Peer Teaching In Pharmacy Education

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Objectives

• Define peer teaching and the potential value it has to pharmacy education
• Review the literature on peer teaching models
• Highlight ways to implement a peer teaching model in pharmacy education
Definitions

• **Near-Peer Teaching**: The provision of learning support to junior students by their senior peers

Near-Peer Teaching

Example Heirarchy for Near-Peer Teaching in Pharmacy

Clinical Pharmacist

PharmD Student

Pharmacy Resident

Fourth-Year Pharmacy Student
Fourth-Year Pharmacy Student
Fourth-Year Pharmacy Student
Fourth-Year Pharmacy Student
Definitions

- Peer Teaching or Peer-Assisted Learning: Teacher and learner are at the same level

Peer Teaching

Pharmacist

Trainee  Trainee  Trainee
Advantages of Peer Teaching in Pharmacy Education

• Limited number of rotation sites
• Alleviate workload pressure for pharmacist
• Pharmacy practice has moved towards taking on a much larger clinical role
• Fosters a culture that places importance on the transmission of wisdom to future pharmacists

Value of Peer Teaching to Students

• Junior students identify more with senior students
• Builds leadership and confidence
• Offers students an alternative method for studying
• Prepares pharmacy students for their future role as educators

Potential Drawbacks

• Senior students may not benefit as much
• Feelings of distrust among peers
• Reduces contact time with more experienced clinicians

Peer Teaching in Canadian Pharmacy Schools

• The Development and Evaluation of a Student Pharmacist Clinical Teaching Unit Utilizing Peer Assisted Learning.

• **Rationale:** Demand for SPEP sites exceeds supply.

CJHP 2011;64(6):446-450
Implementation

9-week rotation

Pharmacist 1
3 weeks

Pharmacist 2
3 weeks

Pharmacist 3
3 weeks

CJHP 2011;64(6):446-450
Results

• More drug-related issues were documented:
  – CTU = 768
  – Previous year = 151

• Overall, positive satisfaction with the program for both the student and preceptor
IMPLEMENTATION OF A NEAR-PEER TEACHING MODEL IN PHARMACY EDUCATION: EXPERIENCES AND CHALLENGES

Christine Leong, Marisa Battistella and Zubin Austin
CJHP-Vol 65, No.5- September-October 2012
The Educational Setting

- Multi-disciplinary, outpatient hemodialysis (HD) unit that serves approximately 300 HD patients
  - Located in a downtown teaching hospital

The Participants

- Attending Pharmacist
  - Over 8 years of experience with near peer teaching
- PharmD Student
- Pharmacy Resident
- 3rd-year co-operative (co-op) student
- 4th-year Structured Practical Experience Program (SPEP) student

All students had minimal nephrology experience prior to this rotation

CJHP 2012; 65(5): 394-398
Structure of Clinical Rotation

- Each student was responsible for providing pharmaceutical care to **at least 8** assigned patients throughout the rotation.
- All students were also expected to participate in education activities such as:
  - Nephrology teaching rounds (twice a week)
  - Nephrology journal club (weekly)
  - Interprofessional patient rounds
  - Therapeutic discussions with the pharmacist
  - Patient discussions with the pharmacist
  - Educational session with the nurse or dietitian
  - Pharmacy department presentations

CJHP 2012; 65(5): 394-398
Teaching Activities

Box 2. Examples of Senior Students’ Teaching Activities with Junior Students

Resident
Chart review
Best possible medical history, medication reconciliation
Patient interview
Patient work-up and therapeutic thought process
Documentation

PharmD student
Appropriateness of drug therapy
Important studies supporting or refuting an intervention used in practice
Methods

• Pharm D *research* student present for 4-6 hrs daily
• Qualitative info was collected over 3 week period
• Methods used for collecting information were guided by ethnographic principles
• Approved by Research Ethics Board

CJHP 2012; 65(5): 394-398
Four recurring themes emerged with implementation of the near-peer teaching model.
Theme 1: Organization and Time Management

• Managing the Schedule
  – Students found organization and effective planning were essential to complete all of the rotation related activities
  – Schedule had to be modified regularly

• Repetition of Information
  – Information was repeated when multiple teachers were involved in reviewing a junior student’s care plan and during interprofessional rounds
Theme 2: Perception of Roles and Structure of the Teaching Model

• Role as a Teacher
  – Senior students gave junior students different perspectives on patient-related issues:
    • PharmD student was very clinically knowledgeable
    • Resident imparted skills related to conducting thorough and efficient patient reviews

CJHP 2012; 65(5): 394-398
Theme 2: Perception of Roles and Structure of the Teaching Model

• Pattern of Participation During Group Discussions
  – Junior students were less likely to respond to clinical questions
  – During therapeutic discussions, attending pharmacist allowed junior students the opportunity to first answer the more fundamental questions (e.g. related to pathophysiology/RF of various conditions) and asked senior students direct questions related to evidence and actions they would take in a specific clinical scenario

CJHP 2012; 65(5): 394-398
Hierarchy

**Expected hierarchy**

- Pharmacist
  - PharmD
    - Resident
    - Co-op
    - SPEP

**Structure that actually occurred**

- Pharmacist
  - PharmD
    - Resident
      - Co-op
      - SPEP

*Figure 1.* Expected and observed patterns of interaction between pharmacist and pharmacy students. SPEP = Structured Practical Experience Program.
Theme 3: Opportunity for Cognitive Congruence

• In this model, the junior students discussed information with the senior students more often than with the pharmacist.

• Near-peers may understand the problems and challenges that students face better and appear to be in a better position to explain difficult concepts at an appropriate level.

CJHP 2012; 65(5): 394-398
Theme 4: Culture Learning & Integration into the Interprofessional Team

Day 5 (week 2): First time rounding

Patient 1
- Patient
- MD
- RN
- Res
- Coop
- Table Chart
- PhmID

Patient 2
- RN
- MD
- Phm
- Res
- Coop
- Table Chart
- PhmID

Day 11 (week 3): Third time rounding

Patient 3
- Patient
- MD
- RN
- Res
- Coop
- Table Chart
- PhmID

Patient 4
- RN
- MD
- Res
- Coop
- Table Chart
- PhmID

CJHP 2012; 65(5): 394-398
What did the authors conclude?

• Given the increasing demand for clinical placements, near-peer teaching provides a unique approach to meeting this need.

• Limitations:
  – Generalizability to other practice specialties
  – Variances in individual student motivation and personalities
  – Learning outcomes were not measured

CJHP 2012; 65(5): 394-398
HOW IS NEAR PEER TEACHING DONE IN PRACTICE?

THE PRACTICAL SIDE
How is Near-Peer teaching done in practice?

• Define objectives and rules
  – Students are aware of this rotation before arrival
  – During first meeting- establish working environment/dynamics

• Define responsibilities of key stakeholders
  – Students themselves
  – Other pharmacists
  – Other allied health (RNs/dietitians)
How is Near-Peer teaching done in practice?

• Prepare ahead of time!
  – List of items to discuss on day one
  – Schedules
  – Patient selection
  – Objectives/Learning Contracts
  – Presentations/Dates
How is Near-Peer teaching done in practice?

- **Patient work ups**
  - Reviewed all together in beginning
    - Resident to go first
  - Pharm D to review with EPE
  - Resident to see pts with Pharm D and EPE
How is Near-Peer teaching done in practice?

- Evaluation of preceptor
  - Monitor my style weekly
- Evaluations of Students
  - Weekly/q2weeks
  - Separately
  - Will ask for feedback from resident/PharmD
How is Near-Peer teaching done in practice?

- **Space**
  - Find various spots for working—pharmacy/library
  - Meeting spots for pt discussions vs therapeutic discussions
How is Peer teaching done in practice?

• Be organized and creative
• Establish the dynamics from Day One!
• It does save time!
• It is way more fun!
Acknowledgements

• Zubin Austin
• Christine Leong
• Karen Cameron
• Dipti Tankala
Questions are guaranteed in life; Answers aren't.