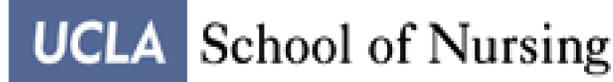# Innovative Tools for Assessing Interprofessional Competencies

LuAnn Wilkerson, EdD[1]; Margaret Stuber, MD[1]; Mary Ann Shinnick, PhD, RN[2]; Jenna van Draanen, MPH[3] Viktor Sigalov, MD[1]

[1]David Geffen School of Medicine at UCLA (DGSOM); [2]UCLA School of Nursing; [3]UCLA Clinical and Translational Science Institute

## Introduction

- There are few assessment tools for evaluating students' IP competencies in the classroom and workplace settings[1].
- With funding from the Macy Foundation, the schools of Medicine and Nursing at UCLA are developing 6 assessment tools focused on the IPEC Core Competencies for Interprofessional Collaborative Practice[2] to test students' knowledge, skills, attitudes, and behaviors.
- We are pilot testing the tools in an IPE course, Systems-Based Healthcare, for third-year medical and dental students and advanced practice nursing students.

## Methods

- The following assessment tools can be used for formative and summative assessment. Aggregated results can be used for purposes of program evaluation.

1. A video case assessment,
2. A workplace observation tool,
3. Implicit Association Test,
4. Knowledge test,
5. Objective Structured Clinical Exam,
6. 360 multi-source feedback tool[3].

| Assessment Tools | IPEC Core Competencies | | | |
|---|---|---|---|---|
| | I Values/ Ethics | II Roles/ Responsibilities | III Interprofessional Communication | IV Teams/ Teamwork |
| OSCE stations | | | X | X |
| iPAD Observation Tool | | | X | X |
| Knowledge Test | | X | X | X |
| Video Tool | X | | | |
| Implicit Association Test | X | X | | |
| 360° Evaluation Tool | | | X | X |

**Table. 1** IPEC Core Competencies tested in each assessment tool

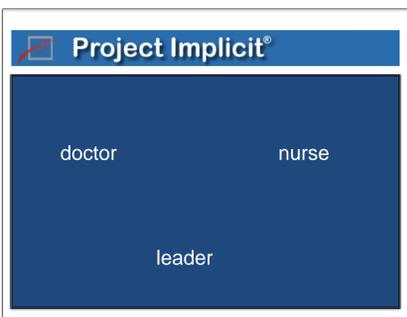- Pilot studies are underway to determine psychometric qualities and feasibility.

## Results



**Figure 1.** Sample of Implicit Association Test activity designed to test student biases in IPE. Source: https://implicit.harvard.edu/implicit/iatdetails.html

**Implicit Association Test**: With Project Implicit (www.projectimplicit.net), we developed an IAT to measure reaction times in associating words like "follower" with the professions of "doctor" or "nurse." As with race and ethnicity, the IAT assesses unconscious biases, here about nurses and physicians.

## Results

**Video Assessment Tool**: Using software that integrates assessments with video (www.Zaption.com), students are asked to analyze IP scenarios. There are three video cases involving IP teamwork in the care of a patient being enrolled in a clinical trial who is now facing end of life decisions.



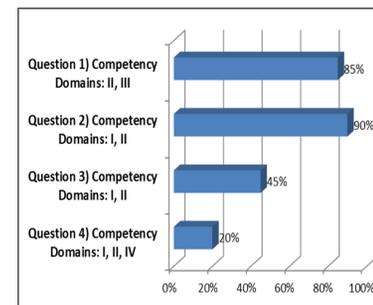**Figure 2.** Scene from one Zaption Video Based Exam



**Figure 3.** Percentage of students answering correctly in the VBE

**360º Multisource Tool**: Students are assessed by attending physicians, team nurses, etc., on 30 dimensions of the Interprofessional Collaborator Assessment Rubric (ICAR)[3] during their performance in a workplace setting using RedCAP software to produce formative feedback reports.

| | Seeks the perspectives and opinions of others | Seeks clarification in a respectful manner when misunderstandings arise | Uses active listening techniques when others are speaking | Uses appropriate conflict resolution strategies to manage and/or resolve conflict |
|---|---|---|---|---|
| Mastery | 2 | 1 | 2 | 1 |
| Competent | 1 | 2 | 1 | 1 |
| Developing | 0 | 0 | 0 | 0 |
| Minimal | 0 | 0 | 0 | 0 |
| Not Observable | 0 | 0 | 0 | 1 |

**Figure. 4** Sample conflict resolution feedback from a student's 360 ICAR Report
Source: https://www.med.mun.ca/getdoc/b78eb859-6c13-4f2f-9712-f50f1c67c863/ICAR.aspx

**eWalk Observation**: Using mobile technology, students can be assessed in the workplace on their individual performance on a team using the ICAR framework[3], or the entire team can be assessed using TeamSTEPPS (teamstepps.ahrq.gov/). Figures 5 and 6 show sample results from a team's eWalk report.
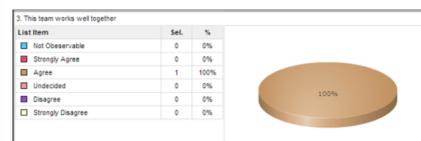


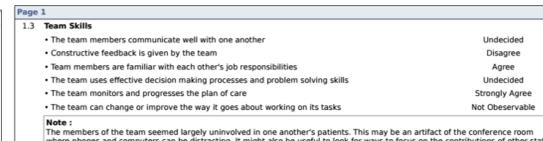**Figure 5.** Graph from a sample team report



**Figure 6.** Sample team skills feedback from a report with one reviewer

## Results



**Figure 7.** APN Students at UCLA completing an Interprofessional Education OSCE

**IP OSCE**
Two cases involving physician/nurse teamwork are designed for use in 15 minute OSCE stations with ratings completed by observers or the standardized patient on a checklist of observable behaviors.

**Knowledge Test**
The test bank allows instructors to assess specific competency domains using 49 questions and answers on: a collaborative practice case study (10), teamwork based on TeamSTEPPS (18), and IP roles and responsibilities (21).



**Figure 8.** Three sample questions from each section of the knowledge test bank

## Discussion

**Unintended consequences, epic fails, and recoveries**
- Students' scores on the assessments highlight the lack of knowledge of and skills for interprofessional interactions.
- We had difficulty recruiting students for pilot testing assessments when they were not embedded in a required course.

**Lessons learned**
- Medical students may not be working as often as expected in interprofessional teams during clinical rotations.
- Aggregated individual results can provide program evaluation results at Kirkpatrick levels 2 – 4.[4]

**Best ideas and successful practices:**
- These six assessment tools fill a current gap in the IPE field for both formative and summative assessment of learners.
- Although these tools were developed for assessment, they can also be useful for teaching in clinical and small group settings.

Reference: [1] Oates M, Davidson M. A critical appraisal of instruments to measure outcomes of interprofessional education. Med Educ. 2015 Apr;49(4):386-9 [2] Core Competencies for Interprofessional Collaborative Practice, Report of an Expert. Sponsored by the Interprofessional Education Collaborative [3] Curran V, Hollett A, Casimiro LM, Mccarthy P, Banfield V, Hall P, Lackie K, Oandasan I, Simmons B, Wagner S. Development and validation of the interprofessional collaborator assessment rubric (ICAR). J Interprof Care. 2011 Sep;25(5):339-44. [4] Kirkpatrick, D. Revisiting Kirkpatrick's four-level model. Training & Development. 1996, 50 (1), 54-57.