Patients with Diabetes at High Cardiovascular Risk with Chronic Kidney Disease: Online Virtual Simulation Improves Clinical Decisions

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BACKGROUND

Atherosclerotic cardiovascular disease (ASCVD) is the leading cause of death in people with type 2 diabetes (T2D), who often have additional risk factors such as chronic kidney disease (CKD), hypertension, dyslipidemia, obesity, physical inactivity and smoking. Based on the results from large-scale cardiovascular (CV) outcome trials, international societies have recently adjusted their recommendations for the individualized treatment of persons with T2D. 1-2

The purpose of this analysis was to assess whether simulation-based online education improves the performance of US primary care physicians (PCPs) regarding tailored strategies for treatment of persons with T2D. 1-3

METHODS

Physicians who fully completed each case were evaluated.

Tailored clinical guidance (CG) was provided for each clinical decision (CD) so learners could modify their CDIs and indicate their rationale.

Physicians who fully completed each case were evaluated. Each learner’s pre-post CDIs were analyzed using a sophisticated decision engine and a paired t-test to assess statistical significance (P < .05 level).

The activity posted on 10/1/2019; data were collected through 10/31/2019.

RESULTS

Upon completion of this educational activity, C/DI and PCP demonstrated improved performance in making appropriate, evidence-based Clinical Decisions (CD, all P < .05)

 PATIENT CASE 1

N/A

HAZEL T.

CASE SUMMARY

Patient is a 35-year-old woman with a long history of type 2 diabetes mellitus (T2DM). She presented to our clinic for an annual wellness exam.

Primary Care Provider (PCP) Recommendations by guidelines

Prevalent measures for selecting an SGLT2 inhibitor (glycemia-raising)

Proven cardiovascular (CV) risk reduction. Recommended by guidelines

Start Empagliflozin, Rationale

Postcardiovascular outcomes trials, international societies have recently adjusted their recommendations for the individualized treatment of persons with T2D. 1-2

Decision Points

BMI: 29.9  Allergies: None

Weight: 79.0 kg  Height: 162.6 cm

Age: 78 years  Gender: Female

Hypertension

• T2D

• Unfamiliar with use

• Economic considerations

• Proven CV risk reduction

• Recommended by guidelines

• Better efficacy data and/or formulary

Main reasons for not choosing an SGLT2 inhibitor

• Economic considerations

• Unfamiliarity with use

 PATIENT CASE 2

DECLAN A.

CASE SUMMARY

This patient is a 68-year-old man who was diagnosed with type 2 diabetes (T2DM) at age 45 years. He is being considered for potential cardiovascular (CV) risk management. Diagnose:

Hypertension

• Proven CV risk reduction

• Recommended by guidelines

• Better efficacy data and/or formulary

Main reasons for not choosing an SGLT2 inhibitor

• Economic considerations

• Unfamiliarity with use

CONCLUSIONS

- This study demonstrates that a virtual patient simulation (VPS)-based education that immerses and engages cardiologists, diabetologists/endocrinologists (D/E) and primary care physicians (PCP) regarding tailored strategies for patients with T2D at high CV risk with CKD.

- Collection of learners’ decision-making rationale data combined with the immersive and realistic nature of VPS provides insight into the decision-making process of physicians in actual clinical practice at the point of care.

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REFERENCES

