Best Practices in Clinical Teaching and Evaluation

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Challenges in Clinical Teaching

- Faculty shortages
- Complex practice environments
  - Increased complexity and acuity
  - New technologies, highly specialized interventions
  - Focus on quality and safety
  - Restrictions by clinical settings

etc
Challenges in Clinical Teaching cont

Lack of evidence to guide clinical education practices

Who uses?
Challenges in Clinical Teaching cont

- Traditional model of clinical teaching
  - Clinical learning dependent on:
    - Available patients and experiences
    - When students “there”
  - Research findings: graduates not well prepared
Challenges in Clinical Teaching cont

- National survey by Nursing Executive Center of new graduates’ proficiency in 36 competencies
  - Only 10% of nurse executives report new graduates prepared for practice
  - Satisfied with only 2 competencies:
    - Use of information technology (e.g., computers)
    - Developing rapport with patients

Challenges in Clinical Teaching cont

- Lowest ranked competencies: learned in clinical setting
  - Work independently
  - Manage multiple responsibilities
  - Prioritize
  - Anticipate risks
  - Delegate
Challenges in Clinical Teaching
cont

- Systematic review of experienced RNs’ perceptions of clinical competence of new graduates
  - 2 main areas of concern related to critical thinking and clinical/technical skills

Rethink Clinical Education

- **New models of clinical education**
  - Dedicated education units
  - Clinical immersion experiences
  - Focused clinical teaching

- **Clinical teaching**
  - Use of evidence
  - Integrative cases
  - Assignments geared to course outcomes
Dedicated Education Unit (DEU) Model

- Partnership between school of nursing and health care agency
DEU Model cont

- Traditional

- DEU

  Preceptors, clinicians are teachers
Capstone Course

- Preceptor model

- DEU model

More students in agency
Clinical Immersion Experiences

- Capstone (transition) courses
- Multi-method study
  - Enhanced competence in nursing role
  - Graduates often seek employment and remain at capstone site or within capstone specialty
  - No effects on achievement exams or NCLEX-RN pass rates

Education-Service Partnerships

- Educating students and staff
- Addressing workforce issues
  - Majority of current partnerships focus on building workforce capacity (solving problems of lack of clinical faculty and clinical placements)
- Improving opportunities for staff to advance their education
Education-Service Partnerships cont

- Advancing research and evidence-based practice
  - Faculty access to subjects for research
  - Clinician access to research experts
  - Opportunities for faculty clinical scholarship


Focused Clinical Teaching

- Focus on specific competencies to be developed
- Provide experiences in “total patient care”, but learning activities may not involve complete care
  - Activities to learn clinical concepts (e.g., immobility)
    - Experience concept in simulation, then clinical practice
Focused Clinical Teaching cont

- Better studies on outcomes of different models and teaching methods
- Study (ADN program) comparing 1 long day (12 hours) vs. 2 short days for clinical experience
  - 146 students randomly assigned
  - No difference in learning outcomes between the 2 groups

Evidence-based Clinical Teaching

What evidence supports our clinical teaching methods in nursing?
Qualities of Effective Teacher

- Well studied
- Good teaching
  - Interactional process
    - Educator-learner and collaboration among learners
    - Qualitative studies
  - Prompt feedback
**Feedback**

- Most important variable affecting learning
- Should be:
  - Specific, informational
  - Given at time of learning
  - For procedures, technologies, and motor skills, provide both verbal and visual feedback
Practice

- Deliberate practice
  - Repetitive practice of skills (cognitive, motor)
  - Assessment of performance + feedback
- Strong association between extent of practice and performance
- Loss of skill with non use
- Distribute practice over time
Motor Learning and Practice

**Cognitive**
- Understanding how to perform skill
- Accuracy

**Associative**
- Refining movement
- More consistency

**Autonomous**
- Can perform without thinking about each step
- Automatic
Cognitive Phase

- When skill first introduced
- Student learns cognitively
  - What the specific skill involves
  - How to perform the skill (equipment, technique)
- Verbal reminders from teacher prompt performance
- Performance: slow, awkward with goal to perform accurately
Associative Phase

- Focus is on refining the skill
  - Master smaller details (e.g., timing)
- Performance becomes more consistent
- Practice can lead to rapid improvement in performance
Autonomous Phase

- Proficient in performing skill
- Performance automatic
  - Little or no cognitive activity
- Improvement in performance is not as obvious
  - Able to adapt motor skill, procedure to unique patient situation and environment
Practice is Critical

- Skill learning requires practice
- Without practice, psychomotor and clinical skills cannot be learned and maintained
- Goal: learn to perform skills without guidance
  - Adapt them to varied clinical situations
Student Stress in Clinical Practice

- Clinical practice most stressful experience
  - Fear of making mistakes
  - Feelings of incompetence
  - Interactions with others (inverse relationship to stress)
  - Being evaluated...


Student Stress in Clinical cont

- Teach stress management
  - Research: need to practice techniques

Breathe
Teacher Stress in Clinical Teaching

- Multiple demands
- Heavy workload
- Balancing needs of students, patients, staff
- Teaching inadequately prepared students...
Clinical Teaching Methods
Patient Assignment

- Choose variety of clinical learning activities
  - Few studies
  - Patient care, but not all “complete care”
  - Other activities

Focused on clinical competencies of course and students’ learning needs
Clinical Learning Activities

- Designed to promote attainment of **specific** competencies
- Use in place of or in addition to patient assignment
- Better coordination with simulation
Prelab Learning Activities: Too Many?

- Majority of students ($n = 208, 74\%$) complete prelab activities on day before clinical
  - Only 10 (4\%) directly before clinical
- Students spend fair amount of time on prelab activities
  - 50\% ($n = 142$) spent 60 to 90 minutes collecting information at clinical site
  - Additional 13\% ($n = 40$) spent more than 90 minutes
Prelab Learning Activities: Too Many? cont

- Prelab paperwork outside of clinical practice
  - 14% (n = 41) spent less than 60 minutes
  - 38% (n = 112) spent more than 120 minutes
  - Taken together, many students spent up to 5 hours on prelab activities

Asking Questions

What do studies show?

- Levels of questions
  - Teachers and preceptors ask low level questions in clinical practice, conferences
  - Many questions seek yes/no response
Short Integrative Cases & Unfolding Cases

Why use?

- Integrate knowledge, values, practice
- Link to practice
- Think about clinical situations not encountered in prior practice but need to know
- Promote higher level thinking
Sample Case

A patient is transferred to your unit from a community hospital with headache, nausea, and vomiting. The patient’s headache is getting progressively worse, and she is losing vision in her right eye.

1. What data are *most* important and why?
2. What are the next steps? Provide rationale.
3. Prepare a report for handoff.
Cases: What are Outcomes?

- BEME review of case-based learning
  - 104 studies
  - Majority (61%) with single cohorts
  - Outcomes
    - Students and teachers enjoy, think enhances learning
    - Evidence unclear as to effects on learning

Written Assignments in Clinical Courses

- Goals for each assignment?
- How much repetition?
- Short assignments:
  - Prevent summarizing what others have written
  - Focus on outcomes
  - Can be done in clinical conferences and critiqued by peers
Examples

- Describe how your patient’s treatments and interventions are similar to or different from your readings and why. (1 p.)

- Select a new intervention for your patient and develop a rationale for its effectiveness. (1 p.)
Too Much to Do?
Too Many Papers?
Not Enough Time?

Try Group Writing in Post Conference
Clinical Conferences

- What is goal?
- Limited studies
  - Some compare face-to-face to online post clinical conferences
  - Active learning strategies

15 minutes
Clinical Conferences

- Gear questions to competencies/outcomes
- Ask higher level questions to assess thinking
- Formative evaluation
Clinical Conferences cont

- Discussion of assessment
  - What data are important? Not significant?
  - What data are missing to arrive at the diagnosis/problem?

- Critique of interventions
  - As a group generate other possible interventions, or
  - Individually list other interventions, pass to next person to critique
Concept Maps

- Studies in nursing:
  - Effective for problem solving and critical thinking
    - Varied measures of critical thinking
  - Guidelines for use? Timing in course and clinical experience? How many?
Concept Maps

Other studies

- Concept maps:
  - Promote meaningful learning
  - Are additional resource for learning
  - Useful to provide feedback to students
  - Assess learning and performance

Clinical Evaluation
Purposes of Clinical Evaluation

- Identify existing competencies
- Identify learning needs to be addressed during clinical practicum
- Assess progress
- Make judgments if competencies achieved at end
Concept of Clinical Evaluation

- Involves observing performance and **judging** student’s competence
- Subjective process
  - Judgment influences what is observed and interpretations
  - Key is fairness—judge all students by same standards
Clinical Evaluation vs. Grading

- **Evaluation**
  - Teacher observes performance and collects other types of data, then compares information to standards to make a judgment

- **Grading**
  - Assigning a symbol to represent the judgment made
Formative vs. Summative

- **Formative**
  - Feedback, progress
  - Not graded

- **Summative**
  - Achievement of outcomes, competencies
  - End-of-instruction
  - Graded
Clinical Evaluation: Essential Steps

Decisions:

1. Purpose of evaluation?
2. Formative or summative?
3. Grading (P-F, letter, other)?
4. Evaluators
   - Faculty only? Preceptor? Self? Multiple?
5. What methods for evaluating each competency?
6. How many times?
Predominant Methods

1. Observation

- Of competencies to be achieved
- Consider
  - Student’s level of expertise
  - Effects of clinical situation on evaluation
Observation: Studies show...

- *Your values and biases*
  - Over-reliance on 1\textsuperscript{st} impressions
- Window of time
- “Good data” but incorrect judgment

So...
2. Rating performance

- List of outcomes or competencies learner is to demonstrate
- Scale for rating performance of them
- Most are intended for summative evaluation
Areas Addressed by Competencies

- Concepts, theories, and other knowledge for clinical practice
- Use of evidence in practice
- Assessment, diagnosis, plan, interventions, and evaluation of outcomes
- Psychomotor and technological skills, other types of interventions, and informatics competencies
Areas Addressed by Competencies cont

- Values related to patient care
- Communication and skill in collaboration
- Quality and safety
- Leadership and role behaviors
- Accountability and responsibility
- Self-development and continued learning
Types of Rating Scales

- Pass-fail most common
- Letter system
- Qualitative labels (excellent to poor)
- Frequency labels (always to never)
- Matrix combining different qualities of the performance
Clinical Evaluation Tool should be:

1. Consistent with outcomes or competencies
2. Valid
   - Does tool collect intended information about performance?
   - Does tool measure safe, effective practice?
Clinical Evaluation Tool should be: cont

3. Reliable
   ■ Same results when used by different faculty and with different student groups?

4. Appropriate number of competencies?
Clinical Evaluation Tool

- Same tool for all courses or course-specific tool?
  - Most use 1 tool for all courses
  - Competencies adapted to each course

- Two-level or multilevel scales?
  - Most use pass-fail or satisfactory-unsatisfactory rating scales
Common Errors With Rating Scales

- Leniency, severity, logical...errors
- Lack of interrater reliability
  - Do all evaluators agree on meaning of competencies?
    - Conducts comprehensive assessment...
  - May be problem even when using descriptors with scale
Common Errors With Rating Scales cont

- **Rater drift**
  - Definition or interpretation of competencies to be assessed changes over time
  - Even if you prepare clinical teachers and preceptors...drift over time
Improving Use of Tool

- Prepare clinical teacher, preceptor, others for using tool
  - Meaning of each competency
  - What would performance *look like* to pass or fail, or at each rating level?
  - Norm: discuss competency and its meaning + come to agreement among evaluators
Improving Use of Tool cont

- Have regular discussion of competencies to be rated
- Annual evaluation of tool, process
  - What’s working? Not working?
  - Other data needed?
  - What methods would provide those data?
Rater Training

- Improve evaluator’s skill in observing and rating performance

- **Rater error training**
  - Increase awareness of rater errors that could occur and how to avoid them
  - Studies show if evaluators know potential rating errors (e.g., halo effect, leniency error), they are less likely to make them
Rater Training cont

- **Frame of reference training**
  - Prepare evaluators to recognize standard for rating performance
    - Reference point for evaluators to use
    - Content oriented training
  - Iterative process
    - Observe and rate performance, check consistency in ratings, discuss discrepancies
Use Multiple Evaluation Methods

- Observation
- Assignments
- Papers (can be short)
- Concept maps
- Journals
- Short cases
- Post clinical conferences
Use Multiple Evaluation Methods cont

- Simulations for summative evaluation
- Standardized patients
- Objective Structured Clinical Examination
- E-portfolios
- Others
Clinical Evaluation Methods

- Method should provide data on specific competency
Incorporating Simulation into Evaluation Protocols

- Identify competencies to be assessed with simulation
- Identify types of simulations needed for those competencies
- Are simulations available or need to be developed?
- Formative or summative evaluation or both?
- Train raters
Standardized Patients

- Provides consistency in performance evaluation
  - Recreate same patient condition and clinical situation with each student
- Provide written and oral feedback to students on their performance
Objective Structured Clinical Examination (OSCE)

- Assess clinical competencies
- Students rotate through stations where they perform assessments, clinical skills, procedures and are evaluated on them
- Most use standardized patients
- Performance rated by multiple examiners
E-portfolios

- Documents in portfolio provide evidence of meeting competencies
  - Requires reflection by student
  - Assessment: formative, summative or both

- Systematic review
  - 69 studies (32 were nursing)
Grading Clinical Practice

- Two criteria
  - Evaluation methods should reflect the clinical competencies
  - Students must understand how their clinical practice will be assessed and graded
Grading Clinical Practice cont

Decisions about assigning grades

- Which assessment methods for summative evaluation and which for formative (feedback) only?
- Will clinical grade be included in course grade?
Grading Clinical Practice cont

- Can be based on competencies met
  - Designate some as critical
  - 2 dimensional grading:
    - Pass = all critical competencies met
    - Fail = 1 or more critical competencies not met
Grading Clinical Practice cont

- Multi-dimensional grading:
  - A = all competencies met
  - B = all critical competencies + half of others
  - C = all critical competencies
  - F = critical competencies not met
Grading Clinical Practice cont

- Can be based on evaluation methods

  **Example 1:**

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<thead>
<tr>
<th>Method</th>
<th>% of Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rating form (clinical evaluation tool)</td>
<td>50</td>
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<tr>
<td>Papers</td>
<td>20</td>
</tr>
<tr>
<td>E-portfolio</td>
<td>30</td>
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</tbody>
</table>
Grading Clinical Practice cont

- Example 2:

<table>
<thead>
<tr>
<th>Method</th>
<th>% of Grade</th>
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</thead>
<tbody>
<tr>
<td>Rating form (clinical evaluation tool)</td>
<td>Pass</td>
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<tr>
<td>Papers</td>
<td>40</td>
</tr>
<tr>
<td>E-portfolio</td>
<td>40</td>
</tr>
<tr>
<td>Presentation</td>
<td>20</td>
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