

Simulation-Based Patient & Family Centered Care: From the Educational Literature to the “Classroom”

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Goals

1. To describe the design of a simulated community-based pharmacy practice course (PHM 206: Medication Therapy Management 3 – “MTM3”) intended to enhance Year 2 undergraduate students patient care skills
2. To highlight key supporting educational literature applied in course development

Entry-Level PharmD Curriculum: Overview

Year 1

- physiology and anatomy, biochemistry, pathobiology, pharmacology, pharmaceutics, pharmacokinetics, health systems, social and behavioural health, pharmacy informatics and clinical trials, MTM 1, and pharmacotherapy 1
- 4 week Early Practice Experience during the summer after Year 1

Year 2

- microbiology, the science of pharmacotherapy, pharmaceutical quality and clinical laboratory medicine, four pharmacotherapy courses, MTM2, *MTM3*, practice management, pharmacy practice research, health and pharmacoconomics
- 4 Week Early Practice Experience during the summer after Year 2

“MTM” Courses

- 4 longitudinal courses delivered over 3 years
- Students expected to apply knowledge and develop skills in practice-based scenarios building on previous courses
- Draw on ALL courses in the curriculum
- 39 hours/course:
 - Hybrid of lectures, tutorials/workshops, “simulated-practice” sessions
 - Small-group facilitation essential for simulations
- 240 students

<i>AFPC Roles</i>	MTM ₁ (Yr 1 Winter)	MTM ₂ (Yr 2 Fall)	MTM ₃ (Yr 2 Winter)
<i>Communicator</i>	•Counselling on a dosage form •Peer & Pharmacist Facilitator-based role-plays	•Counselling on a new Rx •Peer & Pharmacist Facilitator-based role-plays	•Development of Patient Interviewing Skills •Use of Standardized Patients
<i>Care Provider</i>	•Providing basic patient education	•Introduction to DTPs, written care plans	•Identifying patient needs/ clinical goals •Prioritizing DTPs •Clinical decision-making: discussing therapeutic options + negotiating a therapeutic plan with the patient, advocate, or health care provider •Documentation & follow-up
<i>Collaborator</i>	•Accepting a verbal Rx	•Calling MD to amend Rx	•Partnerships: patients & health care providers •Professionalism

MTM3: Course Description

MTM3: Key Features

- Foundational Lectures (12 hrs)
- Simulated Practice Sessions
 - (i) Simulated Practice Encounters (5 x 3 hrs)
Alternating every other week with
 - (ii) Simulated Practice Workshops (5 x 2 hrs)
- Context: Simulating “authentic practice”
 - 7-8 students within their “simulated community pharmacy” providing care to patients, families and collaborating with health care providers (i.e. Standardized Patients – SP’s)

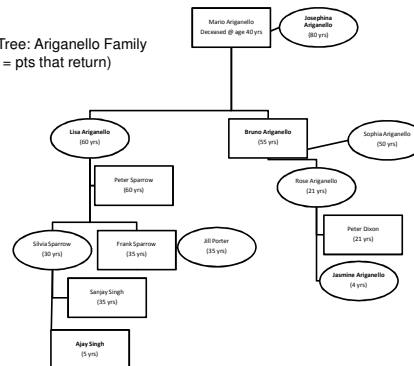
MTM3: Lecture Schedule

Date	Time	Location	Topic	Speaker(s)
Thursday Nov 29, 2012	9:00-10:00 AM	MS 2158	Course Orientation	Debra Moy & Suzanne Singh
January 7	5:00-7:00 PM	PB 250	Global Rating Scale	Debra Moy & Suzanne Singh
January 14	5:00-7:00 PM	PB 250	Professional Responsibility	Debra Moy & Suzanne Singh
January 21	5:00-7:00 PM	PB 250	Patient Interviewing & Documentation	Suzanne Singh
			Clinical Reasoning & Decision-Making	Debra Moy
January 28	No Lecture			
February 4	5:00-7:00 PM	PB 250	Integrating Cognitive Services Into Your Practice	James Snowdon
February 11	5:00-7:00 PM	PB 250	Collaborative Practice	Suzanne Singh, Erin Bearss, MD & Lisa Vesik, RD
			Conflict Management	Debra Moy
February 25	5:00-7:00 PM	PB 250	Professionalism	Lesley Lavack

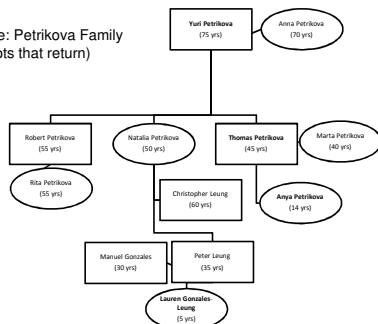
MTM3: Simulated Practice Sessions

- Patient & Family-Centered Care
 - Class of 240 divided in half – responsible to provide care for either the Ariganello or Petrikova Family during the term during alternating Simulated Practice Encounters and Simulated Practice Workshops
 - Modern Family Concept: diverse, intergenerational, multicultural with issues (like real-life!)
 - Documentation for patient visits/maintenance of profiles required since the family members may return throughout the term
- Evidence-basis:
 - describe conceptually by Austin, AJPE 2006
 - building on the work of Austin, 1998, MTM3:
 - Used fewer family members to ensure all students met a returning patient
 - Incorporated health care providers for the family members (MD, NP, RN) to introduce the team approach to care

Family Tree: Ariganello Family
(bolded = pts that return)



Family Tree: Petrikova Family
(bolded = pts that return)



MTM3: Simulated Practice Encounters - SPEs

- Each student conducts a patient interview with a SP
 - 3 students conduct an “A role” (new encounter, 15 min)
 - 5 students conduct a “B” (patient or family member returns, or HCP, 10 min)
- Focus: student’s integration of communication skills and pharmacotherapeutic decision-making and professionalism
- **SP’s** provide **formative feedback** from patient perspective
- **Pharmacist Facilitators (PF’s)** provide **feedback** related to practice-specific skill development and **summative written assessment**

MTM3: Simulated Practice Workshops - SPWs

- Similar to the SPE's the SPW's:
 - require students to meet in their group of 7-8 students
 - 3 students role-play an "A" interaction
- Unlike SPE's, during the SPW's:
 - only the **Standardized Patient** is present to provide **formative** feedback to the student on how they felt as a patient, **no PF is present**
 - 2 students, who are not conducting a patient interview, are assigned to document either:
 - Communication points (things that went well, things that did not)
 - Clinical Practice issues (SP's are not able to address clinical issues)
 - A 3rd student (assigned to the SPW B3 role) must be prepared to do the "B" role-play in large group workshop followed by group debrief
- Focus: promote **formative** learning, enabling students to reflect on, practice and improve their skills before their next assessed SPE

MTM3: Simulated Practice Sessions

- Weekly therapeutic areas of focus
 - Pre-simulation questions guide students
- Continuity of care: Acute and chronic patient care needs, returning patients
 - E.g. Patient with hypertension returns to pharmacy requesting a cough and cold product
- Breadth of common pharmacy practice-related issues covered
 - E.g. medication management, jurisprudence, ethics, professionalism and communication
- Comprehensive patient-centered care
 - Moving beyond a "drug" focus, recognizing that patients have real-life concerns (teen pregnancy, divorce, same sex partners, alcoholic father, difficulty finding time to eat healthy and exercise etc.)

MTM3: Application of Educational Literature

MTM3: Course Design

1. Use of Standardized Patients (SP's)
2. Integrating principles of effective feedback
3. Incorporating formative assessment (in addition to summative assessment using a Global Rating Scale)

(small group learning, non-numeric grading for subjective assessment, facilitative narrative)

1. Use of Standardized Patients (SP's)

Reviewing the Evidence for SP's

- Use of SP's for teaching and learning is strongly supported by the literature since the '70s:
- Barrows (Academic Medicine 1993) - Outlines the value of SPs
 - For **students** - safe learning environment allowing for learning and practice of formative skills e.g. practice communication skills with difficult patients or sensitive topics, become comfortable with how to approach common practice situations in a non-threatening learning environment, high fidelity when SP's well trained and cases are authentic. SP's focus student's attention on their performance as a PRACTITIONER, motivating them and encouraging active learning
 - For **teachers** - can provide all students with equivalent patient experiences instead of random cases on wards or clinics, helps to develop core skills, can determine what will be "taught" using SP's to ensure themes and issues are covered as well as content, level of complexity of clinical problems, high face validity for students
 - For **assessment** - allows for assessment of the students interpersonal skills, clinical skills and thinking skills, can control the "patient experiences" that all students have unlike on the ward/in practice sites

Use of SPs in Pharmacy Education

- Giannetti (AJPE 1981) – One of the first to use SP's to teach interviewing skills to pharmacy students
 - 3 components in the course:
 - didactic presentations on basic concepts
 - audio visual presentation and discussion of interviews
 - practice of interviewing skills with SP's in small student groups
 - Emphasis was on peer feedback, (instructor facilitated students comments and critiques)
 - SP's use "time in/time out" method
 - Used SP's to provide students feedback from the patient's perspective

SP's as Educators & Student Experience

- Monaghan (AJPE, 1997) – Student attitudes re: SP's
 - Students recommended the use of small groups to provide all students the opportunity to individually role-play with an SP's, as not enough practice opportunities when only "a few" are invited to role-play at the front of the class, all encounters should relate to real life practice (not specific communication skills), practice role-playing before class not beneficial (i.e. with peers)
- Austin (AJPE- 1998) –Describes course design using SP's as patients including educator and student perspective
 - High fidelity and face validity for students
 - Feedback provided by SP's helpful and constructive in helping them learn
 - Felt it prepared them well for pharmacy practice
- Austin (AJPE- 2006) – Describes long-term impact of SP's as educators
 - Follow-up interviews, 3 yrs after graduation indicated strong support from graduates for the learning opportunities and teaching approach; indicated SP's conferred longstanding benefit to the practitioners

Weighing Pros & Cons of Incorporating SPs in Simulations

- PROs
 - Educational value, quality evidence-based
 - Benefits to
 - Learners
 - Educators
- CONs
 - Significant time investment for course coordinators
 - Case writing and working with SP program to standardize cases and level cases
 - \$\$\$ - "neutral" – cost per student weighed against student tuition



SPs: Concerns raised...

- "Isn't Year 2 too early for using SP's?"
- "Shouldn't we save SP's to simulate more complicated patients?"
- "SP's are expensive (aren't they?)...maybe we should just use them a couple of times...(is there a "sweet-spot" for how many times SP's may be used?)"

2. Integrating principles of effective feedback

Feedback: A Look at the Evidence

- Endes (JAMA, 1983) outlined the need to differentiate between feedback and evaluation and the importance of focusing on the trainees' observable behaviours, to provide feedback that encourages improved clinical skills. Suggested guidelines for giving feedback, adapting principles from the business administration, psychology and education literature.
- Bing-You (Teaching and Learning in Medicine, 1995, Medical Teacher, 1997) and Hewson and Little, (J of GIM, 1998) – demonstrated a clear correlation between Endes feedback principles and their perceived effectiveness by students in helping them learn.
- Brukner (Medical Teacher, 1999) developed a workshop to teach faculty and house staff how to give effective feedback to students

General Principles for Providing Effective Feedback (Brukner)

1. Review your goals and expectations of the student in the beginning of the rotation.
2. Give interim feedback.
3. Ask the student to evaluate his/her performance prior to giving your own feedback.
4. Focus feedback on the student's behavior, rather than on the student's personality
5. Give specific examples to illustrate your observations.
6. Suggest specific strategies by which the student might improve his/her performance.

Descriptive feedback

- In addition to incorporating the principles of effective feedback, employing "descriptive feedback" to facilitate learning is well recognized in the broader educational literature as an essential practice of *assessment for learning*.
- Evidence: (Black, Harrison, Lee, Marshall & William, 2003, Open University Press, Ch.4)
 - *Assessment for learning* is a powerful tool for improving students' learning.
 - *Assessment for learning* differs from *assessment of learning* in that the information gathered is used for the specific purpose of helping students improve *while they are still gaining knowledge and practising skills*.
 - Teachers who view assessment as integral to learning engage students as collaborative partners in the learning process.
 - This assessment provides precise and timely information so teachers can adjust instruction in response to individual student needs, and so students can adjust their learning strategies or set different goals.

These feedback strategies are incorporated into the design and delivery of MTM₃

MTM₃: Simulated Patient Encounters (SPE's)

- Immediately following the interview the student is asked to reflect on how they felt the interview went from a communication and interview perspective (i.e. what did they did well, what they had trouble with, what they would like to work on)
- This is followed by verbal feedback from the SP who responds to the student's comments, adding additional comments that focus on how they felt as a patient during the interaction.
- Verbal feedback from the pharmacist facilitator (PF) follows the SP, focusing on all aspects of the interview from the perspective of the profession's expectations and practice standards using "descriptive feedback" techniques, as well as their professional experience.
- Written comments are also included on the assessment form by the PF, and returned to the student the next day
- Feedback is provided by the PF using validated Principles of Effective Feedback, well established in the medical education literature.
- All PF's are required to participate in an assessment workshop, modelled on Brukner's work, prior to the start of MTM₃

3. Incorporating formative assessment

In addition to summative assessment using a Global Rating Scale...

Formative Assessment: A Look at the Evidence

- Evaluative feedback, (e.g., percentage marks, letter grades) and frequent evaluation can have a negative impact on learning and motivation. (Tunstall & Gipps, British Research and Educational Journal, 1996, Black & William, Phi Delta Kappan, 1998).
- Even praise, when focused on characteristics of the learner rather than on the characteristics of the work, can have the opposite of the intended effect. (Dweck, Educational Leadership, 2007)
- Feedback can have a significant impact on learning, but this impact can be positive or negative depending on the type, delivery, and timing of the feedback. (Hattie & Timperley, Review of Educational Research, 77 (1) 2007)
- Feedback affects students' motivation to learn and their perceptions about their intelligence and their ability to learn. (Black & William 1998, Butler, British Journal of Educational Psychology 1988)
- Using **descriptive feedback** helps students to learn by providing information about their current achievement (Where am I now?) with respect to a goal (Where am I going?) and identifying appropriate next steps (How can I close the gap?) (Stiggins, Arter, Chappuis & Chappuis, 2004, Sadler, Instructional Science, 1989)

Formative Feedback (Assessment)

- Only formative feedback in the SPW's (unlike in the SPE's), no formal or evaluative assessment. (the carrot)
- Controversial for some Faculty
- No other practice course has incorporated opportunities for "learning" by formative feedback alone
- Attendance and participation is mandatory in the SPW's to "meet course requirements"; student given an "incomplete" in the course if they do not attend and participate (the stick)
- There is a significant body of research on the impact of feedback alone on student achievement and motivation to learn.

MTM3 New Course Development: Final Thoughts

"If you aren't in over your head, how do you know how tall you are?" (T.S. Eliot)

MTM3: points to keep in mind

- Simulation-based courses require creativity and strategic planning
- Robust evidence-based concepts in teaching and learning may support and guide new course development
 - Incorporation of Standardized Patients in patient and family-centered practice-based simulations
 - Using principles of effective feedback to stimulate learning, Be sure to include training all assessors prior to start of course
 - A combination of formative and summative assessment methods can motivate learners
 - Introduced workshop format that promotes discussion and learning, with course coordinators modeling practice, professionalism and decision making in a transparent and authentic manner.

Questions?

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