To investigate patterns and outcomes of recommendations made by pharmacists at the University of Findlay Telehealth Center

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Abstract

A retrospective study of 447 recommendations provided by pharmacists at the University of Findlay Telehealth Center was conducted. At the Telehealth center pharmacist provide services such as: Therapeutic intervention Program Services (TIPS) through OutcomesMTM platform and intervene in drug recommendations made by physicians. The recommendations were made by the pharmacist after reviewing patient medication profile through Outcomes. Recommendations were either accepted or rejected by the physician. Recommendations provided by pharmacist were divided in to five major categories and six common drugs classes. Based on information gathered we found that out of the 447 recommendations made by the pharmacist - 151 (33.78%) were accepted and 296 (66.22%) were declined. The most accepted recommendation among physician were concerns related to duplicate drug therapy (50.0%) and the maximum number of rejected recommendations were related to inappropriate therapy of medications (70.16%).

Introduction

The University of Findlay Telehealth Center begin its operation in 2014. Its mission is to resolve medication related and health related problems faced by patients. This mission is accomplished through the help of full-time staff, full-time pharmacists at the MTM center and pharmacy interns from the university of Findlay. Telehealth center fills the gaps in health care services, helps reduce the number of hospital admissions, reduces healthcare cost and reduces travel burden for patients, identify health risk sooner and increase access to healthcare. Our project was aimed at investigating the pattern of recommendations made by pharmacist at the Telehealth Center.

Methodology

- Data was randomly collected from patient records at the University of Findlay, Telehealth Center.
- Each record consisted of a fax received back from the physician's office regarding the patient's recommendation made by the pharmacist. Patient information was de-identified to maintain privacy. Pharmacist verification was needed in order to access patient records.
- We collected data from 410 patients having a total of 447 recommendations.
- Recommendations made by pharmacists were classified into 5 main categories: suboptimal therapy, high pill burden, duplicate therapy, inappropriate therapy/ discontinue therapy/ no longer needed/not recommended and miscellaneous recommendation(drug-drug interaction, adverse drug reaction, drug disease interaction, therapy recommendation, substitute therapy).

- The drugs associated with these recommendations were also taken into consideration. The drugs identified were classified into 6 categories as antihypertensives, antidiabetics, proton pump inhibitors, antidepressants, antihyperlipidemic and miscellaneous drugs (allergy drugs, iron supplements, multivitamin, NSAID, asthma medications, triptans, potassium supplements, antihistamines, anti anxiety, antiemetic, antiseizure, laxatives).
- Responses from physician faxes were entered into an excel sheet for each patient based on the type of recommendation and the type of drugs identified. The accepted recommendation were assigned a value of 1 and the ones refused were assigned a value of 0. The result was analyzed using the chi square technique.

Results
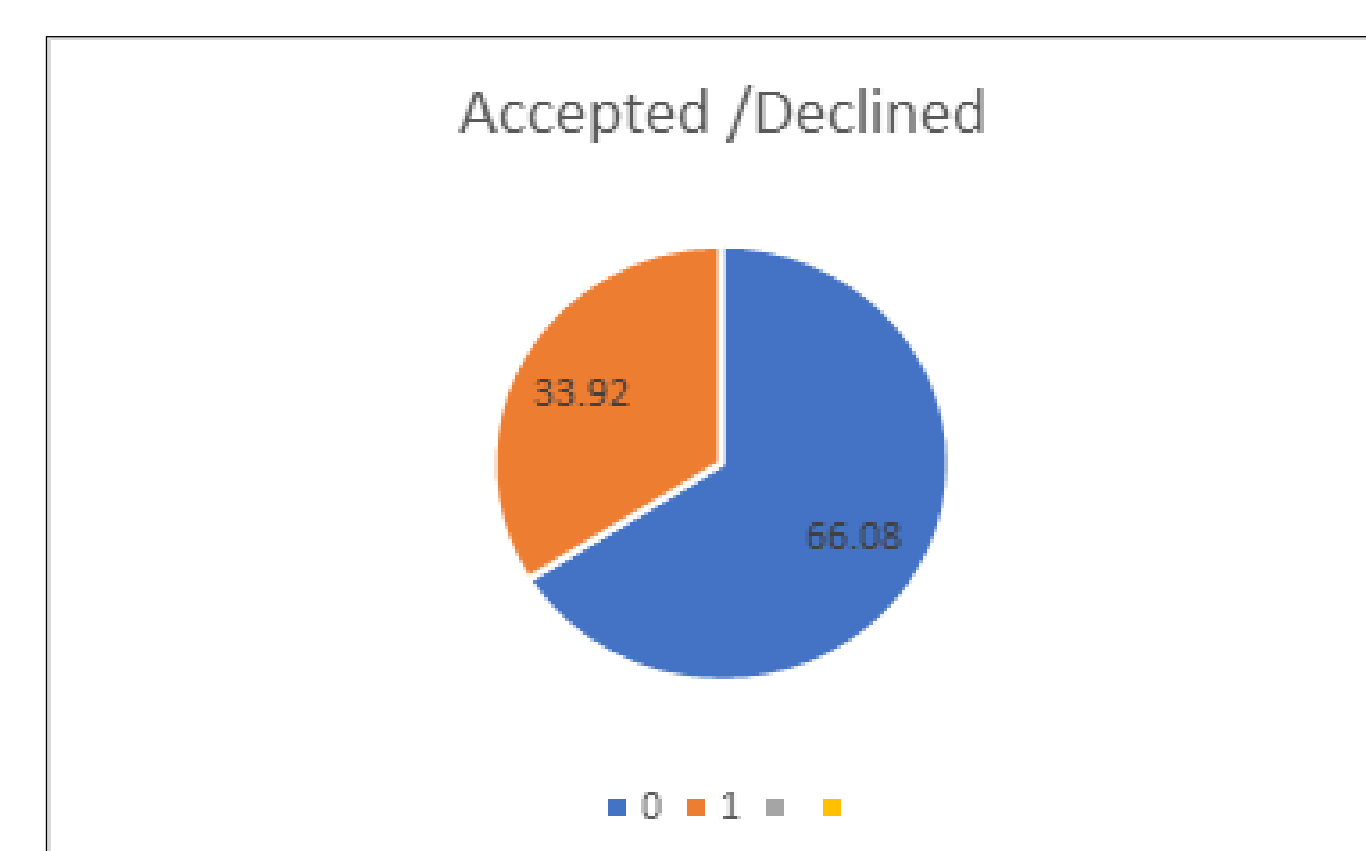
The data display (fig,1) show that 33.92 were accepted and 66.08 were declined. Some physicians gave reason for declining recommendations while some did not. Some of the reasons given were - patient does not tolerate therapy, patient failed control with a first line agent, patient refused to discontinue therapy etc. The results were not consistent with the type of interventions that were made. We expected that interventions like duplicate therapy, and high pill burden should have been accepted but that was not the case.
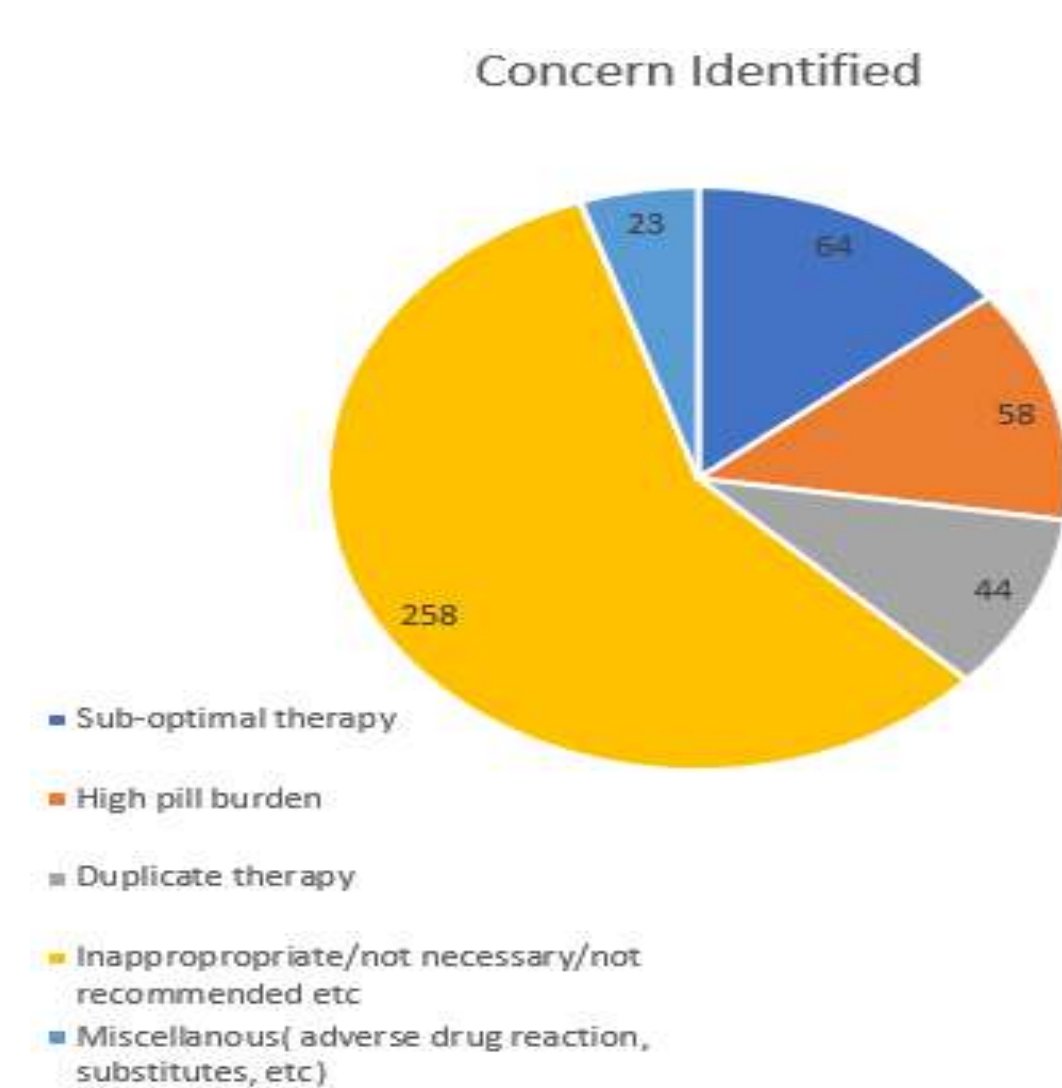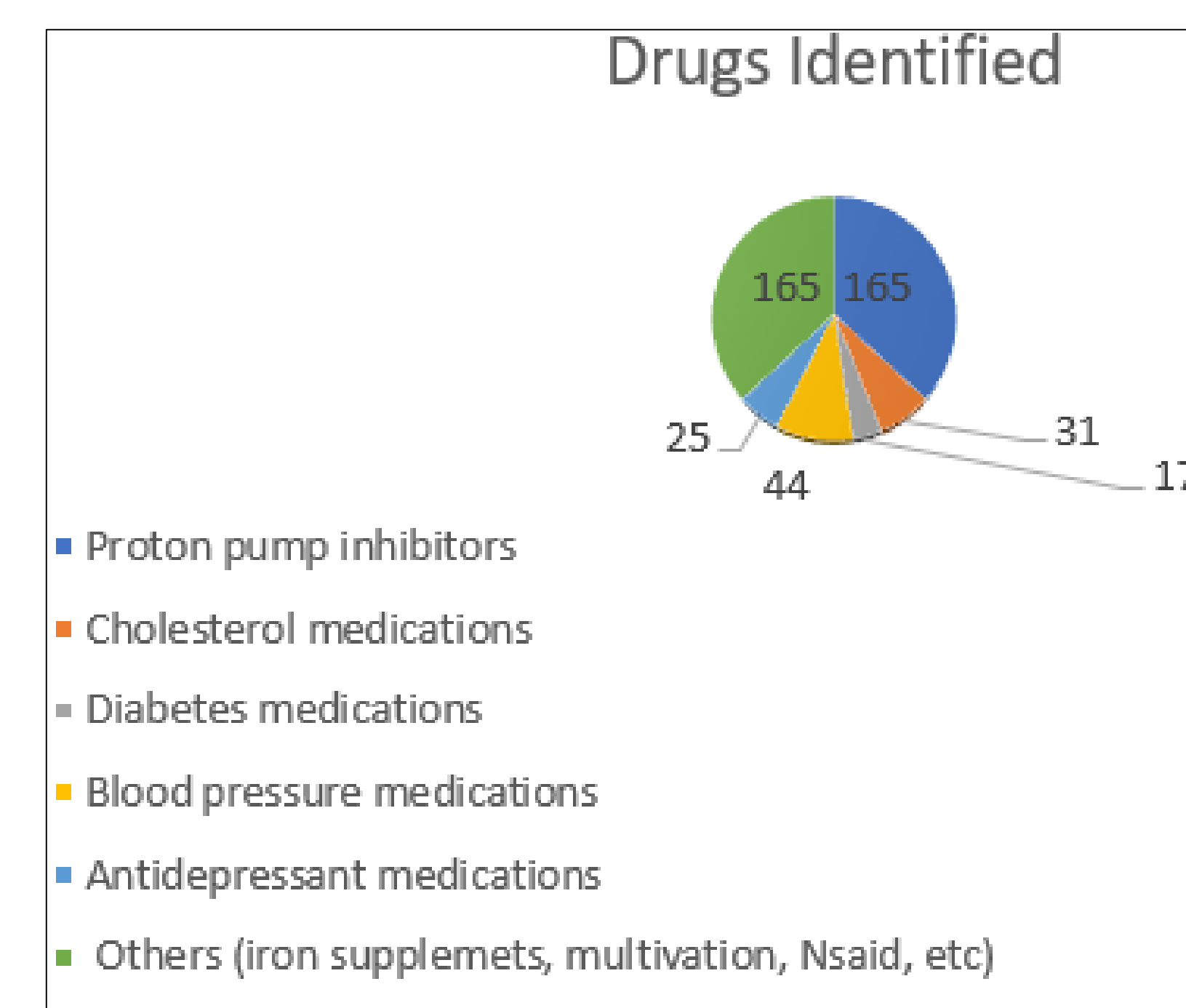

Fig.2 shows the number concerns identified. The most common concern identified is inappropriate therapy/not necessary/not recommended/need to reassess/to be discontinued. The least number of concerns identified were related to miscellaneous concerns. These top concerns were chosen based on the most common concerns identified in the patient records.

Proton pump inhibitors were the most common type of drug class identified in the recommendation changes suggested by the pharmacist. These drugs were commonly prescribed by the physicians but never discontinued by the patient and therefore most of the recommendations were associated with this group. Antihypertensives even though were commonly prescribed by physicians .
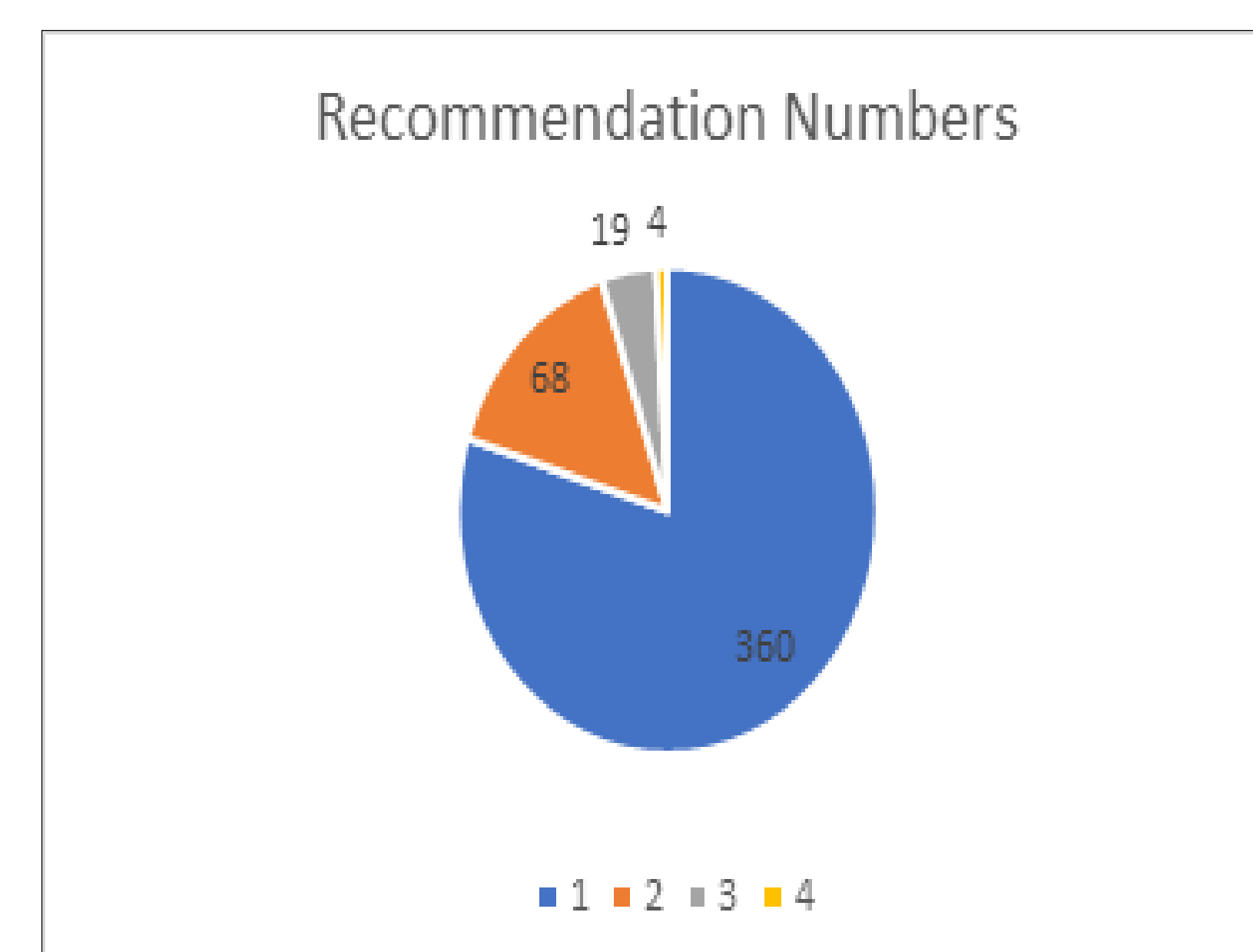
Conclusion

- Out of the total 447 recommendations made by pharmacists for 410 patients, only 33.78% were accepted by physicians. Most of the recommendations accepted were related to therapies which need to be discontinued as they were inappropriate for the patient and were no longer recommended for use.

- Majority of the medications recommended to be discontinued were proton pump inhibitors like omeprazole and pantoprazole. This shows that many physicians often prescribe PPIs but do not ask the patients to discontinue these medications after the course of therapy. In many cases, it is extremely important to discontinue these medications as it can lead to serious adverse effects like kidney disease, fractures and infections.

- Some of the other medications recommended to be discontinued include multivitamins, iron supplements, NSAIDs, asthma medications, triptans, potassium supplements, antihistamines, anti anxiety, antiemetic, antiseizure, laxatives. Pharmacists at the telehealth center are the point of contact between physicians and patients and they provide valuable patient therapy recommendations which may get overlooked by physicians.

Major limitations/strength

- Outcomes platform has a record of all the prescription drugs patient takes including the name of the physician prescribing the drugs. Pharmacist can also follow up the physician office to check the status of a recommendation.

- CareSource has many patients, which provide a large sample size for a retrospective study.

- The limitations we had was that some physician do not respond to recommendations send through fax, some did not give reasons why they declined drug recommends like drug -drug interaction or high pill burden.

- The MTM center does not have patient pertinent lab results to see if the patient should be on the drugs, some patients refused to accept the new recommendations provided by pharmacist even after being physician approved because they are comfortable with their current therapy; even though the pharmacist sees that they have more side effects and they is no means to track any over the counter drugs patient take.

- Further study needs to be carried out in order to find out what makes physicians decline the drug therapy recommendations made by pharmacists and how can the Telehealth Center work on improving the rate of acceptance.

References

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