SGLT2 Inhibitors in Patients with Diabetes and Cardiovascular Disease

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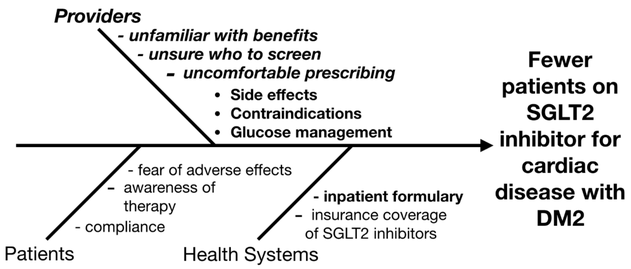
Problem Definition

Multiple studies (e.g. EMPA-REG, CANVAS) demonstrate that SGLT2 Inhibitors (Inh) improve cardiac outcomes in patients with Type II Diabetes (DM2) with comorbid Cardiovascular Disease (CVD) including Heart Failure and Coronary Artery Disease.

SGLT2 Inhibitors are *considered standard of care* for patients with DM2 and CVD.

Based on literature published in European Journal of Preventative Cardiology and JACC HF, our prediction is that physicians at Thomas Jefferson University Hospital Ambulatory Practices (TJUH) under-utilize SGLT2 Inh for patients with co-morbid CVD and DM2.



Aims For Improvement

Within the Jefferson Healthcare System, we sought to determine:

1. The percentage of patients with an indication for an SGLT2 Inhibitor who were actually being prescribed this.
2. How often providers within the Jefferson system were prescribing these medications, and what the barriers to prescribing are.

With this information, we hoped to increase the percentage of (qualifying) patients who are on these medications as part of standard of care by 20% within one year of intervention.

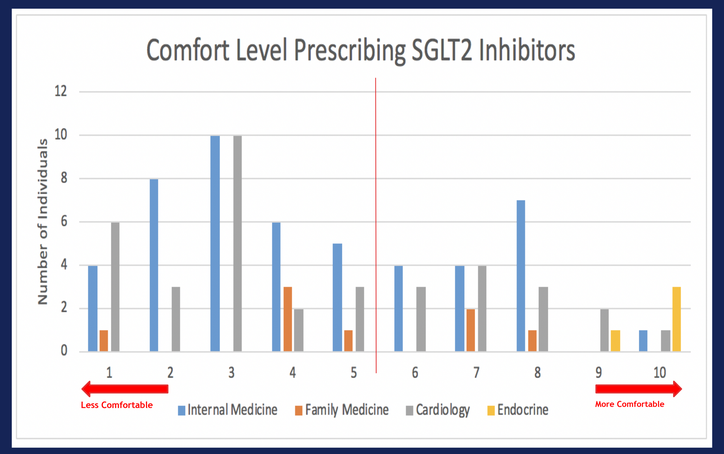
Methods/Results

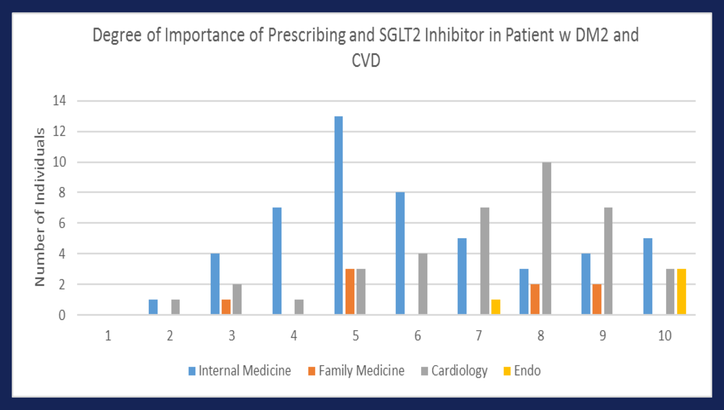
Part 1: We surveyed physicians from **Cardiology, Internal Medicine, Family Medicine, and Endocrinology** to assess:

- physician comfort level and frequency of prescribing SGLT2 Inh
- subjective importance of SGLT2 Inh in patients with DM2 and CVD
- which medical specialties should prescribe SGLT2 Inh

Survey Questions

Survey Results





Take a picture to explore more results of our survey.

Part 2:

1. We collected a random sample of patients (n=200) known to any of the above departmental TJUH outpatient clinics.
2. We performed a retrospective chart review to determine the percentage of patients with DM2 and CVD (heart failure, coronary artery disease) who were appropriately prescribed an SGLT2 Inhibitor.

Methods/Results, Continued

What We Found: 100 patients met inclusion criteria:

- **50** patients were seen by **endocrinology** and met criteria to be on SGLT2. **10/50 (20%)** were on SGLT2 inhibitors.
- **95** patients were seen by **cardiology** and met criteria to be on SGLT2**. 11/95 (11.6%)** were on SGLT2 inhibitors.
- **8** patients were seen by **internal medicine** and met criteria to be on SGLT2, **0/8 (0%)** were on SGLT2 inhibitors.
- **13** patients were seen by only **family medicine** and met criteria to be on SGLT2, **1/13 (7.7%)** was on SGLT2 inhibitors.

**** In total 100 patients qualified for SGLT2 inhibitor therapy. 13/100 (13%) were on SGLT2 inhibitors.***

Measurement Strategy

Process: # patient charts reviewed by Endo CRNP, # patients initiated on SGLT2 Inh while inpatient

Outcome: % physicians comfortable prescribing SGLT2 Inh, # patients who are being prescribed SGLT2 Inh

Balancing: medication affordability, education fatigue, availability for education

Lessons Learned & Next Steps/Future Interventions

What Was Implemented?

- Creation of a cardiac metabolic task force led by Cardiology and Endocrinology with a goal to work collaboratively to increase the rate of the SGLT2 Inhibitor use in these target populations.
- Informational Card was posted in outpatient offices.

Lessons Learned: Provider comfort levels, improvement takes time and requires "buy-in", may need a change in culture, an individual's comfort level/awareness strongly drives outcomes.

Next Steps/Work in Progress:

- June 2020: dedicated Endocrine CRNP funded by ADA to work in Cardiology reviewing patient charts for SLT2 Inh indication.
- Two SGLT2 Inhibitors will be on formulary
- Endocrinologists working with Cardiology/IM/Nephrology- lectures, Q&A
- Collaborations with ADA

* One year from the time changes are implemented, the survey and patient data will be repeated and re-analyzed to determine if we met our aim for improvement *