Safe Medication Administration Initiative

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June 2012
Presentation Details

- Background Information
- The Approach: ADDIE Model
- Theoretical Principles
- Examples/Discussion
- Future Ideas
Background Information

- Semester 4 students
- Not achieving benchmark (100%) on dosage calculation quizzes
- Not new learning
  - How did they pass semester 2/3 quizzes in clinical?
  - Why were unsatisfactory students not identified for remediation?
ADDIE Model (Instructional System Design)

- Analysis
- Design
- Development
- Implement
- Evaluate

FSU for U.S. Army before the 1970s
Significant influence on corporate and educational forums
ADDIE Model

ADDIE Model

- **Analyze:**
  - performance environment & describe goals needed to fix performance gaps (what training is needed?)

- **Design:**
  - process to achieve goals (training)

- **Development:**
  - product to assist learners (courseware)

- **Implement:**
  - deliver the courseware

- **Evaluate: control phase.**
  - A continuous process associated with each phase
Analysis

- **Current Healthcare Culture**
  - **Paradigm Shift:** High focus on performance improvement; quality; patient safety; error preventions
  
  - **Question:** Is testing Dosage Calculation and math skills the best use of curricula to prepare students?

  - **Literature:** Math skills are only one component of Safe Medication Administration
Medication Competency

Eleven Competency Areas that constitute medication competency:

* Anatomy & Physiology
* Pharmacology
* Information seeking skills
* Mathematical & Medication Calculation
* Medication Administration
* Assessment & Evaluation
* Promoting Medication Safety
* Communication
* Interdisciplinary collaboration
* Medication Education
* Documentation

What should be our Focus?

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Analysis: Decision

- Not just math skills; needed larger scope
- Need formal process for education and evaluation of student competencies
- Central Professor(s) to create and facilitate initiative, student tracking, and supportive remediation
- Too many factors influence the clinical setting to achieve rigor with education and evaluation
  - Clinical teacher; group dynamics; time available; stress in clinical, agency specific requirements
Design: Theoretical Principles

- Adult learning T & L Principles
- Scaffolding:
  - Help the learners who need help. Give the learners who are successful the credit they deserve.
- Complete tracking through PNPAT
- Communication with clinical teachers
- Linkage with college math centre
- All remediation based on principles of accountability, self-direction, and ownership for own learning
Initiative

Semester One:
- Basic Math Skills.
- Terminology & Abbreviations

Semester Two (including Sem. One objectives)
- PO; sub-Q, IM, Top
- Dosages based on client weight.

Semester Three (Including Sem. One & Two objectives):
- IV infusions and medications

*****Semester Four: Remediation for students not satisfactory by end of Semester Three. Use of multiple T & L strategies.
- Students are Adult Learners

- Treat them like Adults:
  - 1) Need to know what is expected of them
  - 2) Need opportunity to practice it
  - 3) Need to learn from peers/credible experts
  - 4) Need to know where to find extra help, who to ask
  - 5) Need feedback on their work
  - 6) Need to know why the learning matters (is it really valuable???)
D&D Example: Semester 2

- What are we testing? Most Important Question
- Week One: Make sure we teach (orientation)
- Week Four: Give students a chance to learn it
- Week Seven: Test Student: Formal and Fair
- Week Nine: Assignment (scored 80-90%)
  - Health Teaching & Understanding Doctor’s orders
- Week Nine: Remediation (Below 80%)
  - Assignment plus remediation
  - Practice questions, group work, guides provided, re-test
  - (I.D. learners that need significant follow-up)
- Week 10-Final: Ongoing follow-up
Implement

- Adjusted pre-admission math testing
- Initiative details: PN Handbook and course outlines
- Communication over Blackboard site
- Engage clinical teachers as a support to student
- Professor(s) track result and participation
- PNPAT committee makes any decisions regarding students who do not participate
- Unaccountable with initiative leads to meeting with program coordinator.
- No testing is semester 4: time for intensive follow-up for students still requiring remediation (occurs in lab)
Future

- Results: student scores

- No-show for testing has a correlation with non-participation in remediation. Initiative provides supportive objective documentation regarding student accountability in clinical courses.

- Reading comprehension difficulties: significant factor - low scores

- Students who are reliant on calculators need immediate attention in semester one (Math Centre)
Future

- Students with strong math skills do need remediation with safe medication administration practices
- Initiative needs to expand to include more research on errors associated with medication
- Cohort of students who cannot pass a paper-based test but can demonstrate competency in the lab with ‘hands-on’ practice (Sem. 4)
Questions?

www.nwlink.com/~donclark/hrd/sat1html