Online Education Yields Significant Gains in Physicians' Knowledge of the Complexities of Cardiometabolic Disease in People Living With HIV

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BACKGROUND

As people living with HIV reach older age, they can be at the intersection of multiple comorbidities such as HIV infection cardiometabolic disease. Physicians require education to facilitate best practices regarding these specific challenges. Staying up to date with the latest research and accessing the ever-growing field of knowledge is time-consuming. Online education can make these clinician's tasks more efficient.

METHODS

As part of a larger curriculum, we developed an online CME activity titled: "Complexities of Cardiometabolic Disease in People Living With HIV." The goal was to assess whether this online CME activity improves physicians' knowledge of the influence of cardiometabolic conditions in people living with HIV. Infectious disease (ID)/HIV specialists and primary care physicians participated in an online CME activity (https://www.medscape.org/viewarticle/999145) consisting of a 30-minute video discussion between 3 experts with accompanying slides.

ID/HIV specialists (n = 895)

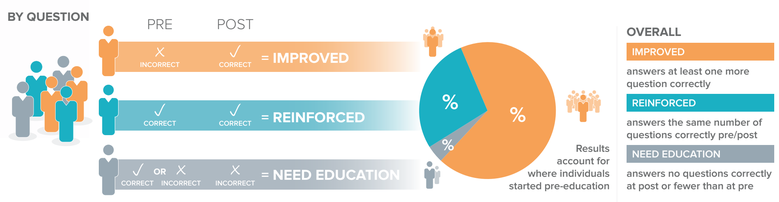
Primary Care Physicians (PCPs) (n 3,748)

The activity is currently available on Medscape from 12/11/2023 until 12/11/2024, and the data were collected from 12/11/2023 through 3/18/2024.

How to Read the Linked Learner Assessment

OUTCOMES COMPLETERS
Each individual completed BOTH the pre and post-education questions – *SAME individuals pre and post-education*

LINKED LEARNER
Each individual tracked pre and post-education – *Learners serve as their own controls*

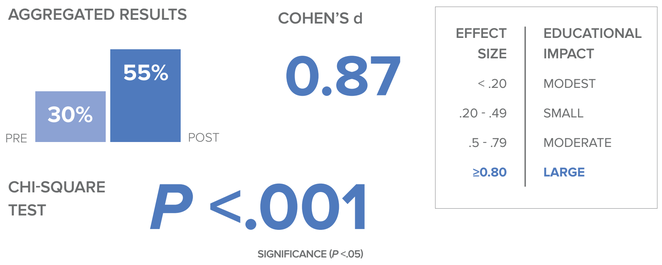


RESULTS

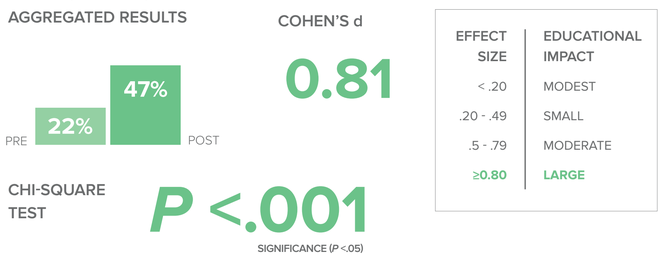
A total of 895 ID/HIV specialists and 3,748 primary care physicians (PCPs) learners participated in the activity, of whom 53 and 132 completed the pre- and post activity questions, respectively. Overall 55% of ID/HIV specialists, and 47% of PCPs improved their knowledge of the factors that influence cardiometabolic conditions in people living with HIV ($P < .001$) indicating a considerable effect of the education (Cohen's d = 0.87; d = 0.81). The average percentage of correct responses rose from 30% to 55% for ID/HIV specialists; and 22% to 47% for PCPs pre-activity to post-activity. Almost half of physicians had a measurable improvement in confidence in their ability to manage multiple cardiometabolic disease in their HIV positive patients.

OVERALL

ID/HIV specialists (n = 53)



PCPs (n = 132)

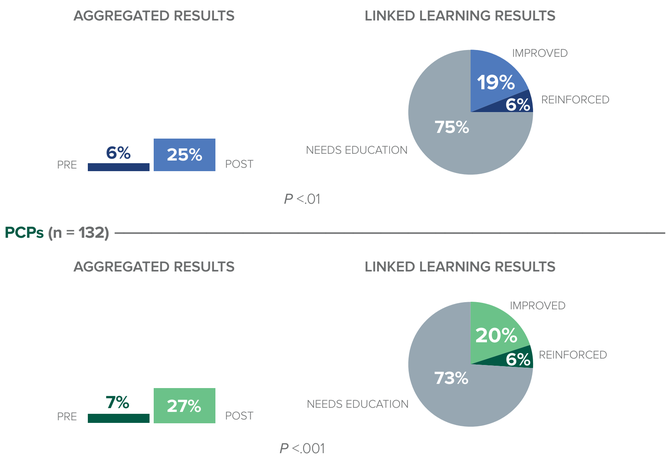


LEARNING OBJECTIVE 1 RESULTS

Increased knowledge regarding the factors that influence cardiometabolic conditions in people living with HIV

QUESTION 1: Which of the following factors plays an important role in the development of cardiovascular disease in people living with HIV? (Correct answer: Microbial translocation)

ID/HIV specialists (n = 53)



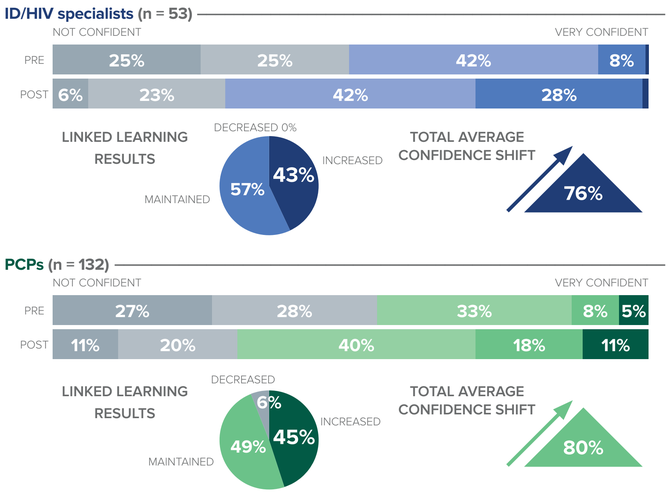
The activity resulted in 73% to 75% of the learners (ID/HIV specialists and PCPs respectively) answering question 1 incorrectly, indicating a need for further education on the factors that influence cardiometabolic conditions in people living with HIV.

CONFIDENCE ANALYSIS

For the 53 HIV specialists and 132 PCPs who participated in the activity "Complexities of Cardiometabolic Disease in People Living With HIV," there was a 76%, 80% confidence shift respectively concerning their ability to manage multiple cardiometabolic diseases in their HIV positive patients.

QUESTION 4: How confident are you right now in your ability to manage multiple cardiometabolic diseases in your HIV positive patients? (Select ranking from 1 [Not confident] to 5 [Very confident])

ID/HIV specialists (n = 53)

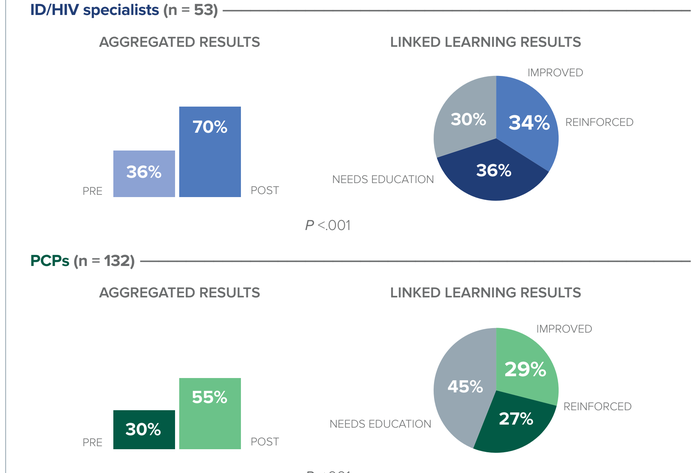


LEARNING OBJECTIVE 2 RESULTS

Increased knowledge regarding the data that affect best practice in management of cardiometabolic conditions in people living with HIV

QUESTION 2: Which of the following best describes the accuracy of glycated hemoglobin (HbA1c) in assessing glycemia in people living with HIV vs people who test negative for HIV? (Correct answer: It underestimates)

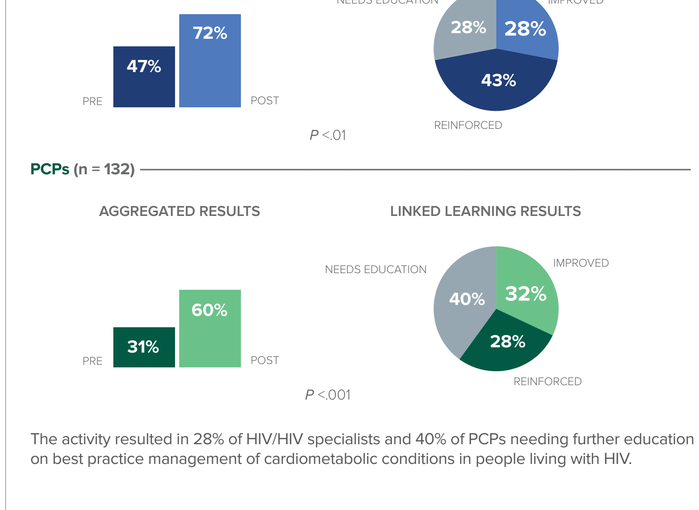
ID/HIV specialists (n = 53)



The activity resulted in 70% of ID/HIV specialists and 56% of PCPs with improved or reinforced knowledge on best practice management of cardiometabolic conditions in people living with HIV.

QUESTION 3: Which of the following statements best describes the anticipated proportional reduction in major vascular event rate based upon anticipated lowering of low-density lipoprotein cholesterol (LDL-C) from the REPRIEVE study in people living with HIV? (Correct answer: The statin effect was higher than the anticipated findings based on lowering of LDL-C)

ID/HIV specialists (n = 53)



The activity resulted in 28% of HIV/HIV specialists and 40% of PCPs needing further education on best practice management of cardiometabolic conditions in people living with HIV.

CONCLUSIONS

This online CME activity significantly improved ID/HIV specialists and PCP knowledge regarding the cardiometabolic disease in people living with HIV. However, there is room for further improvement, since up to 75% of physicians provided incorrect answers post-education. Future educational programs can focus on addressing this gap.

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