Title: Comparing Clinical Outcomes Across Two Ambulatory Pharmacy Practice Models

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Objective: To compare clinical outcomes associated with chronic disease state management achieved across two ambulatory pharmacy practice models, collaborative drug therapy management (CDTM) and nurse practitioner/pharmacist co-visit model.

Methods: A retrospective chart review was conducted to include patients diagnosed with type 2 diabetes (T2DM) and hypertension (HTN) who were receiving a minimum of one medication for their respective disease states. Patient records were stratified by service type, CDTM or co-visit model. Demographic data and objective clinical outcomes for T2DM, HTN, and hyperlipidemia were collected at baseline and following at minimum two visits with the clinical pharmacist. Primary outcome was to compare the change in A1c, and percent of patients at goal A1c from baseline between the two models. Secondary outcomes included a comparison of change in blood pressure and optimization of HMG-CoA reductase inhibitors. Data to compare frequency of medication adjustments by pharmacist and ordering of laboratory monitoring was also collected as secondary outcomes. Statistical analysis to compare both groups included Fisher's exact, Chi-square, and Mann-Whitney U test where appropriate.

Results: A total of eighty patients were included in this analysis, equally divided between practice models. Baseline characteristics that were higher in the CDTM model include weight and BMI, 21.8kg and 6.4kg/m2, respectively (p-value <0.001). The average baseline A1c levels were 9.1% ± 2.9 in the CDTM group versus 9.4% ± 2.4 in the co-visit group. The difference in change of A1c from baseline for the CDTM and co-visit groups was -1.9% ± 2.0 and -2.0% ± 2.71%, respectively. The difference in change of blood pressure from baseline for the CDTM and co-visit groups was a reduction of 14.3/23.2 mmHg (±19/33 mmHg) and 16.1/23.6 mmHg (±24.1/34 mmHg), respectively. No difference was found between models for optimization of lipid lowering therapies.

Conclusion: There is currently limited data comparing pharmacy practice models to one another. These results suggest that the addition of a pharmacist is equally beneficial for chronic disease state outcomes despite the practice setting, specifically CDTM and co-visit models. This is shown by the lack of statistically significant differences in reduction of A1c and blood pressure between the groups. Additional analysis on a larger scale and across various practice settings is needed.