Curricular Integration of Human Simulation Education Across Programs: SEGUE at the University of Pittsburgh School of Nursing

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BACKGROUND

- **1994**: High fidelity human simulation (HFHS) integrated into the School of Nursing graduate curriculum (Nurse Anesthesia Program).
- **1999**: Simulation education used in undergraduate program.
- **2002**: School of Nursing Sim Lab opened.
- **2004**: Simulation Effort in Graduate and Undergraduate Education (SEGUE) at the School of Nursing convened.

**PURPOSE of SEGUE**

- **Data Collection**: Describe SON simulation efforts
- **Advocacy**: Promote simulation as a problem-based and evidence-based educational approach
- **Evaluation**: Assure quality of SON simulation modules.
- **Integration**: Coordinate integration of essential Baccalaureate and Masters Education (AACN) clinical requirements into graduate and undergraduate curricula.

**RESULTS**

- Total simulation education hours increased ~22X since 2002 (~500 hrs) to 2005 (~11,500 hrs)
- Number of hours/student = 16.7 in 2005
- 56.5% (593/1050) of students will participate in Simulation Modules in 2005
- 133 different scenarios are currently used in SON Sim Modules

**CONCLUSION**

- All courses using simulation were identified by faculty survey.
- Projection of future simulation activities and hours per student was performed.
- Simulation modules were stratified by body system, by level of student, and by course number.
- Student enrollment data by level were obtained from the Department of Student Services as of November 2004.
- SEGUE consulted with and assisted interested faculty with integration of content into courses.
- Unique obstetric and pediatric modules were developed and implemented.

**2005 PITT SIMULATION EFFORT**

<table>
<thead>
<tr>
<th>Course Type</th>
<th># Students</th>
<th>*Modules / student</th>
<th>*Hrs. / Student</th>
<th>Cumulative Hours</th>
</tr>
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<tbody>
<tr>
<td>Freshman (UG)</td>
<td>130</td>
<td>2</td>
<td>4</td>
<td>520</td>
</tr>
<tr>
<td>Sophomore (UG)</td>
<td>127</td>
<td>-</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Junior (UG)</td>
<td>122</td>
<td>3</td>
<td>16</td>
<td>1952</td>
</tr>
<tr>
<td>Senior (UG)</td>
<td>111</td>
<td>1</td>
<td>8</td>
<td>888</td>
</tr>
<tr>
<td>Senior elective (UG)</td>
<td>20</td>
<td>2</td>
<td>16</td>
<td>320</td>
</tr>
<tr>
<td>Accelerated (UG)</td>
<td>20</td>
<td>2</td>
<td>16</td>
<td>320</td>
</tr>
<tr>
<td>Fast-Track-Back (RN)</td>
<td>10</td>
<td>2</td>
<td>8</td>
<td>80</td>
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<tr>
<td>Anesthesia (G)</td>
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<td>10</td>
<td>56</td>
<td>6160</td>
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<tr>
<td>NP Programs (G)</td>
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<td>2</td>
<td>16</td>
<td>960</td>
</tr>
<tr>
<td>Ind. Study (UG/G)</td>
<td>10</td>
<td>4</td>
<td>32</td>
<td>320</td>
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<tr>
<td><strong>Total</strong></td>
<td>593</td>
<td>29</td>
<td>16.7</td>
<td>11528</td>
</tr>
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</table>

Table 1: Simulation experience at the University of Pittsburgh School of Nursing

* Represent mean values, UG = Undergraduate, G = Graduate, RN = reentry to practice program

**METHODS**

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