ABSTRACT

Objective: To develop and validate four curriculum components as a part of a national effort to train and prepare the healthcare workforce in the meaningful use of Electronic Health Records (EHRs).

Methods: This study was conducted under the auspices of the Health Information Technology for Economic and Clinical Health (HITECH) initiative of the American Recovery and Reinvestment Act (ARRA). Between 2010 and 2012, the Office of the National Coordinator for Heath Information Technology (ONC) funded five, university-based, regional Curriculum Development Centers (CDC) to design and develop curriculum modules. The northeastern CDC based at Columbia University developed and validated instructor-friendly versions of curriculum goal frameworks, student learning outcomes, multiple-choice tests and performance assessments in three phases: 1) curriculum content and assessment, 2) content validation, and 3) implementation and evaluation.

Results: Using a systems-based and participant-oriented program evaluation approach, we developed and validated four curriculum components: 1) Public Health IT, 2) Vendor Specific Systems, 3) Usability and Human Factors, and 4) Training and Instructional Design. A logic model was developed to guide forthcoming phases of the project, including field implementation of curricular materials, formative evaluations of the program as a whole, and national scale-up efforts.

Conclusions: The design and content-validation phases of the project produced usable versions of curriculum goal frameworks, student learning outcomes, multiple-choice tests and performance assessments for 40 HITECH units in the four curriculum components. The

stakeholder-oriented approach and iterative design-validation model may be replicated in similar

curriculum development projects in disciplines both within and outside the health fields.