

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

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

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## 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.

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## Speaker Panel

### Moderator

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

### Invited Speakers

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

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## 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

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## 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 1<sup>st</sup> 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

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## 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**



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## 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



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## 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



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## Activity Objectives

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

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## 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

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## 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 1<sup>st</sup> day of class
- Introduce themselves to their new patient
- Group ground rules (Ground Rules example)

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## 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

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## 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

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### 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

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## 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

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## Sample Profile: **Rambling Ron**

Email: [RamblingRon@yahoo.com](mailto: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



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## 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



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## 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

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## 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

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## 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

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## 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

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## 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?

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## Example Question: Rambling Ron

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

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## 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)

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### 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

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### 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

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### 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           |

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## 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

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## 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.

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## 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

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## 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

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## 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)

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## 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

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## 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

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## 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

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## 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.

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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

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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

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**ACCESS CODE:**  
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