

Interprofessional Practice: Clinical Laboratory Sciences Students and Medical Students Work Together to Learn Clinical Skills

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Purpose

- There are few examples of interprofessional practice activities where Clinical Laboratory Sciences (CLS) students work alongside medical students
- A novel interprofessional practice activity is described that leads to greater understanding of the role and practice of laboratory medicine professionals that will prepare students for future collaborative practice and improves medical students' clinical skills

Background

- Laboratory medicine is at the heart of an increasingly complex healthcare system
- The importance of collaboration between physicians and laboratory medicine professionals cannot be overstated
- Physicians able to recognize the laboratory as a vital member of the healthcare team can reduce diagnostic errors caused by unnecessary or inappropriate testing and incorrect test interpretation
- The World Health Organization (WHO) has recognized that interprofessional education is crucial to preparing a healthcare workforce able to respond to the ever-expanding advancements in the practice of medicine
- A shift in how educators train students is needed to produce a truly interprofessional collaborative practice-ready team

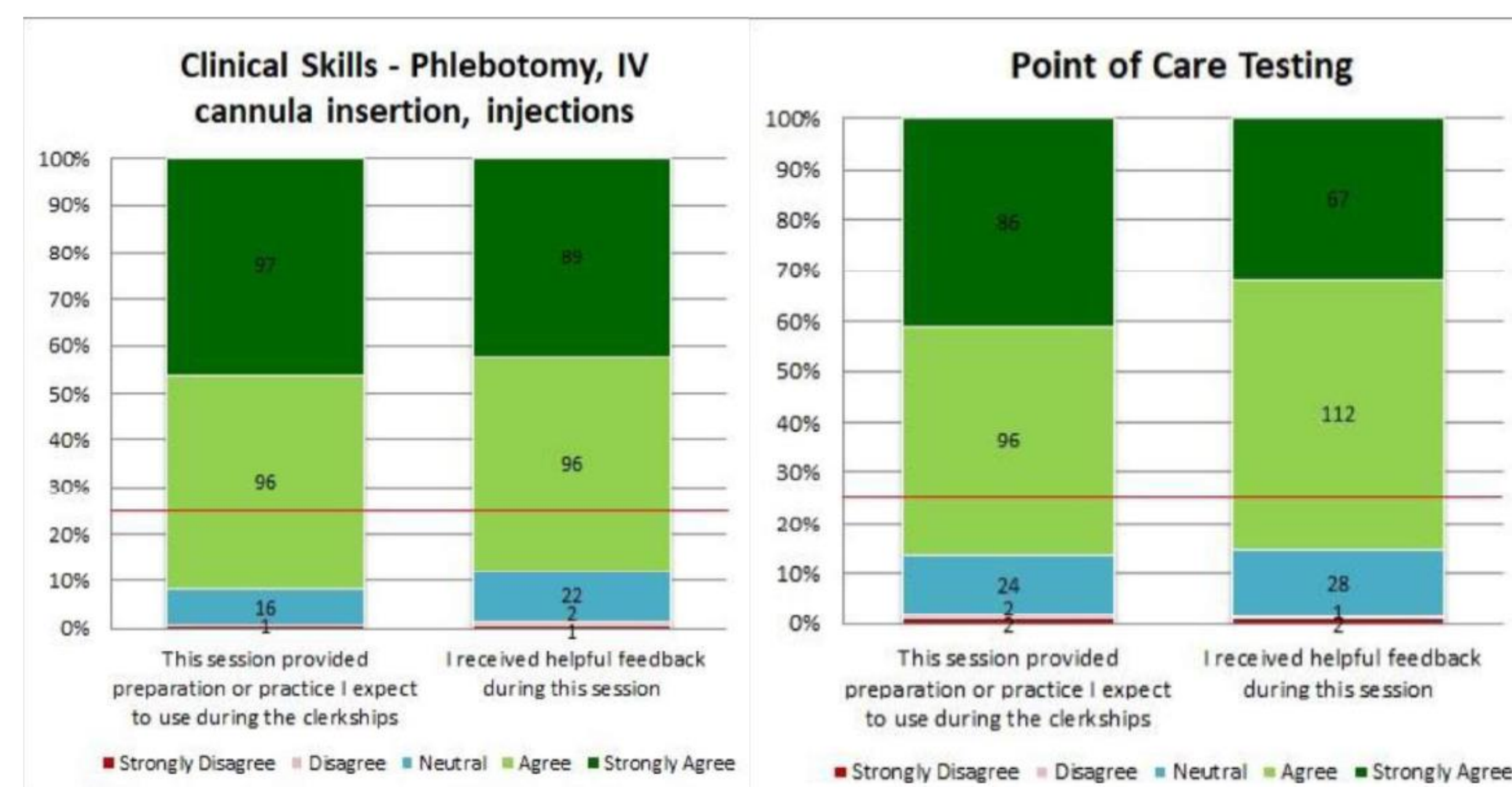
Methods

- 244 rising 3rd year UTMB medical students and 48 UTMB CLS baccalaureate and master's students participated in the activity
- Two clinical skills workshops were held with CLS students teaching venipuncture and practical phlebotomy skills to the medical students using mannequins
- Teams of medical students rotated through a series of diagnostic testing stations led by a CLS student: glucose, INR, urinalysis, pregnancy, rapid strep, and fecal occult blood
- Students performed and received results of point-of-care (POC) tests for simulated patient cases
- Medical students interpreted their patient results and matched their patient's case to the correct diagnosis
- A discussion of cases, results and diagnostic testing were held at the conclusion of the workshop facilitated by Pathology faculty
- Medical students evaluated the sessions on multiple domains using pre-activity (n=224 respondents) and post-activity surveys (n=154 respondents), adapted from published Student Perceptions of Interprofessional Clinical Education-Revised (SPICE-R)
- Three survey questions were included that addressed the medical students' understanding of the education, role and practice of laboratory medicine professionals as well as the importance of interprofessional education
- Additionally, medical students completed a general evaluation of the workshops

Results

On the pre(224) and post(154) workshop survey, the answers of strongly disagree and disagree decreased while the response of strongly agree increased in the post-survey:

1. I understand the role of CLS professionals within an interprofessional team:
 - Strongly agree increased by 8% (p = .03)
2. I have an understanding of how I will work with CLS professionals
 - Strongly agree increased by 8% (p = .03)
3. I have an understanding of the role CLS professionals play in patient care
 - Strongly agree increased by 6% (p = .04)



Legend: 91% (210) of students completed the evaluations, 90% agree or strongly agree that the workshops provided helpful feedback and preparation for clerkships.

Comments Clinical Skills Session:

- *"It was very fun and hands-on, the videos beforehand were relevant, and the small group sizes were perfect to get adequate instruction from the CLS students, who were great to work with."*
- *"This was probably my favorite session. The students leading it did a great job facilitating the session and were a great encouragement while we were practicing. This is the skill I feel most confident in performing."*

Comments Point of Care Testing Session:

- *"Most interesting course; made me appreciate the CLS students."*
- *"The format is amazing; loved the match the patient to the testing format."*
- *"This exercise was engaging and encouraged interprofessional interactions in a way that is centered around problem-solving."*

Discussion

- Advancements in medical technology have influenced the way laboratorians practice, creating challenges for physicians to understand a constantly evolving, complex and vital component of the clinical decision-making process. As such, it is more important than ever for medical providers to work with laboratory medicine professionals in the care of shared patients. A novel interprofessional educational activity such as this is the first step in addressing the need for improved collaborative ideology.
- The importance of this collaboration is underrecognized in the literature and in practice.
- Our survey data support that medical students who participated in this activity had a better understanding of how they will work with CLS professionals and how CLS professionals contribute to patient care.
- Medical students valued and felt that the POC testing and clinical skills demonstrated by CLS students better prepared them for future practice.
- One limitation of the study was that fewer medical students responded to the post-activity survey than the pre-activity survey. We propose this was a result of how the survey was administered and not due to any bias in the post-survey response population.

Summary

- It is important that medical providers work with laboratory medicine professionals in the care of shared patients to reduce diagnostic errors and improve patient outcomes.
- This novel interprofessional educational activity increased understanding of diagnostic lab testing, how students will work with CLS, how CLS contribute to patient care and prepared students for future collaborative practice.
- This activity is easily adaptable both in content of the workshop and in working in an interprofessional team for dissemination across the academic community.

References

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