**GOALS**

New York University School of Medicine and New York University College of Nursing have developed an innovative curriculum to allow for large scale inter-professional education (IPE), called NYU3T: Teaching, Technology, and Teamwork, funded by the Josiah Macy Jr. Foundation.

**NEEDS**

Inter-professional education is necessary to enable collaborative practice that strengthens health systems and improves patient outcomes. Despite the growing need for IPE, health professionals are generally taught in isolation, following strict disciplinary lines. Limited learning space, lack of qualified faculty and heterogeneous curricula of different institutions constrain opportunities for collaboration among medical and nursing professionals.

"Obviously, nurses and physicians work closely in the clinical world, but do we teach them in advance the requisite knowledge and skills for optimal collaboration? Not always."

Terry Fulmer, Dean of Bouvé College of Health Sciences at Northeastern University

"Collaboration among highly performing physicians and nurses is the key to the highest level of patient care."

Robert I. Grossman, Dean and CEO of NYU Langone Medical Center

**SOLUTIONS**

To address these challenges, NYU3T uses VP21, a locally-developed, innovative web-based application to deliver the knowledge and skills relevant to IPE.

VP21 enables future physicians and nurses to learn together in a virtual space without being physically at the same place. Logging on to VP21, a large number of undergraduate nursing students and first-year medical students each year have flexible learning experiences about inter-professional skills and behavior on their own schedule and at their own pace, either individually or collaboratively.

**IMPLEMENTATION**

The target learners for the NYU3T program are:

- Second-year nursing students & pre-clerkship medical students.
- Medical students and nursing students.
- All learners with an interest in IPE.

During the first semester, students complete five learning modules including pre and post motivation surveys, didactics and pre and post knowledge tests. The key learning areas consist of:

- Healthcare Team Members’ Roles and Responsibilities
- Teams and Teamwork
- Effective Communication and Conflict Resolution
- Biomedical Informatics and Health Information Technology
- Interdisciplinary Care Planning

Two virtual patients cases are offered in the second semester to apply the knowledge learned in the didactic modules.

**INSTRUCTIONAL METHODS**

Effective use of multimedia. Including multimedia content such as situated videos and audio, the five online modules are designed to optimize educational effectiveness based on cognitive load theory and multimedia learning principles.

Individualized learning on collaborative practice: NYU3T’s online modules and cases provide virtual teammates with ready-made collaborative content, e.g., after watching a case video, a medical student writes his/her thoughts to improve the teamwork, then review his/her virtual teammates’ responses to revise his own reflection. The asynchronous collaboration is more emphasized in the virtual patient cases that allow medical students and nursing students work in pairs to develop an inter-professional care planning.

**OUTCOMES & EVALUATION PLAN**

After the first year of the program, more than 650 students (including about 175 medical students and 475 nursing students) had completed the five didactics modules on VP21. More than 400 students had completed the two virtual patients cases.

<table>
<thead>
<tr>
<th>Completion</th>
<th>Modules</th>
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<tbody>
<tr>
<td>701</td>
<td>NYU3T I: Healthcare Team Members</td>
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<tr>
<td>672</td>
<td>NYU3T II: Teams and Teamwork</td>
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<tr>
<td>615</td>
<td>NYU3T II: Communication and Conflict Resolution</td>
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<td>665</td>
<td>NYU3T IV: Biomedical Informatics and Health Information Technology</td>
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<td>664</td>
<td>NYU3T V: Interprofessional Care Planning</td>
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<tr>
<td>407</td>
<td>NYU3T VI: Virtual Patient Lin Tran</td>
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<tr>
<td>404</td>
<td>NYU3T VII: Virtual Patient Emma Cook</td>
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NYU3T online learning modules completion status, Feb. 2012

To evaluate the effectiveness of the online learning experiences, we are measuring changes in:

- attitudes toward inter-professional health care teams and the team approach to care, using pre and post attitudes Toward Health Care Teams Scale (ATHCTS)
- perception of team skills using Team Skill Scale (TSS)
- knowledge gain using pre and post assessments embedded in each module
- knowledge retention using final assessments at the end of each semester of the NYU3T program

All the evaluation items are delivered via VP21.

**REFLECTION**

NYU3T’s online learning materials can be easily disseminated to other medical and nursing schools for large scale IPE. The VP21 modules and virtual patient cases are freely available to the public.

The NYU3T’s online learning modules and virtual patient cases are scalable: they can be delivered to very large cohorts of learners.

The didactic modules and virtual patient cases can be integrated in a longitudinal curriculum for inter-professional education.

It is still difficult to encourage active collaboration among students – this is an ongoing effort to refine the modules to maximize true collaborative learning.

**REFERENCES**

- To view the NYU3T modules on VP21: http://vp21.med.nyu.edu
- For more information about the NYU3T program: http://med.nyu.edu/research/nyu3t