

Assessing the Relationship Between SSRIs, SNRIs, and Bupropion Adherence and Glycemic Control in the Diabetic Population Among LA General Medical Center Patients

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Introduction

Diabetes Mellitus and Depression are among the most common health concerns to date. With its prevalence among our population, it is crucial to continue looking into these disease states to better understand their relationship. The correlation between adherence to SSRIs, SNRIs, and bupropion and glycemic control has been well studied.¹ However, the population in LA General Medical Center, consisting primarily of individuals coming from low income backgrounds, has yet to be observed. This study aims to further assess the relationship between antidepressants and glycemic control using retrospective analysis of electronic health records. The goal is to provide feedback to the LA General Medical Center to implement a system that may help screen for depression and encourage medication adherence among the target patient population.

Objectives

Assess the relationship between antidepressant adherence, specifically SSRIs, SNRIs, and bupropion, and glycemic control in patients seen at the LAC-USC diabetic clinic.

Methods

- A retrospective analysis of electronic medical records was done, utilizing Cerner
- 100 patients from the patient database obtained from the LA General Medical Center diabetic clinic was organized based on demographics.
- Patients' most recent 3 A1c levels from January 1, 2023 to December 31, 2023 were recorded
- Patients on SSRIs, SNRIs, and bupropion were further analyzed
- Patients' medication adherence were based on provider's notes or past fill history
- A correlation was made based on these recordings; **Adherent vs. Not Adherent**
- **Adherent:** Patients who show consistency with their medication fill and pickups based on prescription quantity. If the patient picked up their antidepressants refills for at least 3 total refills within the expected due date based on medication quantity, they are deemed consistent
- **Not Adherent:** Patients who are not consistent with medication fill and pickup or did not utilize medication once prescribed. Inconsistency entails patients who did not continue using their antidepressants past the 4 weeks mark when antidepressants usually start taking effect
- **Stable A1c:** A1c stays consistent or shows a decreasing trend of any margin throughout the 3 A1c readings depending on patients' labs
- **Unstable A1c:** A1c fluctuates or increases over the 0.5% threshold based on patients' baseline without a trend towards improvement

Results

Demographics: Gender and Race

	Demographic	Study Population
Gender	Male	22
	Female	78
Race	Hispanic	89
	Non-Hispanic	11

Table 1. Demographics. n=100

Demographics: Age

Age	Study Population	Average in Age Group
Age ≤ 30-49	16	40
50-59	29	55
60-69	39	64
Age ≥ 70	13	74

Table 2. Demographics. n=100

Comorbidities

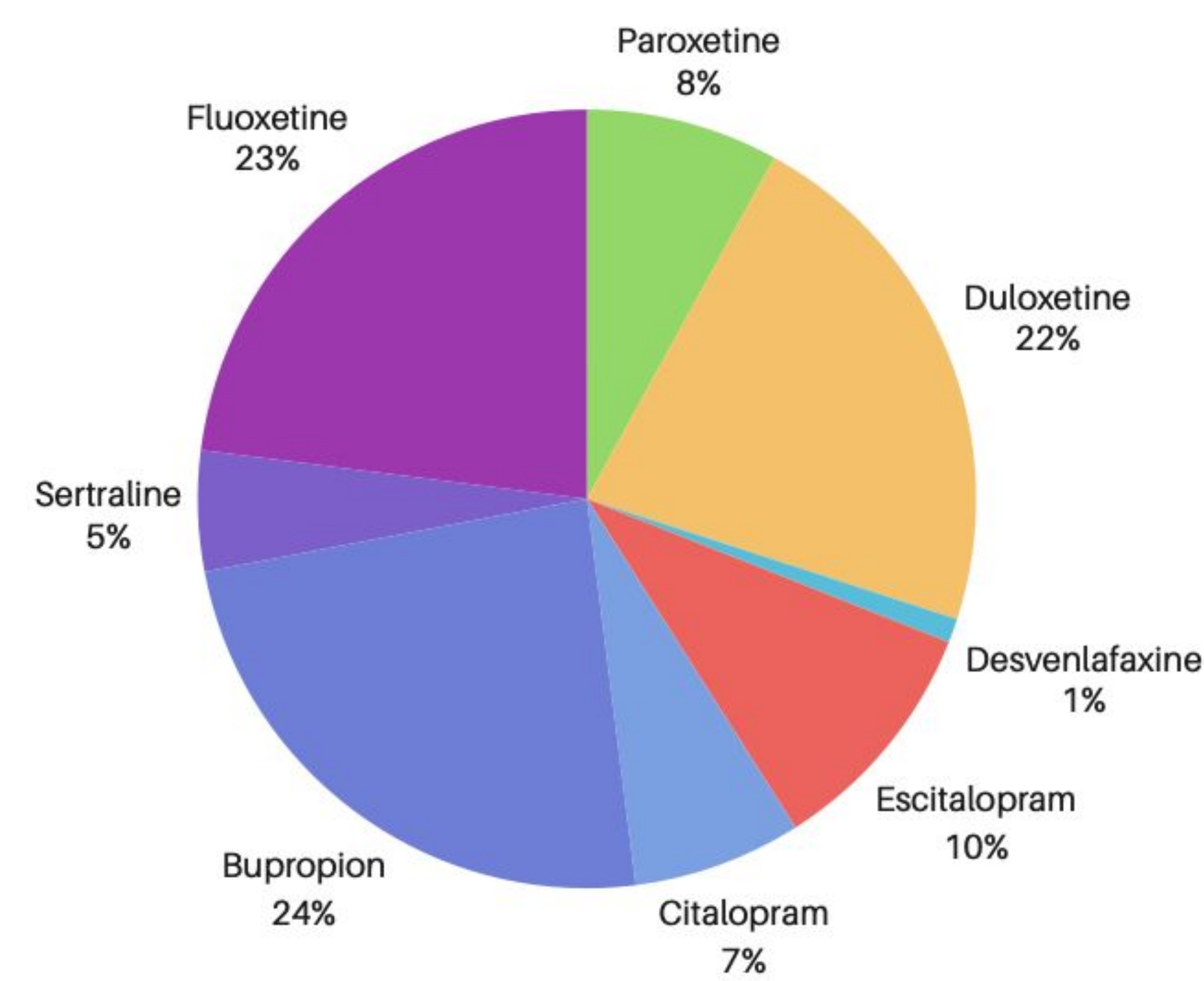
Condition	# of Patients Who Have Each Condition
Hypertension	65
Hyperlipidemia or Dyslipidemia	24
Other conditions	48

Table 3. Comorbidities. n=100

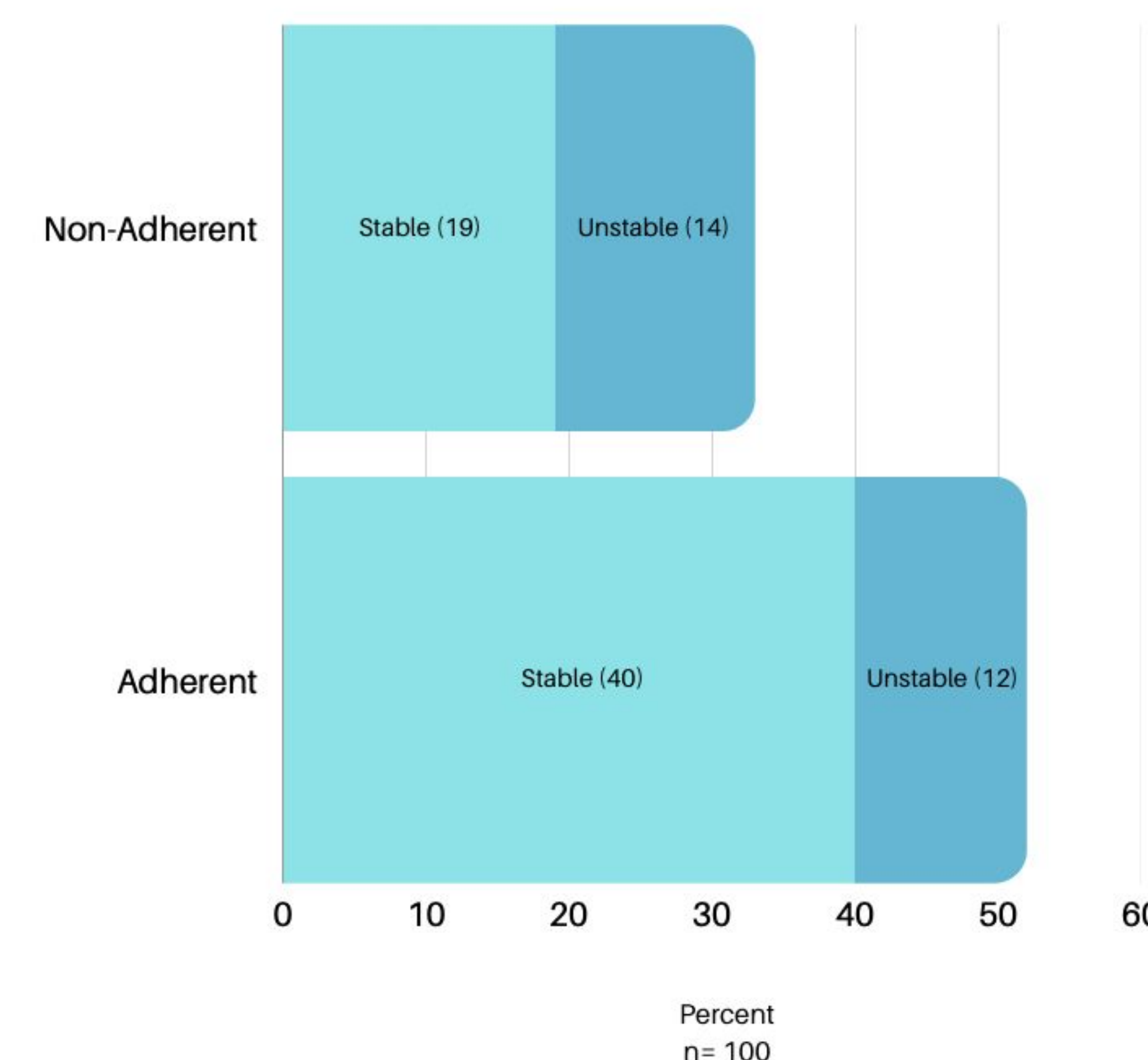
Indication for SSRI, SNRI, Bupropion

Condition	# of Patients Who Have Each Condition
Depression	88
Anxiety	18
Other Mental Health conditions	7

Table 4. Antidepressant Indication. n=100



Graph 1. Antidepressant Medications



Graph 2. Adherence and A1c Levels. n=100

Discussion

- Patients adherent to their antidepressants showed controlled A1c levels
- Majority of patients also have hypertension. Future studies on relationship between hypertension, antihypertensive medication, and depression
- Next steps would be to share data results and inform LA General Medical Center diabetic clinic to help educate and implement a system

Limitations

- Adherence documentation is limited
- Providers do not always leave comments on adherence
- Fill history has a limited scope on whether patients take their medications
- Once the patient picked up their prescriptions, we do not know if they are taking the medication correctly or consistently

Conclusion

Our study suggests that patients in the LA General Medical Center diabetic clinic population who are adherent to their psych medications, specifically, SSRIs, SNRIs, and bupropion have better glycemic control.

References

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