Functional Development of a Competency-Based Self-Assessment Tool for Clinical Research Professionals

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Introduction: Development of clinical research competencies result in higher quality research and enhanced health outcomes. Clinical research workforce development programs look to identify the educational needs of clinical research professionals to ensure the quality of study performance and outcomes. The objective of this project was to understand, develop, and organize the functionality of an online competency based self-assessment tool.

Methods: This project was designed to map out a functionality flow diagram using the Joint Task Force (JTF) Clinical Research Competencies as a guide. The JTF core competency framework consists of 8 domains and 49 statements, with each statement expressed at "Fundamental", "Skilled" and "Advanced" levels. A framework was developed by creating questions that align with each JTF core competency statements. Correct responses to questions prompt the user to report their educational and professional experiences with tasks related to that question. A scoring algorithm is developed for each question accounting for both knowledge and experience at each level.

Result: The flow diagram uses standardized symbols and steps to demonstrate functionality from beginning to end. It starts with Domain 1, Question 1.1. "Fundamental level". After correctly answering each question, there is an education and professional task completion question. If the fundamental level question is answered correctly, users move to the "skilled" then "advanced" levels for that question. After finishing all three levels, all responses are included in an algorithm for a final assessment score for question 1.1, users receive the score along with a recommendation of training/education. If users are unable to answer the fundamental level question, they earn a score of 0 on the final assessment for the entire question and are recommended full training and education.

Discussion: A software functionality blueprint is the next step in the development of TRAIT tools.