

# Using Team-Based Interprofessional Education to Enhance Student Knowledge of Healthcare Professional Roles

IPE-TBCDM Faculty Team\*  
Schools of Dentistry, Medicine, Nursing, Pharmacy, and Social Work

## Background

A large-scale, semester long interprofessional education (IPE) course designed to prepare health professions students for interprofessional (IP) practice was developed in 2015.

Institute for Healthcare Improvement *Triple Aim*:

1. Improve patient experience
2. Improve population health
3. Decrease cost of healthcare

IPE Collaborative (IPEC) competencies, 2011:

1. Values and Ethics
2. Roles and Responsibilities
3. Interprof. Communication
4. Teams and Teamwork

“All healthcare professionals must be able to work in inter-professional teams to improve medication safety and patient outcomes.”

- Institute of Medicine

## Purpose

This study evaluated whether a pedagogy for collaborative, case-based decision making by IP student teams was effective for teaching roles of healthcare professionals on a team.

## \*IPE-TBCDM Faculty

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Pharmacy: B. Mueller, G. Sweet (director)  
Social Work: D. Mattison, B. Zebrack  
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## Course Design & Methods

### Team-Based Clinical Decision Making (TBCDM)

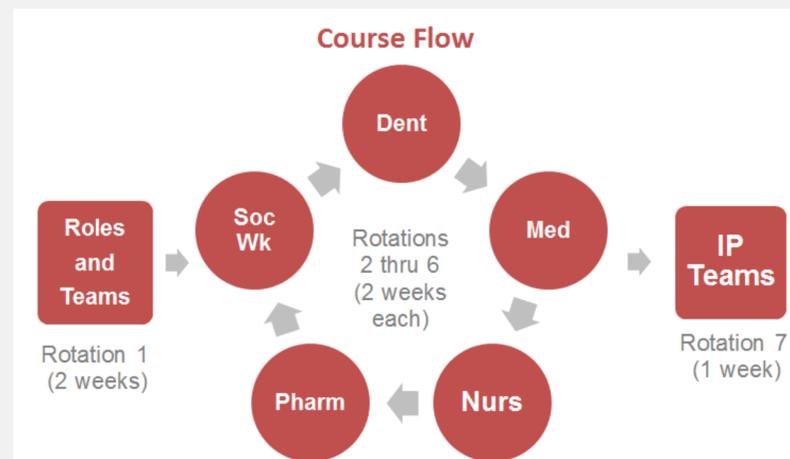
active learning ▪ case studies ▪ group discussions

**257** students **11** faculty **5** schools

#### IPE Competencies:

Understand Professional Roles ▪ Acquire Effective Teamwork Skills

- Large-scale semester course, taught by IP faculty pairs
- Dentistry, Medicine, Nursing, Pharmacy, Social Work
- IP teams of 6-8 students rotate through 7 modules
- Students in fixed teams for semester, solving complex cases that require collaboration (active learning)
- Students teach each other about their disciplines



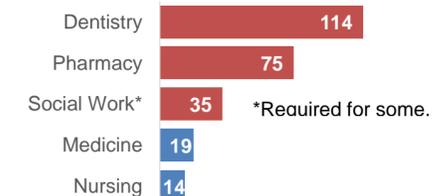
## Assessments

1. Perceptions of each discipline (pre/post)
  - Education and Training
  - Roles and Responsibilities
  - Likelihood of Collaboration
2. Knowledge quiz: 10-question quiz covering all 5 disciplines (pre/post)

## Results

### Enrollment

Enrollment was highest where the course was **required** compared to where it was an **elective**.



### Likelihood of Collaboration

Increase in perceived likelihood of future collaboration with other disciplines. Greatest change with:

Pharmacy → Social Work  
Dentistry → Social Work, Nursing

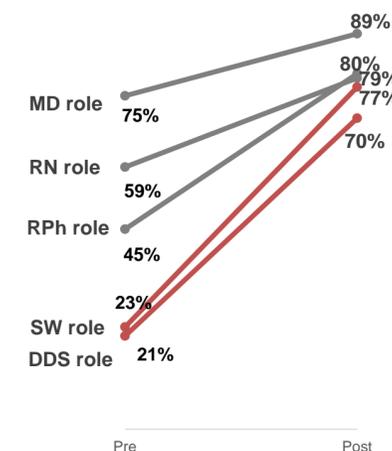
### Professional Roles

Familiarity with roles of others increased significantly.

Individual scores higher post-course vs baseline ( $7.0 \pm 1.6$  vs  $5.0 \pm 1.6$ ,  $p < 0.0001$ )

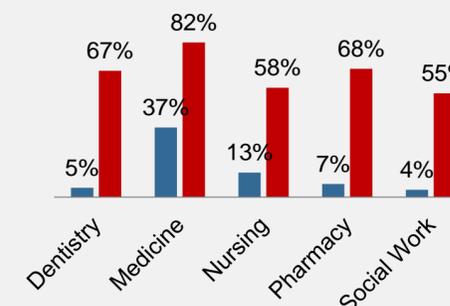
Team scores higher than individual scores in week #1 ( $8.1 \pm 0.9$  vs  $5.0 \pm 1.6$ ,  $p < 0.0001$ )

Biggest gains were in understanding roles of **Social Workers** and **Dentists**.



### Education and Training

Familiarity with education and training of other professions increased significantly ( $p < 0.05$ ).



## Conclusions

A shared vision across the schools, and a year of planning, allowed us to establish a large-scale, semester long IPE course involving students from 5 health science disciplines.

A case-based, active learning pedagogy allowed students to teach each other about their disciplines to:

- Understand the roles each profession plays on the team
- Gain experience representing role of own profession on a team

## Future Directions

Institutional efforts must continue to work towards removing barriers to IPE implementation (scheduling, curricular space, balanced representation of student learners).

Continued and increased dialogue and collaboration across schools must occur to identify new meaningful ways to incorporate IPE.

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## Disclosures

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