

# **Panel: Developing Clinical Natural Language Processing Workforce of the Future**

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## **Abstract**

Clinical Natural Language Processing (cNLP) is a scientific domain dedicated to developing tools and capacity for maximizing the value of unstructured clinical narratives (e.g. progress notes, radiology reports, referral letters), one of the most information-rich yet underutilized sources of healthcare data. The goal of cNLP is to extract useful information locked in medical text to improve healthcare delivery and management, clinical and translational research, and ultimately patient health. Sample applications include identifying eligible patients for clinical studies, extracting findings and relations for post-marketing drug safety surveillance, and supplementing structured data to generate more accurate clinician performance reports for quality improvement. Given the shortage of qualified individuals who are able to develop cNLP applications and promote their widespread use, it is imperative to prepare future generations of workforce who are equipped with the skills to process medical text using cNLP, help clinicians and researchers interpret the results, and integrate cNLP applications with health IT systems and other sources of biomedical data. In this panel discussion, we will discuss the challenges and opportunities of training the cNLP workforce of the future. The panelists are experienced cNLP researchers and educators, who will share their experiences designing and establishing their cNLP mentoring and educational programs.