Continuing Professional Development: Linking Education and Performance Improvement

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Global Perspectives:

World Federation for Medical Education (WFME)

- Improved health of all peoples is the main goal of medical education
- Medical workforce is globally mobile
- WFME Standards have a role in safeguarding adequate educational grounding of migrating doctors
- WFME Standards serve as a necessary quality-assuring credentials for medical doctors globally.

Global Perspectives:

World Health Organization (United Nations)

- WHO is responsible for providing leadership on global health matters, shaping the health research agenda, setting norms and standards, articulating evidence-based policy options, providing technical support to countries and monitoring and assessing health trends.
- Programmes - Patient Safety, Health and Environment Linkages Initiative, WHO-CHOICE

Global Perspectives:

World Health Organization

- Health Workforce Education and Production (HEP)
- Develops and supports the implementation of policies and strategies that aim to increase the relevance, quality and capacity of health workforce education and training
- Strengthens institutions and faculties to educate and train a skilled health workforce
- Promotes investments to improve educational infrastructure
- Devises mechanisms for improving access to educational materials and technologies
- Enhances national capacities to respond to the health needs of countries through quality education and training, and well-regulated practice.

Quality of Care and the Lack of Effectiveness of Continuing Education

- Healthcare today harms too frequently and routinely fails to deliver potential benefits.
- Doctors, nurses, pharmacists and other health professionals are not being adequately prepared to provide the highest quality and safest medical care possible, and there is insufficient assessment of their ongoing proficiency.
- Today's professional health workforce is not consistently prepared to provide high quality health care and assure patient safety. One contributing factor to this problem is the absence of a comprehensive and well-integrated system of continuing education in the health professions.

Core Elements in Continuing Professional Development

- Profession-specific continuing education and learning - (CME/CNE/CPE) provides essential knowledge and skills specific to the individual professional about their responsibilities
- Interprofessional education - two or more professions learn with, from and about each other to improve collaborative practice and the quality of care (CanPE 2001)
Matrix for Continuing Professional Development

- Values/Ethics for Interprofessional Practice
- Roles/Responsibilities Interprofessional Communication
- Teams & Teamwork

- Physicians
- Nurses
- Pharmacists

Core Elements in Continuing Professional Development

- Practice environment – hospital, clinic/ambulatory setting, rural/critical care hospital
- National Standards for Clinicians – MD, Nurse, PA, NP, Pharmacist – what are the limits of their license
- Clear identification and description of the standard of care and/or the expected performance behaviors
- Measurement of desired/expected outcome – knowledge, competence, performance, population health

Is the issue lack of “transfer”?  

Clinical Practice Focus on outcomes Clinical Practice

- Borrowed and adapted from Marijke Kehrhahn's keynote address at Alliance for CME 2011

What is “transfer”?

- Effectively and continuously
  - Applying the specific knowledge, skills, and/or attitudes that were learned in one setting or circumstance to another setting or circumstance.
  - Using the principles underlying the specific knowledge, skills, and/or attitudes to apply what was learned in one setting to another setting.

Perkins, 1992
Some Thoughts about Transfer
The first place to practice transfer of learning is within the learning environment.
- Deliberate practice and “expert” feedback is important.
- Task variation within the learning environment
  - Varying the task and the context slightly helps learners become accustomed to using their newly acquired knowledge and skills in novel situations.
  - Facilitates transfer of specific KSAs that were learned and the their underlying principles into new situations.
- Cognitive imprint that facilitates recall.

Educational planning that foster linkage to performance
- Educational context needs to be consistent with practice settings
- Requires multiple strategies that incorporate profession-specific CE with interprofessional education that is patient centric/systems based
- Profession specific CE should address required performance elements/competencies for each profession
- Interprofessional CE clarifies roles and responsibilities of each team member, communication and overall team work

Table/Small Group Discussion

Theoretical Bases for CPD
- Knowles: andragogy vs. pedagogy
- Schon: reflection in/on action
- Stages of learning
- Prochaska: stages of change

Knowles: Andragogy

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<tr>
<th>Assumptions</th>
<th>Andragogy</th>
<th>Pedagogy</th>
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<td>Self concept</td>
<td>Learning is self-directed</td>
<td>Learning is instructor-directed</td>
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<td>Experience</td>
<td>Accumulated experience is learning resource</td>
<td>Experience is neither broad nor deep</td>
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<td>Readiness to learn</td>
<td>Relates to tasks in their real life social roles</td>
<td>Relates to tasks that correspond to development stage</td>
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<td>Orientation to learning</td>
<td>Problem-centered</td>
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Reflection “in action”: think what they are doing, while they are doing it. Physicians read the situation and make a change on the spot.

Reflection “on action”: happens after the moment is over. “thinking back to discover how knowing-in-action might have led to an unexpected outcome.

Schon: Reflection in Action and Reflection on Action

Stage 1: Recognizing an opportunity for learning
- “something not right”
- Scanning– conscious/subconscious examination of the practice, professional environment resulting in dissatisfaction with some aspect of the practice or practice performance
- Reflecting in action and reflecting on action
- Articulation – difference between “what is” and “what should be”– creating cognitive dissonance

Stage 2: Searching for resources for learning
- Problems may be presented in the form of questions
- Can be declarative – knowledge acquisition
- Often procedural information– how to use knowledge
- Can augment current knowledge base
- Sets the stage for change in thinking/doing
- Creates an image of the change in behavior necessary to address the problem

Stage 3: Engaging in learning
- Learning becomes more focused, intentional and formal
- Can incorporate informal approaches even in a formal setting
- Formal learning can be courses, enduring materials, simulations, preceptor-guided experiences, Maintenance of Competence or Certification programs in US and Canada

Stage 4: Trying out what was learned
- Begins to use the newly learned skills and knowledge to address the problem that precipitated the learning process
- Develops a favorable opinion about new insights/learning and decides to accept/reject
- Experiments with new approach/learning after confirming benefits with colleagues
- Growth and confidence in new skills and knowledge into practice

Stage 5: Incorporating what was learned
- Integrates new learning/skills into daily routines
- Becomes the fabric of practice patterns
- Clarify what is needed to implement new knowledge and skills within the practice environment
- Trains staff on new learning/skills/approaches
Prochaska: Stages of Change

<table>
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<tr>
<th>Stage</th>
<th>Description</th>
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<tr>
<td>Pre-contemplation</td>
<td>Not even considering a change—denies need for change. No motivation.</td>
</tr>
<tr>
<td>Contemplation</td>
<td>Some thinking about the idea of change—no commitment, but open to it.</td>
</tr>
<tr>
<td>Preparing</td>
<td>Decided to change, and committed to the decision. No action yet taken.</td>
</tr>
<tr>
<td>Action</td>
<td>Change is happening—they like it and want it to continue.</td>
</tr>
<tr>
<td>Maintenance</td>
<td>Stayed the course</td>
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Outcomes-based Continuing Education

<table>
<thead>
<tr>
<th>Levels of Learning</th>
<th>Knowledge (Content)</th>
<th>Behavior (Skills)</th>
<th>Performance (Outcomes)</th>
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<tbody>
<tr>
<td>1st Level</td>
<td>Low</td>
<td>Low</td>
<td>Low</td>
</tr>
<tr>
<td>2nd Level</td>
<td>Medium</td>
<td>Medium</td>
<td>Medium</td>
</tr>
<tr>
<td>3rd Level</td>
<td>High</td>
<td>High</td>
<td>High</td>
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Motivation – Perceived Vs Actual Needs

- High needs: High motivation, inaccurate self perception
- Low needs: No motivation, no need for learning

Outcomes-based Continuing Education and Transfer

- Start with the end in mind – outcomes framework
- Take into account stages of learning – practices what is being learned
- Focus on clinical problems – provide knowledge that can be used in practice
- Provide opportunities for practice and feedback in authentic settings

Outcomes: the result of an action or activity.

Educational outcomes: the result of an educational activity.

Seven levels of outcomes:

- Level 1: Knowledge
- Level 2: Understanding
- Level 3: Application
- Level 4: Analysis
- Level 5: Synthesis
- Level 6: Evaluation
- Level 7: Creating

Start with the End in Mind

Outcome: Community Health
Outcome: Patient Health
Outcome: Performance: Do
Outcome: Competence: Show How
Outcome: Learning: Know How
Outcome: Learning: Know What
Outcome: Satisfaction
Outcome: Participation
Professional practice gap

Community Health  
Patient Health  
Performance  
Competence  
Learning  
Satisfaction  
Participation  

what is currently being done  
what could or should be done  

Outcomes-based Continuing Education

Instructional Design  
Preparation  
Reinforcement  
Engagement in learning  
Feedback  
Satisfaction  

Outcomes  
Enroll in Continuing Education  
Activity  
Satisfaction with Continuing Education Activity  
Learning  
Declarative Knowledge  
Procedural Knowledge  
Competence  
Performance  
Patient Health Status  
Community Health Status  

Instructional Design (after Merrill, 2011)

- Presentation: Tell learners: “insulin should be considered” with evidence.
- Example: Case presentation where insulin is being considered for a T2D patient whose HbA1c > 9.0.
- Practice: Several case discussions where insulin is being considered for T2D patients whose HbA1c > 9.0.
- Vary patient characteristics.
- Vary setting.
- Vary complexity of patient condition.
- Feedback: group discussion and “expert” confirmation.
- What is transfer? - Cognitive imprint of a set of strategies and principles for considering insulin for patients with T2D whose HbA1c is > 9.0.
Role of the CE Professional Assessment

- Identify physician learning needs using data, especially clinical practice data.
- Facilitate physician self-assessment, self-directed learning and evaluation using appropriate data.
- Consider a multi-disciplinary focus for needs assessment, educational design, and evaluation, as appropriate.

Professional Learning As Practice-based Inquiry

- Define the problem in practice.
- Initiate a process of inquiry.
- Work to change mental models.
- Make the inquiry comparative.
- Prepare the setting.

What is the “gap”? How to create CPD opportunities

<table>
<thead>
<tr>
<th>What is</th>
<th>What ought to be</th>
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<tr>
<td>Self-Assessment</td>
<td></td>
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<td>Knowledge</td>
<td></td>
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<tr>
<td>Performance</td>
<td></td>
</tr>
<tr>
<td>Individual</td>
<td></td>
</tr>
<tr>
<td>Team</td>
<td></td>
</tr>
<tr>
<td>Systems barriers</td>
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Learning From Experience

- Experience at work
- Reflective analysis
- Application of new mental model and principles to practice
- Abstract conceptualization
- Revise mental model
- Revise principles of practice

Experiential Learning Cycle in a Professional Learning Community

- Experience at work
- Reflective analysis
- Application of new mental model and principles to practice
- Having Peer Support for learning and change
- Abstract conceptualization
- Revise mental model
- Revise principles of practice

Role of CE Professional Educational Design

- Utilize the gap analysis to target specific desired outcomes for learning and performance
- Link learning goals/objectives to be congruent with the desired changes in knowledge/performance
- Connect desired changes in performance to current standards of care
- Analyze and apply practice environment and organization data into educational discussions and cases
- Integrate interprofessional competencies into educational design and performance expectations.
A Model for Continuous Improvement

Based on the work of Deming and Shewhart

Case Study Discussion

Applying Theories into Effective Continuing Professional Development

- Assessing Professional Practice Gaps- Individual and team/organization
- Validate evidence to support desired performance measures- standards of care, current practice data
- Select educational strategies and approaches that support learner needs and foster translation of knowledge into practice
- Measure outcomes that are consistent with educational design and desired performance measures

Case-based Learning

- Review multiple cases for maximum effect.
- Identify structural similarities among the cases.
- Convert case comparisons to principles of good practice.

(Gentner, Lowenstein & Thompson, 2003)

"Moore, Green, Gallis 2009"

How to facilitate a Professional Learning Community

- Long term:
  - study groups, communities of practice, groups that are already “naturally” together
- Short term:
  - In CE activities (breakout groups, table discussions)
  - Using exercises, building time for interaction and discussion with colleagues (about changes)

Parallel Competency Paths toward Improved Performance

Healthcare Professional Competencies
- Performance gap
- Self-assess/reflection
- Learning/application
- Re-assess performance

CE Professional Competencies
- Gap Assessment
- Educational design
- Outcomes measurement

Assessment

Why?
- System Competencies
- Healthcare Provider Competencies
  - Cause Analysis
  - Knowledge
  - Skills
  - Attitude
  - Other Barriers
- Competency Gap
- Strategies for Learning and Change

The Idealized Design for Comprehensive CPD and Performance

- Create an overall education plan that identifies educational programming specific to the institutional goals for patient care for the institution
- Educational initiatives/programs need to be tailored to the practice environments, strengths and needs of the organization/setting
- Seek alternatives that leverage existing resources and build on mission and desired outcomes for the organization
- Provide support to healthcare professionals and teams