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Online Medical Education Advances Physicians' Understanding of the Clinical Benefits of Sodium-Glucose Cotransporter 2 Inhibition in Chronic Kidney Disease Management

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INTRODUCTION

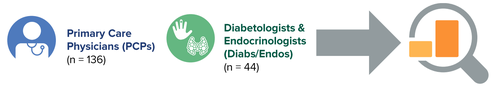
Patients with chronic kidney disease (CKD) have a substantially impaired cardio-renal health prognosis and a reduced life expectancy. Several recent cardio-renal outcomes trials have demonstrated the clinical benefits conveyed by sodium glucose cotransporter 2 (SGLT2) inhibitors with respect to improved cardiovascular (CV) risk and reduced decline in kidney function.

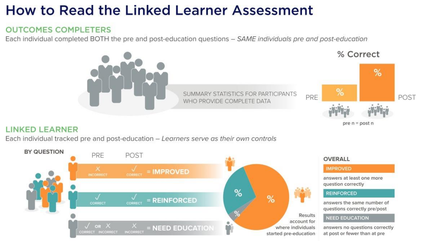
AIM

The goal of this online medical education activity was for learners to be better able to detect CKD early in clinical practice and integrate reno-protective therapies, such as SGLT2 inhibitors, into their management of suitable patients with CKD.

METHOD

Five nephrology experts participated in a 30-min online video program with synchronized slides and written transcript discussing the results of the EMPA-Kidney trial.





RESULTS

Primary Care Physicians (PCPs) (n = 136)

AGGREGATED RESULTS

COHEN'S d

0.56

EFFECT SIZE	EDUCATIONAL IMPACT
< .20	MODEST
.20 - .49	SMALL
.5 - .79	**MODERATE**
≥0.80	LARGE

CHI-SQUARE TEST ***P* <.001**

Diabs/Endos (n = 44)

AGGREGATED RESULTS

COHEN'S d

0.28

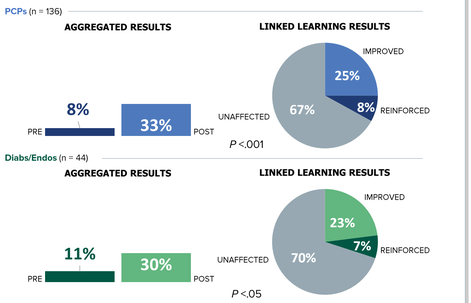
EFFECT SIZE	EDUCATIONAL IMPACT
< .20	MODEST
.20 - .49	**SMALL**
.5 - .79	MODERATE
≥0.80	LARGE

CHI-SQUARE TEST ***P* =.67**

QUESTION 1 RESULTS

25% of PCPs and 23% of D/Es increased their knowledge regarding the close association between metabolic, renal, and cardiovascular diseases

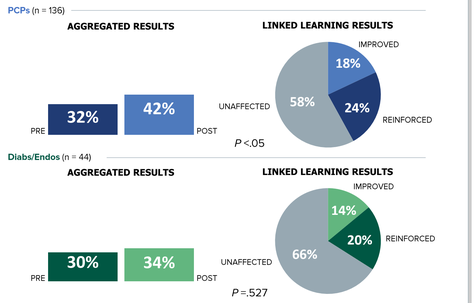
QUESTION: Among individuals with chronic kidney disease (CKD), up to 50% of cases may be attributable to diabetes. Up to what percentage of patients with diabetic kidney disease may progress to kidney failure and cardiovascular disease, respectively? *(CORRECT ANSWER: 10% and 90%)*



QUESTION 2 RESULTS

42% of PCPs and 34% of D/Es increased or reinforced their knowledge regarding the latest results of CKD outcome trials with renoprotective drugs

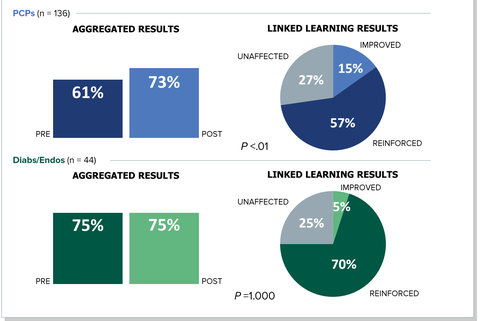
QUESTION: A meta-analysis spanning 13 large (≥ 500 participants per group), double-blind, placebo-controlled trials evaluating sodium-glucose cotransporter 2 (SGLT2) inhibitors against placebo was conducted to address kidney disease progression, acute kidney injury, and a composite of cardiovascular death or hospitalization for heart failure in adult patients for at least 6 months. According to the findings of this meta-analysis, use of SGLT2 inhibitors reduced the risk of cardiovascular death or hospitalization by what percentage? *(CORRECT ANSWER: 23%)*



QUESTION 3 RESULTS

73% of PCPs and 75% of D/Es demonstrated greater competence related to the practical use of SGLT2 inhibitors with proven kidney benefit in a broad range of patients with CKD

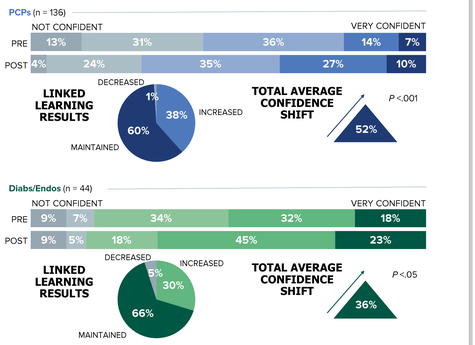
QUESTION: In a recent visit, your patient with a 10-year history of type 2 diabetes, relatively well controlled (glycated hemoglobin: 7.6%) with metformin 2 g/day, has shown a decrease in his estimated glomerular filtration rate (eGFR) to 48 mL/min/1.73 m2. However, his albuminuria has worsened to 100 mg/g, placing him at moderate risk for progression of kidney disease. He is also hypertensive, and despite being on optimized renin-angiotensin system blockade, you decide to start him on an SGLT2 inhibitor. The lab results 4 months after starting the SGLT2 inhibitor show a further decrease in eGFR. What should be the next step regarding this patient's SGLT2 inhibitor treatment? *(CORRECT ANSWER: Continue with the same dose as initially prescribed)*



CONFIDENCE ANALYSIS

38% of PCPs and 30% of D/Es increased their confidence in identifying patients, with or without diabetes, at an early stage of CKD according to latest guidelines

QUESTION: How confident are you right now in identifying patients, with or without diabetes, at an early stage of CKD according to latest guidelines? (Select ranking from 1 [Not confident] to 5 [Very confident])



CONCLUSIONS

Participation of PCPs and D/Es in an online video expert program improved or reinforced their understanding of the close association between metabolic, renal, and cardiovascular diseases, the latest results of CKD outcome trials with SGLT2 inhibition in CKD management, as well as their competence in the practical use of these reno-protective medications in suitable patients with CKD.

ACKNOWLEDGEMENTS

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