

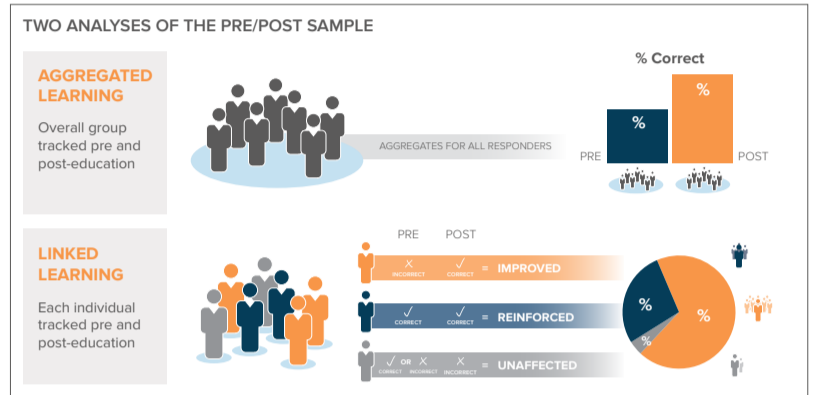
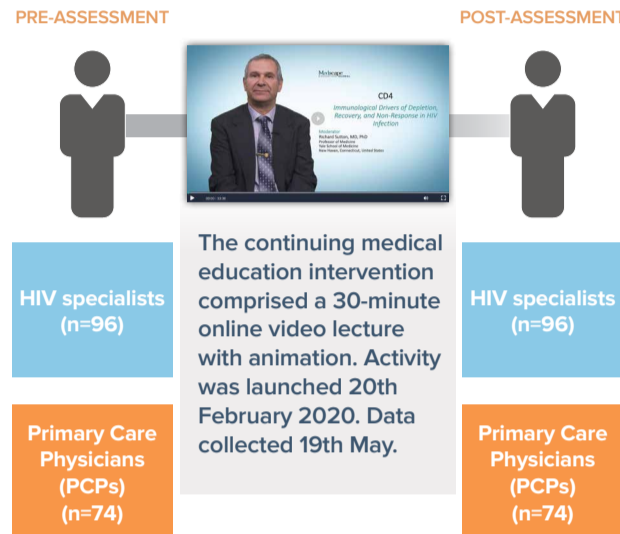
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BACKGROUND

Progressive depletion of CD4 T cells is the hallmark of untreated HIV infection and involves multiple mechanisms such as direct and cytotoxic T-lymphocyte killing of infected T cells.^{1,4} Antiretroviral therapy (ART) is key to reversing T cell depletion.⁵ However, some HIV-positive individuals fail to adequately recover T cells despite optimized ART.⁶⁻⁸ We assessed whether online independent medical education could improve the knowledge of both HIV specialists and primary care physicians (PCPs) regarding immunological mechanisms of CD4+ T cell depletion and factors associated with poor CD4+ T-cell gain in HIV-positive individuals receiving ART.



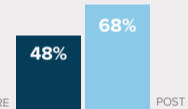
METHODS



RESULTS

HIV specialists (n=96)

AGGREGATED RESULTS



CRAMER'S V EFFECT SIZE:
EXTENSIVE

0.207

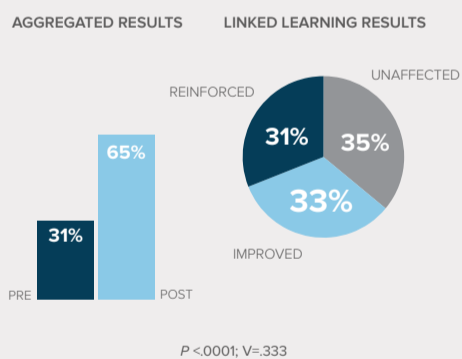
CHI-SQUARE TEST

P < .001

QUESTION 1 RESULTS

Significant knowledge gain regarding factors associated with poor CD4 T cell recovery in an optimized ART setting.

HIV specialists (n=96)

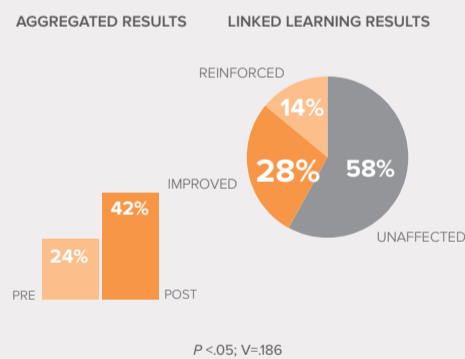


Question: Which of the following is a patient-associated factor that could lead to poor CD4 T cell recovery despite optimized ART treatment? (Correct Answer: Age)

QUESTION 2 RESULTS

Significant and clinically meaningful knowledge gains regarding how both CD4 T cells and patient-related factors affect HIV pathogenesis and the clinical course of the disease.

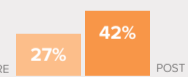
PCPs (n = 74)



Question: Which of the following is a patient-associated factor that could lead to poor CD4 T cell recovery despite optimized ART treatment? (Correct Answer: Age)

PCPs (n = 74)

AGGREGATED RESULTS



CRAMER'S V EFFECT SIZE:
EXTENSIVE

0.151

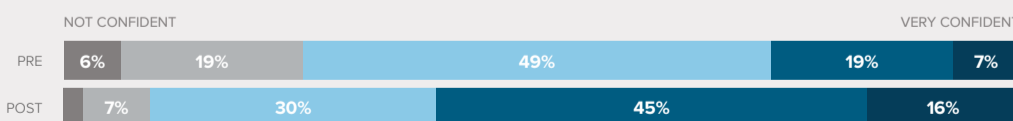
CHI-SQUARE TEST

P < .01

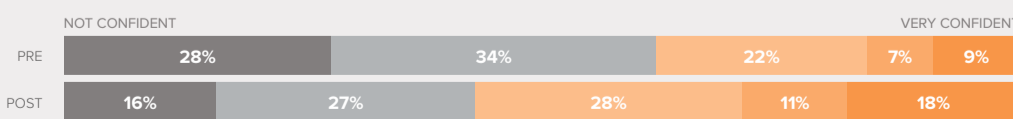
SELF EFFICACY RESULTS

Clinically meaningful confidence shift in the understanding of the role of CD4+ T cells in HIV pathogenesis

HIV specialists (n=96)



PCPs (n = 74)



Question: How confident are you right now in your understanding of the role of CD4+ T cells in HIV pathogenesis? (Select ranking from 1 [Not confident] to 5 [Very confident])

CONCLUSIONS

ART is key to reversing CD4 T cell depletion caused by HIV infection. But CD 4 T cell recovery can be affected by certain factors such as age and comorbidities.^{6,7} Furthermore, some heavily pretreated patients fail to recover CD4 T cells despite optimized ART due to immune exhaustion.^{9,10} Therefore, it is important that physicians involved in the care of patients with HIV have appropriate knowledge regarding aspects of CD4 T cell depletion and recovery. This online medical education significantly improved physician knowledge and confidence in the immunological mechanisms associated with CD4+ T cell depletion and recovery, clinical predictors, and patient-associated factors of inefficient CD4+ T-cell gain in HIV-positive individuals, despite optimized ART.

ACKNOWLEDGEMENTS

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