Practice Standards, Training, and Professional Development

Curtis E. Haas, Pharm.D., FCCP, BCPS
University of Rochester Medical Center
Rochester, New York
Conflict of Interest Disclosures

- None
Learning Objectives

1. Identify the elements of fundamental, desirable, and optimal pharmacist practice and pharmacy service components.

2. Apply the standards of practice for clinical pharmacy to the critical care practice environment using a standard process of care.

3. Develop an approach to conducting a gap analysis relative to the principles and values of team-based care in a local critical care practice environment.

4. Differentiate between the conventional and nonconventional pathways of training to obtain knowledge, skills, and attitudes for critical care pharmacy practice.
Learning Objectives

5. Define the key features of a mentor-mentee (protégé) relationship and the important role of mentoring in developing and training critical care clinical pharmacists.

6. Develop an approach to lifelong professional learning to maintain competency in critical care pharmacy practice using the principles of continuing professional development.

7. Identify the many educational components or techniques that can be incorporated into a personal development plan.

8. Identify the avenues and processes for contributing to the critical care body of knowledge as a presenter, author or peer reviewer.
Agenda for Presentation

- Practice Standards for Critical Care Pharmacy
- Training of Critical Care Pharmacists
- Continuing Professional Development
- Dissemination of Critical Care Knowledge
Standards of Practice – Clinical Pharmacy *(Pharmacotherapy 2014:34:794-7)*

- Defines expectations of clinical pharmacists delivering comprehensive medication management in team-based, collaborative settings.

- Qualifications:
  - Advanced education, training and experience
  - Clinical and personal competencies to practice in team-based environment
  - Board Certification
Standards of Practice – Clinical Pharmacy

Pharmacist’s Process of Care

Follow-up: Monitor and Evaluate

Collaborate

Communicate

Document

Collect

Assess

Plan

Implement


Workbook Page 1-20
Standards of Practice – Clinical Pharmacy *(Pharmacotherapy 2014:34:794-7)*

- Additional Expectations
  - Collaborative, team-based care and privileging
  - Professional development and maintenance of competence
  - Professionalism and Ethics
  - Research and scholarship
  - Education and training/mentorship
  - Management and leadership
  - Policy and service development
  - Consultation
Scope of Critical Care Pharmacy Services

(Crit Care Med 2000;28:3746-50)

Six Domains
- Clinical activities
- Drug Distribution
- Education
- Research
- Documentation
- Administration

Two Areas
- Pharmacist Activities
- Pharmacy Services

Three Gradations
- Fundamental
- Desirable
- Optimal
Scope of Critical Care Pharmacy Services \textit{(Crit Care Med 2000;28:3746-50)}

- Important elements of this document:
  - Expressed the need for clinical pharmacists in the management of complex ICU patients
  - Promoted a team-based approach to care
  - Pharmacists have shared responsibility and accountability for patient outcomes.
  - Promoted investment in departmental and institutional infrastructure and human resources to support a safe and effective drug use process in the ICU.

Workbook Page 1-21
Scope of Critical Care Pharmacy Services *(Crit Care Med 2000;28:3746-50)*

- Many pharmacy service standards are outdated:
  - Information systems – meaningful use and other incentives make EMRs more widespread.
  - Distribution systems have evolved
  - Sharp-end technologies not included
- Several fundamental recommendations not practical for small, community institutions.

Workbook Page 1-21
ICU Pharmacist as Educator

Teaching Methods/Techniques

- Clinical Training
- Point-of-Care
- Demonstrations
- Clinical Conferences
- Topic Discussions
- Assigned Readings
- Journal Club
- QI Projects
- Writing Assignments

- Didactic Teaching
- Collaboration on Guidelines/Protocols
- Competency-based programming
- Patient-Family education
ICU Pharmacist as Educator

Multiple Audiences

- Pharmacy Students and Residents *(may or may not have primary interest in critical care)*
- Critical Care Team *(primary interest in critical care – greater ICU therapeutics focus)*
- Pharmacist Colleagues *(may or may not have primary interest in critical care – competency development)*
- Other trainees *(mixed backgrounds and interests)*
- Patients and families *(not a traditional educational focus for ICU pharmacists)*

Workbook Page 1-22
ICU Pharmacist as Educator
Simplifying the Preceptor Process

- I do….you watch (Role Modeling)
- I do….you help (Coaching)
- You do…..I help (Coaching/Facilitating)
- You do…..I watch (Mentoring)
Critical Care Service Standards

(Crit Care Med 2003;31:2677-83)

- **Level I:**
  - Comprehensive critical care for a wide variety of patient populations with a high level of specialization

- **Level II:**
  - Comprehensive critical care but may not provide care for certain patient populations.

- **Level III:**
  - Provides stabilization, but limited ability to provide comprehensive critical care.
Critical Care Service Standards

(Crit Care Med 2003;31:2677-83)

- Emphasized importance of clinical pharmacists as required members of the team
- Qualifications and competence of the ICU pharmacist was defined as essential.
- ICUs with an academic mission should provide protected time for pharmacist contribution to scholarly activities
- Non-academic centers should provide time for ICU pharmacists to maintain competence.
Principles and Values of Team-Based Health Care

Definition of Team-Based Care:

*Team-based health care is the provision of health services to individuals, families, and/or their communities by at least two health providers who work collaboratively with patients and their caregivers—to the extent preferred by each patient—to accomplish shared goals within and across settings to achieve coordinated, high-quality care.*

www.iom.edu/Global/Perspectives/2012/TeamBasedCare.aspx

Workbook Page 1-24
Principles and Values of Team-Based Health Care

- Personal Values (Highly Functioning Team Members)
  - Honesty
  - Discipline
  - Creativity
  - Humility
  - Curiosity

- Principles of Team-Based Care
  - Shared Goals
  - Clear Roles
  - Mutual Trust
  - Effective Communication
  - Measurable Processes and Outcomes

www.iom.edu/Global/Perspectives/2012/TeamBasedCare.aspx

Workbook Page 1-24
Critical Care Team – Gap Analysis

*How is your team doing?*

- **Shared Goals:**
  - Are the patient and family goals for critical care routinely incorporated in the plan?
  - Are the patient and family viewed as active members of the team?
  - Are there clearly articulated and understood goals agreed upon by all team members?
  - Is progress towards the goals routinely re-evaluated in light of the changing course and evolving perspective of the patient and family?
Critical Care Team – Gap Analysis

How is your team doing?

- **Clear Roles:**
  - Are each team member’s functions, responsibilities and accountabilities clearly defined?
  - Are the roles and responsibilities focused on the shared goals of the team and patient?
  - Is there clear respect for the contributions of each team member (non-hierarchial, interdependent perspective)?
  - Does each member go about his or her responsibilities with a reasonable degree of autonomy and a balance of collaboration?
Critical Care Team – Gap Analysis

How is your team doing?

- Mutual Trust:
  - Does an environment of mutual trust and support exist among the ICU team?
  - Does the hiring process include a focus on the personal and professional values that support mutual trust?
  - Is the team effective at establishing and maintaining mutual trust with patients and families?
  - Does the team regularly participate in non-patient care activities to develop greater trust?
Critical Care Team – Gap Analysis

How is your team doing?

- Effective Communication:
  - Has the team established a high priority for open, direct, clear, consistent professional communication between team members (regardless of traditional hierarchial structures)?
  - Does communication take advantage of all potential modes and technologies for efficiency and convenience?
  - Do members of the team use effective listening skills?
  - Are signs of tension and unspoken conflict regularly recognized and addressed?
Critical Care Team – Gap Analysis

How is your team doing?

- Measurable Processes and Outcomes:
  - Has the team identified and implemented reliable, timely and ongoing measures of performance?
  - Are these measures focused on both process/outcomes of care provision and team function?
  - Are measures of patient and family satisfaction included?
  - Does the team regularly report its measures of success and failure?
  - Are data regularly used for process improvement?
Other Relevant Standards

- Joint Commission
  - Medication Management Chapter
  - National Patient Safety Goals
- CMS Conditions for Participation
  - Quality Assurance and Performance Improvement
  - Preparation and administration of medications
  - Medical Records requirements
  - Pharmaceutical Services
- Other (e.g. Pay for Performance, HACs)
Agenda for Presentation

- Practice Standards for Critical Care Pharmacy
- Training of Critical Care Pharmacists
- Continuing Professional Development
- Dissemination of Critical Care Knowledge
Qualifications of Clinical Pharmacists *(Pharmacotherapy 2013;33:888-91)*

- Board certification (or board eligible) is the cornerstone of eligibility.
- Postgraduate residency training preferred pathway for clinical pharmacists providing direct patient care.
- Alternatively, 3-4 years of relevant experience with at least 50% of time in specialty area.
- Valid CDTM agreement or formally granted clinical privileges.
Training Recommendations

- Graduate of ACPE-accredited school of pharmacy
- Licensure and registration
- Conventional
  - PGY-1 Pharmacy Practice
  - PGY-2 Critical Care or Fellowship (116 programs; 145 residents; 4 fellows)
- Unconventional/Alternative Pathways
  - Pathway not clearly defined / Variable
  - Declining in relevance (?)
Nonconventional Training Paths

- Mentored clinical practice experience
  - Hands-on, team-based experience
  - Mentors – different backgrounds/disciplines; multiple mentors may be needed
  - Reinforced by reading and analysis of the primary and secondary literature; topic discussions; point-of-care learning
  - Minimum of 3-4 years of mentored/supervised experience for level I and II ICU practice competency
Nonconventional Training Paths

- PGY-1 with mentored/supervised training
  - Mentored clinical experiences similar to above
  - Mentors – different backgrounds/disciplines
  - 2-3 years of mentored/supervised experience to gain competency for Level I and II ICUs.

- Critical Care Traineeship (ASHP Foundation)
  - 4-month distant education
  - 2-week on-site experiential training
  - Post-experiential training activities
  - Not a comprehensive training program – consider it a component of a broader experience
Nonconventional Training Paths

*Other potential components*

- Graduate degree (e.g. Masters Degree)
- CE Programming
- Attendance at CCM meetings
- Fundamentals in Critical Care (SCCM)
- ACLS/ATS/PALS training and certification
- SCCM CPP National Journal Club
- SCCM CPP Mentor program – long-distance
- Experiential rotations at peer institutions
- Visiting professor or scholar programs
- Guideline/Protocol/Guideline development
Mentor – Protégé Relationship

(MM J Pharm Educ 2003;67:Article 82)

- Mentor Qualities
  - Strong Interpersonal skills
  - Technical competence/expertise
  - Knowledge of organization and profession
  - Status/Prestige within organization and profession
  - Willingness to be responsible for protégé’s growth and development
  - Ability to share credit
  - Patient
Mentor – Protégé Relationship

(Am J Pharm Educ 2003;67:Article 82)

- Protégé Qualities
  - Self-perceived growth needs
  - A record of seeking/accepting challenging assignments
  - Receptivity to feedback and coaching
  - Willingness to assume responsibility for own growth and development
  - Ability to perform in more than one skill area
Mentor – Protégé Relationship

(Am J Pharm Educ 2003;67:Article 82)

- Relationship Qualities
  - Voluntary
  - Mutual benefits perceived and derived from the relationship
  - No conflicts of interest/competition between mentor and protégé
  - Not confined to professional or business interests
Phases of Mentor-Protégé Relationship (Am J Pharm Educ 2003;67:Article 82)

**Initiation**
- Weeks-Months
- Begin work
- Mentor Coaches

**Cultivation**
- 2-5 years
- Mutual Benefits
- Intimate Bonds

**Separation**
- Months
- Protégé autonomy
- Mentor deserted
- Resentment

**Transformation**
- Years
- Peer relationship
- Mutual sense of gratitude

Workbook Page 1-29
Mentoring and Critical Care

- Mentor-Protégé relationships are essential to formal development of critical care pharmacists.
- Seek mentors who can fill gaps in knowledge, skills and attitudes relative to critical care practice, research and education.
- Over time, ICU pharmacists should have several mentor-protégé relationships.
- Critical care pharmacists should mentor junior colleagues and trainees.
Mentoring

Who is carrying who at what point in the relationship?
A young, bright clinical pharmacist who recently completed PGY-1 training approaches you about her interest in developing clinical expertise in critical care at your 480-bed community teaching hospital with Level II critical care services. What options would you discuss with this pharmacist concerning obtaining the necessary knowledge, skills and attitudes?
Discussion Question

She appreciates the advice to return for CCM PGY-2 training, but last year she bought a new house.....

.....and this year, a new car.
She wants advice on gaining “on-the-job” experience.
Agenda for Presentation

☑ Practice Standards for Critical Care Pharmacy

☑ Training of Critical Care Pharmacists

☐ Continuing Professional Development

☐ Dissemination of Critical Care Knowledge
Continuing Professional Development

General Considerations

- Necessity and obligation to multiple stakeholders
- Multifaceted, self-directed, holistic, outcomes-focused approach to learning
- Career-long, iterative process – continuous cycles, rather than a defined start and end
- Sustained career successes more dependent on CPD than early-career education/training
- Should be closely integrated into daily practice and work environment for success and sustainability (can’t be another thing to do)
Continuing Professional Development

Stakeholders

- Pharmacist-Learner (Self)
- Employer
- Critical Care Colleagues
- Students, residents and fellows
- Patients

*Each contribute to and benefit from CPD process.*
Continuing Professional Development Process

Evaluate

Reflection

Act

Plan

Portfolio

Workbook Page 1-32
Continuing Professional Development Reflection

- Self-Assessment Process
- Seek evaluation and feedback from others
- Conduct personal/professional SWOT
- Reflection should be both scheduled and episodic
- Goal is to identify 2-3 specific, well-defined, and achievable learning needs.
Continuing Professional Development Plan

- Develop a person development plan (PDP) to address learning needs
- Include learning objectives that are SMART (specific, measurable, achievable, relevant, time-bound)
- Identify resources needed to address the PDP
- Evaluate the availability and access to needed resources; modify PDP accordingly
- PDP should be regularly reassessed and modified
Continuing Professional Development Act

- Develop an action plan to implement the PDP
- Need to incorporate a variety of learning strategies and methods
- Incorporate into the daily practice activities
- PDP action plan should not be considered an “additional burden” (or it will never get done!)
Continuing Professional Development

Evaluate

- Evaluate effectiveness of the action plan for achieving learning objectives of PDP:
  - Did activities provide content, depth and experiences to address the learning objectives?
  - Did the activities stay focused on the objectives and were timelines adhered to?
  - Were all competencies adequately addressed?
  - How did the CPD activities affect the learner and the patient?

- Evaluation should lead into next round of Reflection – restart continuous cycle…
Continuing Professional Development Portfolio

- Sometimes considered the 5th step of CPD, but is integral to each of the 4 steps.
- Process for documenting CPD process
- Format varies – may be standardized by employer, regulatory authorities, CE providers, etc.
- Is a dynamic, living document that reflects the continuous, iterative nature of CPD.
Continuing Professional Development

Learning Strategies and Methods

- Continuing pharmacy education (CPE)
- Short courses or seminars
- Participation in professional organizations
- Primary and secondary literature ("Foraging" and "Hunting")
- Discussion and debate
- Journal clubs/Clinical conferences
- Interprofessional, patient care rounds
- Guideline and protocol development
- Point-of-care learning

Workbook Page 1-33
Agenda for Presentation

- Practice Standards for Critical Care Pharmacy
- Training of Critical Care Pharmacists
- Continuing Professional Development
- Dissemination of Critical Care Knowledge
Dissemination of Critical Care Knowledge (Scholarship)

- Reasons to Disseminate Knowledge
  - Professional
  - Ethical obligation
  - Personal

- Venues
  - Peer-reviewed publications
  - Non-peer-reviewed publications
  - Abstracts/Posters/Platforms
  - Presentations/CPE
Peer-Reviewed Publication

- Selecting a Target Journal
  - Type and quality/importance of manuscript
  - Target audience

- Manuscript
  - Comply with journal requirements
  - Succinct, focused, non-repetitive
  - Syntax and spelling
  - Avoid common errors/weaknesses
Common Manuscript Weaknesses

Original Research

- Abstract and paper don’t match
- Weak introduction
- Unclear objective(s)
- Methods without results
- Results without methods
- Duplicate results in tables
- Rambling, unfocused discussion
- Failure to address weaknesses
- Conclusions beyond the data
- Too many tables
- Simplistic figures
- Cite literature incorrectly
- Exceed word limits
Peer-Reviewed Publication

Review and Revision Process

- Editorial Review
  - Focus on relevance and general quality
- Peer or Scientific Review
  - Should focus on quality and impact of content
  - Recommend Accept, Revision, or Reject
- Editor Response
- Revision process
  - Respond to all comments, not necessarily agree
  - Revised manuscript by deadline
- After Acceptance

Workbook Page 1-37
Abstracts and Scientific Presentations

Selecting a Meeting….

- Quality and relevance of presentation
- Prestige of meeting/Career goals
- Membership – desire to support organization
- Availability of funding for travel (or not…)
- Priorities of key collaborators
- Location of the meeting (sadly true….)
- “Encore” presentations an option
Abstracts and Scientific Presentations

Preparing the Abstract

- Succinct – greatest impact in the least space
- Title – brief and captivating
- Clearly state purpose (primary)
- Methods and analysis concise but clear
- Results may need to be just primary endpoint
- Conclusion – single brief sentence clearly tied to stated purpose
- Revise, revise, revise – engage all authors
Abstracts and Scientific Presentations

- Submission
  - All electronic now – reduces ability to cheat!

- Platform vs Poster
  - Depends on quality and relevance
  - Usually based on reviewers’ scores
  - Typically have to designate Platform status

- Review Process
  - 3-5 reviewers typical
  - Decisions are final (no revisions, resubmissions)
Poster Presentations

Dos and Don’ts….

- Avoid wordy posters (nobody will read it…)
- Use of tables, figures, concise bullet lists best
- Font size readable from 5-6 feet (with bifocals!)
- Ease of readability more important than aesthetics
- Unless required, don’t reprint abstract on poster
- Watch out for the “logo police” – especially if printing at your site
- Walk-rounds – be prepared and be succinct

Virtual Posters – rising popularity…

Workbook Page 1-39
Platform Presentation

- Recognition of high quality, impactful work
- Presentation usual 10 minutes with 5-10 minutes for questions
- Usually brief slide presentation – can not get into very granular presentation of work
- May involve peer review/judging
- Feedback may be written or verbal
- Often requires an accompanying poster
Dissemination of Knowledge

A conscious decision to swim with sharks

Actually, nobody wants to swim with sharks. It is not an acknowledged sport and it is neither enjoyable nor exhilarating. These instructions are written primarily for the benefit of those, who, by virtue of their occupation, find they must swim and find that the water is infested with sharks.

- Rules for Swimming with Sharks
  - Assume all unidentified fish are sharks
  - Do not bleed
  - Counter any aggression promptly
  - Get out of the water if someone else is bleeding
  - Use anticipatory retaliation
  - Disorganize an organized attack

Being a Peer Reviewer/Referee

- **Reasons to participate**
  - Professional obligation (take and give back)
  - Professional service opportunity
  - Enjoy reviewing the “raw” product
  - Educational opportunity for trainees

- **Reasons to decline an invitation**
  - Conflict of interest
  - Lack of expertise in the subject matter
  - Lack of time to meet deadlines

Workbook Page 1-39
Being a Peer Reviewer/Referee

- Getting on the list
  - Publish in the journal
  - Be recommended by a peer
  - Being a recognized expert in the field
  - Publishing in the field in a peer journal(s)
  - Volunteering services
Tips for conducting peer review

- Assumption of biomedical review skills…
- Focus on scientific quality and importance
- Grammar and word choices – leave to copyeditor
- “Connect the dots”
  - Objective(s) ↔ Conclusions
  - Methods ↔ Objective(s)
  - Methods – valid, state-of-the-art, statistically valid
  - Method ↔ Result
  - Result ↔ Method
  - Conclusions ↔ Results
  - Fair and complete discussion of the study weaknesses
Peer Review Recommendation

- Reasons for Rejection Recommendation
  - Fatal flaw
  - Extensive revision needed (total rewrite)
  - Valid research that is not important
  - Re-publication of extensive portion of study
  - Serious ethical violations
  - Not relevant to target audience of journal

- Revision (minor or major) Recommendation
  - Quality paper that needs issues addressed
  - Major revision usually undergoes 2\textsuperscript{nd} review

- Accept Recommendation
  - Unusual on first review – exceptional manuscript
Peer Re-review Process

- Receive detailed response to comments (yours and other reviewers) along with revised manuscript
- Restrict comments to responses to first review – “play fair”
- Confirm revisions have not materially altered the meaning of other parts of the manuscript
- Evaluate the validity of defense of comments not accepted (often valid)
- If extensive revisions still needed editor may reject.
Evening Sailing on Lake Ontario

Thank you for your attention!