

Clinical skills boot camp in a program to train healthcare professionals to provide primary care to underserved communities

Camp d'entraînement aux compétences cliniques dans un programme de formation de professionnels de la santé pour la prestation de soins primaires aux communautés mal desservies

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Implication Statement

This article describes the evaluation of a clinical skills boot camp for students at Connecticut Area Health Education Center (CT AHEC) interdisciplinary program to train primary healthcare professionals to serve underserved communities. Early intensive training in basic clinical knowledge can ensure students begin programs with shared basic knowledge, which can facilitate skills in delivering team-based care, a key strategy for optimizing primary healthcare workforce capacity and efficiency.

Énoncé des implications de la recherche

Cet article décrit l'évaluation d'un camp d'entraînement aux compétences cliniques destiné aux étudiants du programme interdisciplinaire du Connecticut Area Health Education Center (CT AHEC) visant à former des professionnels de la santé primaires pour servir les communautés mal desservies. Une formation intensive précoce en connaissances cliniques de base peut garantir que les étudiants débutent les programmes avec un socle de connaissances fondamentales partagées, ce qui peut faciliter l'acquisition de compétences en prestation de soins en équipe, une stratégie clé pour optimiser la capacité et l'efficacité des effectifs en soins de santé primaires.

Introduction

Previous evaluations of clinical skills boot camps have focused on students of one profession or on interprofessional teams but not their clinical skills.¹⁻⁵ This evaluation assessed training effects among students from multiple professions on core principles and practices for providing primary healthcare to underserved communities. Training was conducted at the beginning of graduate education to ensure that all students started the program with a similar level of competency in skills critical to the care of vulnerable populations.

Description of innovation

Training began with six online self-paced learning modules prior to beginning the school year for most cohorts. An oral hygiene screening module was added after the first two cohorts indicated a need. Faculty surveyed community health center providers to identify core competencies to be addressed in training (presented in the table). Modules were self-paced to allow students to begin learning prior to the start of the academic year and to accommodate a broad range of baseline knowledge. Modules provided instruction on clinical tasks and skills and other aspects of care quality. A one-day in-person experiential training session with some lectures introduced core principles and

practices for providing primary healthcare to underserved communities. Training focused on health inequities, medical management of underserved patients, the role of interprofessional care competencies⁶ in addressing patients' needs, and interprofessional care skills. Participants were 525 students in dental ($n = 74$), medical ($n = 200$), nursing ($n = 88$), pharmacy ($n = 53$), physician assistant ($n = 77$), and social work ($n = 32$) schools. The University of Connecticut institutional review board determined that the current assessment was exempt from full review.

Outcomes

A comparison of the mean number of correct responses across modules before and after boot camp showed considerable improvement with moderate effect size. Two-tailed comparisons using post-hoc comparisons using the Holm adjustment indicated that students considerably improved following all training modules, with moderate to large effect sizes, as shown in the table.

All trainees completed initial knowledge assessments and post-course evaluations for the modules they completed. All modules had low attrition.

Table 1. Results of within-group t-test comparisons of online clinical knowledge assessments

Module	N	Pre-test mean (s.d.)	Post-test mean (s.d.)	p-value	Effect size (Cohen's d)
BMI screening	Pre: 482 Post: 474	85.54 (17.71)	96.68 (8.67)	<.001	0.80
Blood pressure test	Pre: 484 Post: 477	57.32 (35.25)	89.19 (19.35)	<.001	1.12
Diabetes screening	Pre: 455 Post: 442	74.02 (16.08)	86.93 (12.03)	<.001	0.91
Universal precautions	Pre: 485 Post: 482	60.32 (23.72)	84.07 (21.77)	<.001	1.04
Oral hygiene	Pre: 473 Post: 466	93.13 (14.11)	97.91 (7.67)	<.001	0.42
Oral hygiene screening	Pre: 326 Post: 323	53.01 (27.76)	85.82 (19.58)	<.001	1.37
Across Modules	All responses Pre: 2705 Post: 2664	73.05 (27.26)	90.34 (16.6)	<.0001	.77

Students rated training effects on their clinical skills, knowledge, professional networks, and academic training, and indicated whether they would recommend the training. More than 80 percent of participants gave favorable ratings to all aspects of training.

Suggestions for next steps

Implementing this program requires an online learning platform. Teaching materials include slides and videos, which are available at no cost from CT AHEC. Instructor(s) should be prepared to offer an overview of social determinants of health, interprofessional care competencies, and the importance of team-based care. The training schedule should support all students in achieving basic competency early in their graduate training.

This study assessed changes in knowledge and perceptions of relevance. Future evaluations will assess the effects of training participation on demonstrations of targeted skills and commitment to a primary care career. CT AHEC did not collect evaluation data on participants' areas of discipline. In the future the program will collect these data, assess whether training effects vary by discipline, and use results to inform training development.

Conflicts of Interest: The authors have no conflicts of interest to declare.

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