

Clinical Simulations to Advance Non-Prescription Medicine Curricula: Virtual Patients

Self-Care Therapeutics/ Non-Prescription
Medicine SIG
July 20, 2009

Objectives

- Explain the use of virtual patients in nonprescription medicine courses.
- Describe the development and progression of virtual patient cases throughout the semester.
- Discuss strategies to involve faculty and volunteer preceptors as "patients".
- Explore and apply assessment strategies for student evaluation.

Speaker Panel

Moderator

- Schwanda K. Flowers, PharmD
 - Assistant Dean for Experiential Education

Invited Speakers

- K. Kelly Orr, PharmD
- Karen M.S. Bastianelli, PharmD

Faculty Affiliations / Disclosures

- Kelly Orr, PharmD, AE-C
 - Clinical Associate Professor, The University of Rhode Island (RI)
 - Seven years of teaching
 - Declares no conflict of interest
- Karen MS Bastianelli, PharmD
 - Assistant Professor, Associate Director, PCLC
 - University of Minnesota-College of Pharmacy, Duluth (UMN – CoP, Duluth)
 - Five years of teaching
 - Declares no conflict of interest

Curricular Simulation Introductions

- **The University of RI**
 - Self Care (2) Elective
 - Offered since Spring 2003
 - Enrollment 35 – 52 students
 - Preference to P3 students, however P2 students have enrolled for the 1st time
 - 3 credits
- **UMN – CoP, Duluth**
 - Elective (Project)
 - Offered since Fall 2005
 - Enrollment: 16-33
 - Virtual Patient
 - Online Book Discussion
 - Service Learning Presentation
 - APhA Annual Meeting
 - 2 credits

Course Description: The University of RI

- Self Care (2) Elective
 - Extension of self-care topics from required Self- Care (1) course offered in the fall semester
 - Lecture Based
 - 2 Exams (20% each)
 - Active learning components
 - Self Care Business Plan (20%)
 - Virtual patients (20%)
 - Smaller in-class activities (20%)

THE UNIVERSITY OF RHODE ISLAND



Course Description: UMN - CoP, Duluth

- Five Semester Sequence of Pharmaceutical Care Skills Course
 - First Year: Labs 1 and 2
 - Two credits each
- Introduction to the Profession
 - Patient Care
 - Practice Management
 - Extemporaneous Compounding
 - Professionalism
- Active Learning
 - Weekly Lecture
 - Twelve Lab Activities


UNIVERSITY OF MINNESOTA
College of Pharmacy



Virtual Patient (VP) Description

- Fictional patients the students will interact with via e-mail over the semester
- Each patient is portrayed by a pharmacist
 - Community pharmacists/preceptors
 - Recruit former students
 - PD4 rotation students
 - Faculty
 - Residents



Activity Objectives

- Develop clinical assessment skills
- Enhance communication skills
- Expand knowledge regarding self-care health concerns
- Interact and work with small groups

Getting the Patients Started

- Identifying pharmacists
 - Approximately 10 per semester
- Establishing a patient profile
 - Short profiles are posted on WebCT for students to review
- Providing them with logistics of activity
 - Introductory letter (VP Letter Example)
 - Develop email address
 - Question calendar (see Example)
 - Standardized topics (Standardized Questions Example)



www.wampower.com/_getting_started.jpg

Student Instructions

- Work in assigned small groups
- Find a name and email address for their group
 - Example:
 - Dr. Benny Dryl (dr.bennydry@yahoo.com)
 - Dr. Nick O'Tine (doc.oteen@gmail.com)
- Review sample case 1st day of class
- Introduce themselves to their new patient
- Group ground rules (Ground Rules example)

Setting Up Groups

Determining number of patients

- Depends on class size
- Four students assigned per patient
- Two-Three students per patient



Assigning groups vs. self selection

- Card assignments
- Instructor assigns groups

Directions for Students Responding

- Make sure to respond to the patient's questions
 - cc to all members of group **and instructor**
- Use language the patient can understand
- Response will include the following
 - Assessment
 - Plan
 - Follow up

January 2009

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1 <small>New Year's Day</small>	2	3
4	5	6 <small>Question</small>	7	8	9 <small>Response due</small>	10
11	12 <small>Email topic to VP</small>	13	14 <small>VP emails question to student</small>	15	16	17
18	19 <small>Martin Luther King Jr. Day</small>	20 <small>Student response due</small>	21	22	23	24
25 <small>Chinese New Year</small>	26	27	28	29	30	31

The Virtual Patient "Stars"

- Wheezing Wilma
 - Puffing Pete
 - Herb Buying
 - Rash Diva
 - Burping Bertha/Betty
 - Guy Buyalot
 - Harry Luke O'Plakia
- Forgetful Fred
 - Sugar Plum
 - Rambling Ron
 - Expecting Emma
 - Ima Pillpopper
 - Momma Mia & Sickly Sam
 - Holy Hannah

Sample Profile: **Rambling Ron**

Email: RamblingRon@yahoo.com

- Usual chief complaint
 - "What do you think about this?"
- HPI
 - 58 year-old male w/ various health questions.
- PMH
 - HTN, anxiety, and depression
- SH
 - No tobacco, occasional EtOH.
 - Occupation: Accountant
- Allergies
 - Sulfa
- Medications:
 - Lisinopril 20 mg QD
 - Paroxetine 20 mg QD
 - Alprazolam 0.5 mg PRN
- Objective Data:
 - BP =130/86



Sample Profile: **Rambling Ron**

- Usual chief complaint
 - "I slid wrong into second base"
- HPI
 - 40 year-old male
- PMH
 - Occasional GERD
 - Occasional Insomnia
- SH
 - Married, international pilot; occasional EtOH, denies tobacco
- Allergies
 - Bee Stings
- Medications:
 - None



Standardized Topics

The University of RI

- Skin condition
- Cough & cold
- Herbal or supplement
- Hot topic in the news
- New medication
- Drug-drug or disease state interaction
- Over-dosage or drug of abuse

UMN-CoP, Duluth

- Contact Dermatitis
- Ophthalmic Disorders
- Headache, Muscle, & Joint Pain
- Fever
- Diabetes Mellitus
- Overweight & Obesity
- Minor Wounds & Secondary Bacterial Skin Infections
- Otic Disorders
- Heartburn & Dyspepsia
- Botanical Medicines

Emailing Questions

The University of RI

- Total of 5 - 10 questions / semester
- VP selects topic from list provided
 - Elective question(s) based on patient's individual profile
- Each question in total is forwarded to course coordinator for grading
 - VP is welcome to include any feedback
- End of semester presentation

UMN-CoP, Duluth

- Total of 10 questions per semester
- Topic mass emailed to VP
- VP selects topic from list provided
 - Standardized topics
 - Schedule of topics
- Responses may be discussed in lecture

It's YOUR Turn To Create Your Own Patient

- Break-up into groups
- Create a VP to take back to your institution
- Designate a speaker in each group
- Be ready to share your ideas

Create Your Own Patient

- Take the next 10 – 15 minutes to develop your own virtual patient
- Think of a medical history seen in practice that you would like to highlight
 - Example: Diabetes, Hypertension, COPD, special patient populations, etc.
- Determine how complex you want your patient to be
- Be prepared to share with your group

Develop Some Topics

- Take 5 – 10 minutes to develop a list of topics for your own course
- Be prepared to share with your group
 - What topics are similar?
 - Are there any that are different?

Example Question: Rambling Ron

- Sample Question- Cold (see Rambling Ron Example-Cold)
- Sample Question- Rash (see Rambling Ron Example-Rash)

Grading Questions

UMN - CoP, Duluth

- A Project = Participation only

The University of RI

- Questioning (25%)
- Assessment (25%)
- Plan (35%)
- Follow up/Monitoring (15%)
 - Grading form included on next slide (VP grading form example)

The University of RI: Student Feedback

- Vast majority enjoy the activity, prefer it to another examination
- Critical to improve the quality of the activity
 - Have made several changes based on their recommendations
 - Patient profiles
 - Group ground rules
 - Standardized questions

The University of RI: Pharmacist Feedback

- Enjoy interactions with students
- Feel they are provided with sufficient support from course coordinator
- Work schedule is largest barrier
- Opinions vary of ideal number of questions
- Have suggested doing one question by IM
- Majority return as patients and/or suggest colleagues

University of MN: Assessments & Evaluations

- | | |
|---------------------------|----------------------|
| • Students | • Pharmacists |
| ▫ Self/Peer Participation | ▫ Value of Project |
| ▫ Skills Assessment | ▫ Instructor Support |
| ▫ Group dynamics | ▫ Pace of Project |
| ▫ Patient interactions | ▫ Appropriate Topics |
| ▫ Overall Project | ▫ Workload |

UMN-CoP, Duluth: Outcomes

- Consistently rated at 4's or 5's on 5 point scale
- Skills:
 - Overall experience valuable
 - Activity innovative and interesting
 - Improved patient assessment skills
 - Improved communication skills
 - Improved knowledge of self care topics
 - Able to integrate knowledge from other courses
- Patient Interactions:
 - Interactions simulated "real life"
 - Questions at appropriate level
 - Patient feedback
 - Experience useful in future practice
 - Questions/topics well paced throughout semester

UMN-CoPD: Student Feedback

- What would you change about the VP project?
 - Nothing, I love this project.
 - Our patient didn't give us much feedback.
 - Make some questions relate to seasonal/what's happening in the world.
 - Liked working in a small group– allowed being exposed to different "styles".
 - Nothing. It was great to get feedback from VP.
 - Maybe try to have consistency in depth of questions among the groups; although I felt I learned more from the research needed to answer questions this semester.
 - Make it individual work, it was difficult sometimes to coordinate our schedule.

UMN CoPD: Pharmacist Feedback

- What would you change about the virtual patient project?
 - Difficulty keeping up with the once/week schedule.
 - A great use of technology , its simple, effective, and interesting .. what more could you ask for?
 - Creates a practical learning environment for the students by introducing them to "real" pharmacy questions.
 - It would be fun to have a virtual identity (avatar), so that the students could see what the virtual patient "looks" like.
 - Suggest new topic every week– tough to think of 2 questions for same topic
- Would you participate in this project again?
 - Definitely! It's a great way to get new students in touch with real pharmacists

The University of RI: Lessons Learned

- One vs. two weeks per correspondence
 - Same amount of conversation as one week
- Self selection vs. randomized groups
- Early evaluation of group participation
- Unmotivated students
 - Lawsuits
- Patients with self care exclusions
 - Harry Luke O'Plakia
 - HIV+ patient

UMN-CoP, Duluth: Lessons Learned

- Smaller group size preferred (max of 3)
- Questions now weekly (formerly biweekly)
- Students prefer new topics weekly
- Increased feedback from patients to students
- Instructor only fills in PRN (vacations, illness)

The University of RI: Benefits

- Simulation of real-life dynamic scenarios provide opportunities for students to interact with patients in controlled settings
- Student growth in self care skills
- Easily transferable to other schools
- Involves pharmacists outside the College

UMN-CoP, Duluth: Benefits

- Students relate lab topics and activities to “real world” examples
- Large impact for small time commitment
- Builds collegiality between Students and volunteer Pharmacists.
- Grows relations with volunteer Pharmacists and the College
 - Former colleagues & former students

Overall Limitations

- Students not focusing on verbal communication skills
 - Cannot interpret facial expressions, tone of voice, demeanor, or appearance
 - This is achieved in *Pharmacy Skills Practice Lab*
- Well suited for a **smaller** class
 - Can be adjusted to fit needs
- Time and pharmacist resources
 - First year set up is **labor** intensive
 - Subsequent years **easier**
 - Especially if you have returning Virtual Patients

Resources for Getting Started

- Sample documents available AACP.org
 - NMA Faculty Resources website
- Orr KK. Integrating virtual patients into a self-care course. *AJPE* 2007;71(2) Article 30.

The University of RI: Special



- Anne Hume, PharmD
- Kelly Matson, PharmD
- Lisa Cohen, PharmD
- Brett Feret, PharmD
- Celia MacDonnell, PharmD
- Kristy Ward, PharmD
- Jef Bratberg, PharmD
- Andrea Dooley, PharmD*
- Maggie Charpentier, PharmD
- Joan Lausier, PhD, RPh
- Kathryn Strong, PharmD
- Kevin Wilbur, PharmD
- Heather Larch, RPh
- Dominic Scorziello, RPh
- Elizabeth Montfort, PharmD
- Lisa Rodriguez, PharmD*
- Jennifer Newell, PharmD*
- Daniel Lefkowitz, PharmD*
- Jessica Wiers, PharmD*
- Rebecca Gagnon, PharmD*
- Stacie Seizdik, PharmD*
- Kristie Carter, PharmD*
- Amanda Glover, PharmD
- Karen Violette, PharmD
- Frank Toce, PharmD
- Brian Musiak, PharmD
- Nigel Musgrave, RPh
- Carol Neft, PharmD*
- Deb Greemour, PharmD
- AliciaCampinini, PharmD

University of Minnesota: Special



- Michael Swanoski, PharmD
- Brad Hren, PharmD
- Ben Anderson, PharmD
- Peggy Haselow, PharmD
- Jamie Crump, PharmD*
- Jessi Linde, PharmD*
- Beth Hager, PharmD*
- Nicole Olson, PharmD*
- Shari Gentilini, PharmD*
- Richard Krikava, RPh
- Michael Gregorson, RPh
- Ron LeFrance, RPh
- Kyle Riess, PharmD*

*denotes former students
