**INTRODUCTION**

Type 2 diabetes mellitus (T2DM) is a common and chronic disease that is characterized by hyperglycemia and is associated with increased mortality and morbidity. Effective treatment is essential to prevent severe complications, amputations, and mortality. To address the unmet need for effective and efficient T2DM treatment, the Canadian Agency for Drugs and Technologies in Health (CADTH) recently conducted a cost-effectiveness analysis (CEA) that evaluated the cost-effectiveness of adding Canagliflozin (CA NA) 100 mg, a sodium-glucose cotransporter 2 (SGLT2) inhibitor, to metformin (MET) plus sitagliptin (SIT A) in patients inadequately controlled on MET plus SIT A.

**METHODS**

The Canadian Agency for Drugs and Technologies in Health (CADTH) cost-effectiveness analysis (CEA) evaluated the cost-effectiveness of adding Canagliflozin (CA NA) 100 mg, a sodium-glucose cotransporter 2 (SGLT2) inhibitor, to metformin (MET) plus sitagliptin (SIT A) in patients inadequately controlled on MET plus SIT A. The CADTH model (ECH O-T2DM) was a second-order stochastic microsimulation model, constructed with Markov health states that were observed in the UK Prospective Diabetes Study (UKPDS). The key model inputs and assumptions are provided in Table 1. The CEA used in the model was expressed in 2013 Canadian dollars.

**OBJECTIVE**

The objective of this paper is to evaluate the cost-effectiveness of adding CA NA 300 mg and 100 mg compared to SIT A 100 mg in patients inadequately controlled on MET plus SIT A in the Canadian setting.

**RESULTS**

- **Costs:**
  - The total cost per patient over 40 years was lower for CA NA 100 mg compared to SIT A 100 mg.
  - Patients taking CA NA 100 mg had lower total costs compared to patients taking SIT A 100 mg.

- **Outcomes:**
  - Patients taking CA NA 100 mg had better quality of life outcomes and lower costs compared to patients taking SIT A 100 mg.
  - The incremental cost-effectiveness ratio (ICER) for CA NA 100 mg was lower than SIT A 100 mg.

**DISCUSSION**

- The results suggest that adding CA NA 100 mg compared to SIT A 100 mg is effective and cost-effective in patients inadequately controlled on MET plus SIT A.
- The results show that adding CA NA 100 mg compared to SIT A 100 mg is a cost-effective strategy for patients in the Canadian setting.

**CONCLUSION**

The results of the current study suggest that adding CA NA 100 mg compared to SIT A 100 mg is effective and cost-effective in patients inadequately controlled on MET plus SIT A in the Canadian setting. The findings support the use of CA NA 100 mg as a treatment option for patients with T2DM in Canada.