Virtual Patients Group update: 6/24/09

A. **Last Week:**

(UF)

1. Dr. Cendan has been promoted to Assistant Dean of Simulation.
2. Created a mailing list for Senior Personnel of VP project. Virtualpatientgroup-l@lists.ufl.edu
3. You, M.D. exhibit – video of experience is posted: 
   http://verg.cise.ufl.edu/MOSIvideo/MOSIvideo_july1st.wmv and
   http://verg.cise.ufl.edu/MOSIvideo/You_MD_6_30_09.m4v. Met to figure out a development to-do list.
   Need to add additional scenarios. Need suggestions from M.D.s
4. The VP and NERVE system has been installed in CG-68, the simulation room run by Sem Lampotang that’s connected to the Harrell Center.
5. MRH press release (http://news.ufl.edu/2009/06/23/mixed-reality-human-multimedia/), picked up in several publications (google for “mixed reality human” and “mixed reality patient”) Local news (TV20, UF NPR, Alligator)
6. Creating “Contraceptive Counseling”, “Sexually Transmitted Diseases”, and “Abnormal Mammogram” scripts
7. VPF data is now being stored encrypted offsite at Jungledisk.com (in case a computer crashes, etc.) we will have data backed up daily.
8. VP group meeting @ UF set for July 13th

(MCG)

9. MCG Study - NERVE vs. UC-Davis web eye app comparison study with neurological students (status?)
10. MCG Rated videos of users with the MRH (CESERT) – writing paper on results
11. Manuscript submitted to AJS (Angela) - breast exam
12. Hiring Fulltime VP person in August (med-centric w/ tech chops)

(UCF)

13. UCF finishing Gallstone and BRCA case
14. Working on better characters
15. Possibly Stemmler grant submission on assessment

B. **Next Week:**

1. July 22nd – Aaron is running study with Dr. Ritz’s student. Also will be adding virtual social perspective taking (VSP) of the eye-exam, thus the student will get to see what the world looks like to have CN3 and CN6. Eventually Eye-exam being run in January as part of medical neuroscience course.
2. Conscious Sedation scenario will be tested over the next three weeks as Hwang is in Korea.
3. Start working on template and rapid patient creation using VPF (so that similar questions can be automatically generated)

(MCG)

1. NERVE testing
2. Recruiting for Learning study starting 7/13.

(UCF)

1. Continue BRCA and Gallstone case.
2. When local VPF server installed, need to get data backed up to JungleDisk

C. **Requests**

UCF wants to have two locations on the VPF screen for multimedia (e.g. a patient on the right, and a MRI image on the left). Also these locations would display more than images and include video and Flash animations. Currently: Brent is setting up VPF so that this is possible.
Brent wants to have SPs use VPF to both learn how to be an SP and to capture people with different cultures. Can UF, MCG, and UCF accommodate?

**Publications**

1. **Recent Publications:**

2. **Publications Under Review:**

3. **Upcoming publications:**

<table>
<thead>
<tr>
<th>Conference</th>
<th>Lead Author</th>
<th>Deadline</th>
<th>Type</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Southern Surgical Association (12/6)</td>
<td>Gucwa</td>
<td>7/1</td>
<td>Abstract</td>
<td>???</td>
</tr>
<tr>
<td>Southeastern Surgical Congress (2/20)</td>
<td>Lind</td>
<td>7/10</td>
<td>Abstract</td>
<td>???</td>
</tr>
<tr>
<td>Journal of Graduate Medical Education</td>
<td>Cendan</td>
<td>7/20</td>
<td>Paper</td>
<td>Hand-off scenario in VPF</td>
</tr>
<tr>
<td>ASE</td>
<td>???</td>
<td>10/23</td>
<td>Abstract</td>
<td>CESERT results</td>
</tr>
</tbody>
</table>


**UF**

Dyspepsia – Pharmacy (Beck, Kimberlin, Rossen) – used with 120+ students, over 2600 triggers and 600 responses. Average accuracy 80% (typed).

Handoff (Juan Cendan, Ethan Blackwelder, Lori Filichia) – creating a VPF scenario of the hand-off between physicians for a gastric band patient. Currently: initial script created, being tested by residents. Target: Journal publication (due July 20th).

Chest Pain (Juan Cendan, Ethan Blackwelder) – Ready for testing w/ medical students

Failure to Thrive (Juan Cendan, Ethan Blackwelder) – Under development

Contraceptive Counselling (Juan Cendan, Ethan Blackwelder) – Under development

Lower Back Pain (Juan Cendan, Shivashankar Halan) – Ready for testing w/ medical students

GI Hemorrhage (Juan Cendan, Shivashankar Halan) – Ready for testing w/ medical students

Post Operative Hemorrage (Juan Cendan, Shivashankar Halan) – Ready for testing w/ medical students

Anesthesia Pre-Operation OSA (Wendling) – Ready for testing w/ medical students

Sexual Transmitted Diseases (Juan Cendan, Shivashankar Halan) – Under development

Abnormal Mammogram (Juan Cendan, Cesar Ramirez-Santana) – Under development

**MCG**

Depression (Foster) – tested with multiple classes

Bi-Polar Disorder (Foster, Denise, Rossen, Rizzo) – patient is bi-polar. Need to discuss mania/suicide. Will then have a conversation with either spouse (Foster) or law-enforcement (Rizzo)

Grief and Loss (???) – planning

Pediatrics (???) – planning

Breast script (Shah, Blackwood, Lind and Lind) – Abnormality confirmed as cancer.

Chest Pain (Lind) – planning (to be used with nursing and the grief and loss scenario)

**UCF**

Gallstone case (Feldmen, Cuty-Ruiz, Raij) – 15 year old boy with gallstones. Sent out to 5 faculty members. This case will be used in HB-2 course around spring time.

Breast pedigree (Feldmen, Cuty-Ruiz, Raij) – BRCA case: Dr. Gibson is filling a paper template now. Next week will fill in responses and we will meet to further develop and discuss pedigree options. This case will be used in HB-1 on august 27.
Meningitis (Surkunalingam) – a male college student who presents to the office complaining of a stiff neck, malaise, and a slight fever. The patient is suffering from bacterial meningitis, in particular Nissieria Meningitidis. The study was done with 1st year medical students. The students were split into two 40 member groups. The control and the study group. The control group had no interaction with the VPF software and just preformed a normal standardized patient exam for their final exam. The study group was given the VPF software one week prior to their final exam.

**Goal:** 30 scripts by end of summer

### 5. Current focus of Technical Development

- **IPS** – Integrate FaceGen, Autoemotion
- **IPSViz** – Integrate into VPF, Create visualizations for educators
- **VPF** – Integrate IPSViz, Create multiple fields for triggers (e.g. user actions such as exams or tests) and responses (e.g. VP’s thoughts), Create support for SPs to use VPF to capture culture.
- Webcam VPF – Explore O3D/other 3d via the web approaches.
- SecondLife – VPF characters can be exported to SecondLife. No development currently planned.
- **MRH** – build prostate exam
- **NERVE** – install into CG-68, build other CN conditions, Build VSP
- **VSP** – Build NERVE VSP (Kotranza)

### 6. Studies

Consequences (Rossen, Chuah, Foster, Rizzo) – have students go through multiple scenarios, where they learn the consequences of their actions. In the bi-polar script, not asking about suicide causes the patient to attempt suicide and the student has to break the news to spouse or talk to law enforcement. Planned August.

Constructivist learning (Rossen, Cassell) – have students learn by building their own virtual patients and evaluating fellow students’ interactions with their patient. Planning stage. Perhaps spring 2010?

Learning Study - Student learning using the breast simulator – Project that will involve students doing the a baseline breast vest SP exam then three VP interactions a week apart and a final learning breast vest SP exam. Current Status: planning. Target: All 3rd year students to conduct a breast exam with MRH (Kotranza, Lind).

Self-Exam – Teaching patients how to perform self exams with an ethnically-variable virtual instructor on hand to provide information and assist. Will compare against Mammacare (Lind, Park, Wier)

NERVE comparison with UC-Davis web applet - At MCG, neurology students will be coming this Thursday to do the study (NERVE vs. UC-Davis web system). (Lind)

### D. Funding

#### 1. Upcoming Proposal Writing

- Breast exam (Lind, Brown) – Internal EDI grant to assess the value of a breast exam simulator in residents
- Conscious Sedation – NIH R21 (?) Due Oct. 16th (Quarles, Lampotang, Lok)
- Stemmler (UCF, MCG?) – Assessment?

#### 2. Proposals Under Review

- NIH R25 – Teaching cultural tailoring for medical students and patients (Lok, Lind, Johnsen, Cendan, Cuty-Ruiz)

#### 3. Current Grants

Association of Surgical Education, CESERT Grant, 2008-2010 – MRH evaluation

NSF Career Award and REU Supplement, 2007-2012 – Bias with VPs
NSF Medium (MRH development), 2008-2012
NIH R01/R56, 2008-2012 – Pain faces with virtual humans for bias evaluation
NIH R03, 2008-2010 – NERVE