;142:756-764

Acute Decompensation after Removing a Central Line: Practical Approaches to Increasing Safety in the Intensive Care Unit. Pronovost PJ, Wu AW, Sexton JB, Ann Intern Med. 2004;140:1025-1033

The Critical Care Safety Study: The incidence and nature of adverse events and serious medical errors in intensive care, Rothschild JM, Landrigan CP, Cronin JW, et al, Crit Care Med 2005; 33:1694 –1700

Fumbled Handoffs: One Dropped Ball after Another, Gandhi TK, Ann Intern Med. 2005;142:352-358.

Intensive care unit quality improvement: A “how-to” guide for the interdisciplinary team, Curtis JR, Cook DJ, Wall RJ, et al, Crit Care Med 2006; 34:211–218

A system factors analysis of “line, tube, and drain” incidents in the intensive care unit. Needham DM et al. Crit Care Med 2005; 33:1701-1707.

IHI’s Health System Measures Kit: Version 1.4: Pursuing Perfection & IMPACT Network

IHI Innovation Series 2003:
- Move Your DotTM
- Measuring, Evaluating, and Reducing Hospital Mortality Rates
- Optimizing Patient Flow: Moving Patients Smoothly Through Acute Care Settings
- The Breakthrough Series: IHI’s Collaborative Model for Achieving Breakthrough Improvement
- Improving the Reliability of Health Care
- Transforming Care at the Bedside

IHI Innovation Series 2004
- Improving the Reliability of Health Care
- Transforming Care at the Bedside
-

IHI Innovation Series 2005
- Seven Leadership Leverage Points for Organization-Level Improvement in Health Care
- Going Lean in Health Care
- Process for Running Effective Meetings

- Reducing Hospital Mortality Rates (Part 2)

IHI Innovation Series 2006

- A Framework for Spread

All white papers in IHI's Innovation Series are available online — and can be downloaded at no charge at: http://www.ihi.org/IHI/Results/WhitePapers/

Patient Transport

Incidents relating to the intra-hospital transfer of critically ill patients:An analysis of the reports submitted to the Australian Incident Monitoring Study in Intensive Care, Beckmann IU, Gillies DM, Berenholtz SM, et al, Intensive Care Med 2004; 30:1579–1585

Websites

The Joint Commission International Center for Patient Safety
http://www.jcipatientsafety.org/

The Emergency Case Research Institute- Dedicated to safety, cost-effectiveness, and quality of healthcare
http://www.ecri.org/

Healthcare Improvement Skills Center
http://www.improvementskills.org/

Agency for Healthcare Research and Quality
http://www.ahrq.gov/

Institute of Healthcare Improvement
http://www.ihi.org/ihi

Joint Commission on Accreditation of Healthcare Organization
http://www.jointcommission.org/

Public Health reporting for the State of Oregon
http://egov.oregon.gov/DHS/ph/acd/reporting/reportable.shtml

The Leapfrog Group
http://www.leapfroggroup.org/

Centers for Medicare and Medicaid Services
http://www.cms.hhs.gov/home/medicare.asp

Example of Daily Schedule (Monday through Friday)

Before 0800	Pre-Round Medical & Cardiac Critical Care patients	
0800 - Open	Medical & Cardiac Critical Care Rounds	
	Critical Care Education Conference	ICU Education Room
1430 - 1445	Inpatient Bed “Huddle”	9D Classroom

1630- Open Medical & Cardiac Critical Care Afternoon Walk Rounds
1715 Check-out Rounds with Critical Care Day Unit Shift Leader
Night-time: Beeper call from home on nights when working both the day before and after (eg, not Friday night when off on Saturday). In-house presence as dictated by patient care and house staff education needs.

Weekends & Holidays

- Weekend days as scheduled by the Fellowship program
- Day-time: In-hospital presence as needed to provide patient care and house staff supervision and education; beeper call when out of hospital
- Night-time: Beeper call from home. In-house presence as dictated by patient care and house staff education needs.
- Fellow will NOT participate in OHSU night call coverage during VA ICU rotation

Work Space

The Fellow will have work space in 3D-173C with use of the following: desk, file cabinet, book shelves, computer and printer. This room is not to be used by residents. The Fellow is encouraged to avoid using the Resident Work Room for computer access.

Education Conferences

VA Critical Care Education Conference

Monday through Friday, VA ICU Education Room, Building 100, Room 3D-175

- **Attendees:** Medical and Cardiac Critical Care staff, fellows, residents, and student, Critical Care nurses, Respiratory Therapists
- **Regular monthly schedule**
  Core topics: multidisciplinary, medical, cardiac, pharmacy, nutrition, RT, etc
  Scheduled literature reviews and case presentations by fellows and residents, students

Pulmonary & Critical Care Radiology Conference

Wednesdays, 1330-1430
OHSU 10C

Pulmonary & Critical Care Medicine Journal Club

1st Monday of each month, 1200-1300
OHSU BRB

Pulmonary & Critical Care Medicine Research Conference

Mondays (except 1st), 1200-1300
OHSU BRB

Pulmonary & Critical Care Medicine Grand Rounds

Fridays, 1230-1330
VA Building 101, Room 201

Portland VA Medical Center Critical Care Staff

Director, Critical Care: Mark S. Chesnutt, M.D

Cardiac Critical Care: Karen MacMurdy, M.D., Director
Crispin Davies, M.D.
George Giraud, M.D.

	Susan Grauer, M.D. Greg Larsen, M.D. Edward Murphy, M.D. Merritt Raitt, M.D.
Medical Critical Care:	William Holden, M.D., Director Mark Deffebach, M.D. David Lewinsohn, M.D., PhD. Daniel O'Hearn, M.D. Molly Osborne, M.D., PhD.
Surgical Critical Care:	Christina Rehm, M.D., Director Robert Goldman, M.D. Donald McConnell, M.D. Betsy Soifer, M.D.
Clinical Manager:	Laurie Meyer, RN, MS
Assistant Clinical Manager:	
Clinical Nurse Specialist:	Jenny Richardson, RN, MS, CNRN
Education Coordinator:	Sue Waterson, RN, MSN
Computer Specialist:	Linda Smith, RN
Clinical Pharmacy Specialist:	Diane Lyle, PharmD.
Respiratory Care Service:	William Holden, M.D. & Mark S. Chesnutt, M.D. Interim Medical co-Directors Terry Donnelly, RRT, Program Specialist
Quality & Performance Consultant:	Roz Rockweit, RN, MA