



# Evaluating the utilization of sodium-glucose cotransporter 2 inhibitors for cardiovascular protection in family medicine patients with type 2 diabetes mellitus and cardiovascular disease

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## Background

- Cardiovascular (CV) complications are the leading cause of morbidity and mortality in patients with type 2 diabetes mellitus (T2DM).<sup>1</sup> Thus, improving CV protection in T2DM patients should be a priority for family physicians.
- American Diabetes Association guidelines recommend a sodium-glucose cotransporter 2 inhibitor (SGLT2i) with demonstrated CV benefit to reduce the risk heart-failure hospitalization and CV events in T2DM patients with atherosclerotic cardiovascular disease (ASCVD) and/or heart failure (HF).<sup>2, 3</sup>
- Barriers to SGLT2i use, such as cost and inadequate or lack of insurance coverage, may cause them to be underutilized.<sup>4</sup>

## Objectives

- To evaluate current utilization of cardio-protective SGLT2i medications in Texas Tech University Health and Sciences Center (TTUHSC) Family Medicine (FM) patients with T2DM and ASCVD and/or HF.
- Determine how deterring several potential barriers to SGLT2i utilization are and create interventions to attenuate these barriers.

## Design/Methods

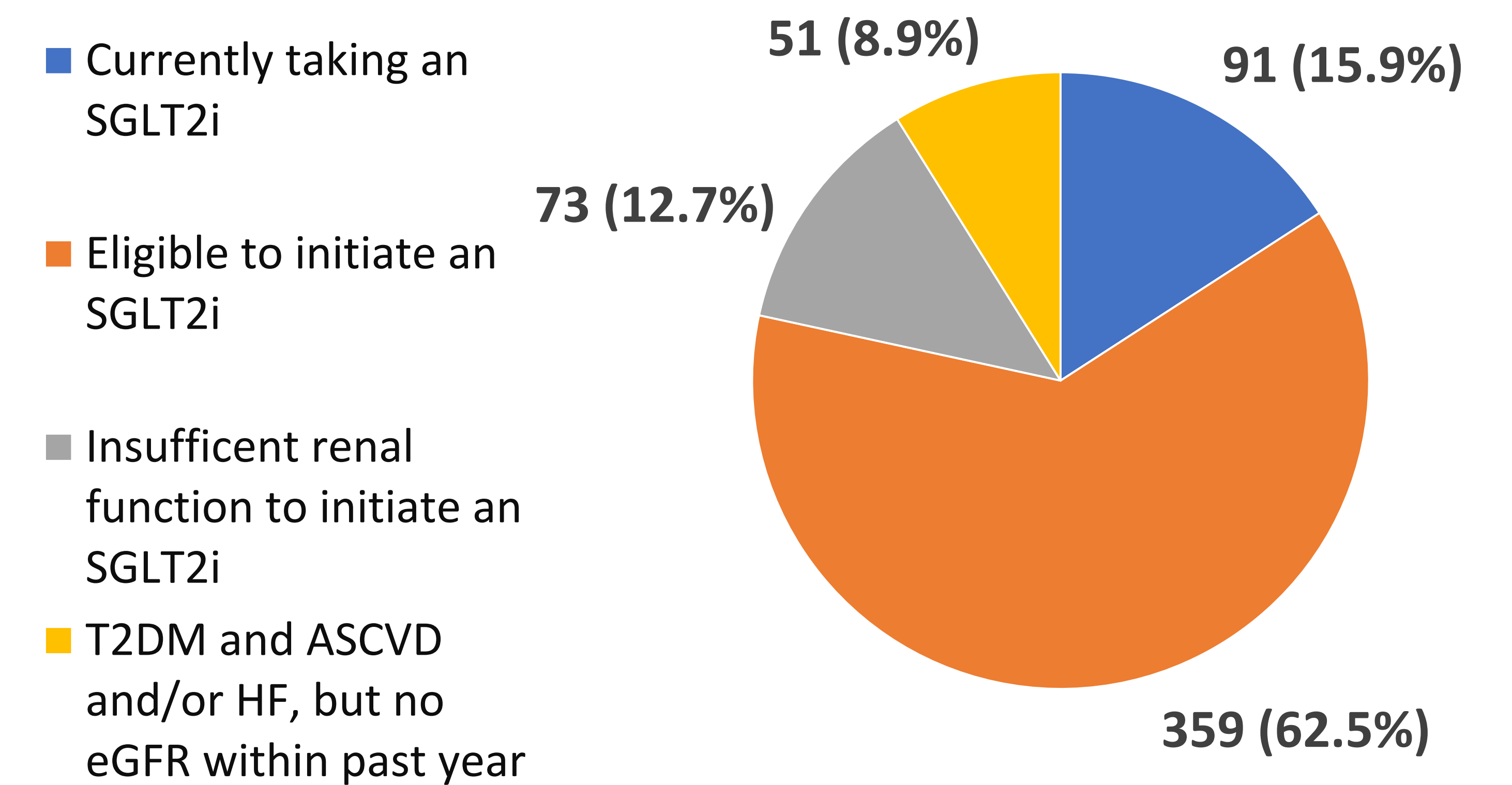
- The electronic medical record was used to perform retrospective chart review on 1,764 TTUHSC FM patients with T2DM.
- Criteria to identify a patient as eligible to initiate an SGLT2i for CV protection were a history of ASCVD (coronary artery disease, cerebrovascular disease, atherosclerotic peripheral vascular disease, and/or history of myocardial infarction, stroke/transient ischemic attack, or revascularization procedures) and/or HF, and an estimated glomerular filtration rate (eGFR)  $\geq 30$  mL/min/1.73m<sup>2</sup> in the past year.
- A survey was administered to TTUHSC FM providers to determine how deterring each of the following are to SGLT2i use: medication cost, inadequate or lack of insurance coverage, adverse effects, patient hesitation to start a new medication, and renal insufficiency. Providers were asked to assign each potential barrier a value of 1-5, according to the following key:

- 1 Does not prevent patients from accessing/taking an SGLT2i
- 2 This factor is a burden, but ultimately does not prevent patients from accessing/taking an SGLT2i
- 3 This variable is not a relevant factor when considering SGLT2i accessibility
- 4 Prevents some patients from accessing an SGLT2i
- 5 Prevents most patients from accessing an SGLT2i

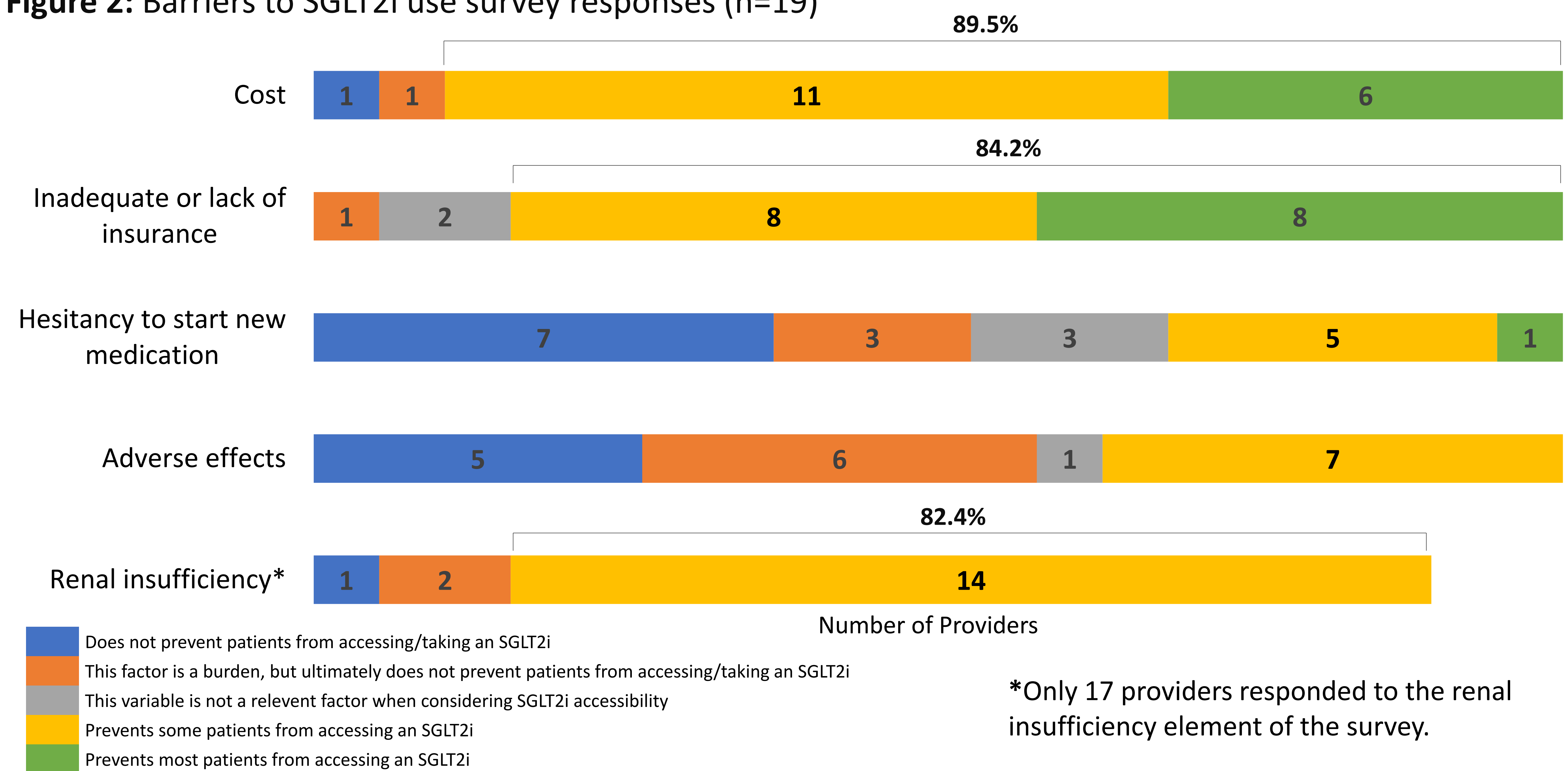
## Results

- 574 T2DM patients were found to have established ASCVD and/or HF. Of these patients, 91 (15.9%) were currently taking an SGLT2i, 359 (62.5%) were eligible but not currently using an SGLT2i, 73 (12.7%) had insufficient renal function (eGFR < 30 mL/min/1.73m<sup>2</sup>) to initiate SGLT2i therapy, and 51 (8.9%) did not have an eGFR recorded within the past year (**Figure 1**).
- 19 providers responded to the survey. Over 80% of participants identified medication cost, inadequate or lack of insurance coverage, and renal insufficiency as barriers that prevent some or most patients from using an SGLT2i (**Figure 2**).

**Figure 1:** SGLT2i utilization in T2DM patients with ASCVD and/or HF (n=574)



**Figure 2:** Barriers to SGLT2i use survey responses (n=19)



## Conclusions and Next Steps

- Cardio-protective SGLT2i therapy is currently only used by a small minority of TTUHSC FM patients with T2DM and ASCVD and/or HF. The TTUHSC FM providers who participated in the survey identified cost, inadequate or lack of insurance, and renal insufficiency as the most deterring barriers to SGLT2i use.
- Next Steps: education emphasizing the CV benefits of SGLT2i therapy, information regarding resources to attenuate financial barriers to SGLT2i use (cost and inadequate or lack of insurance coverage), and instruction over renal dosing for SGLT2 inhibitors in patients with chronic kidney disease will be provided at resident didactic sessions, faculty physician meetings, and will be distributed to all FM providers electronically (including advanced practitioners).
- The goal of these interventions is to improve CV protection in T2DM patients with ASCVD and/or HF by increasing SGLT2i use amongst eligible patients by 10%. Utilization will be reevaluated 6 months to determine if this goal has been met.

## Sources

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