

Impact of MedSync at Sun Life Pharmacy in Rural Arizona

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Pharmacy



Objectives

- Identify current medication possession ratio at Sun Life Pharmacy in Eloy, Arizona as the baseline for medication adherence
- Implement the MedSync program provided by the pharmacy software currently being used at Sun Life and simplify and standardize the process for MedSync for the pharmacy
- Statistically analyze the medication possession ratio for patients that enroll into MedSync to determine if the intervention was statistically significant in improving adherence

Background

- The pilot clinic serves a rural, medically underserved area where patients cannot always pick up their medications due to a lack of transportation, income, or other health disparities unique to rural areas
- Medication adherence is an established marker for improved health outcomes
- Poor adherence rates lead to poorer health outcomes for patients and put patients at risk for withdrawal and rebound reactions (2)
- Patients enrolled in medication synchronization had adherence rates of 66.1% to 75.5% during one year versus 37.0% to 40.8% among control patients (3)
- The project is important to improve the quality of patient care in reference to the Medicare Stars System and to help patients ensure they are adherent to their medications to improve health outcomes

Methods

- Design:** Pre/post observational study
- Sample:** Prescriptions for diabetes mellitus, hypertension, and dyslipidemia via oral route
- Measures:** Deidentified data obtained from approx. 4,000 prescriptions. Medication Possession Ratio (MPR) was used to assess adherence.
- Data Collection:** Prescriptions came from SunLife's RxQ pharmacy management program and were categorized by disease state
- Data Analysis:** Paired t-tests with confidence intervals, means, standard deviations, and p-values were obtained and compared to previous data obtained

Implications

- By improving the MPR (medication possession ratio), pharmacists hope to remove barriers to medication adherence and improve health care outcomes for patients with chronic illness

Results

March – May 2020			
Disease	Average of MPR	Std Dev of MPR	Medication Count
Diabetes Mellitus	69.72	33.54	1137
Dyslipidemia	69.04	34.35	897
Hypertension	71.83	34.72	2008
Grand Total	70.62	34.32	4042

September – November 2020			
Disease	Average of MPR	Std Dev of MPR	Medication Count
Diabetes Mellitus	71.47	33.93	1011
Dyslipidemia	69.16	35.54	840
Hypertension	71.61	36.12	1853
Grand Total	71.01	35.41	3704

Row Labels	P-Value	CI
Diabetes Mellitus	0.2301	(-1.1089-4.6089)
Dyslipidemia	0.9444	(-3.1723-3.4063)
Hypertension	0.8443	(-2.4598-2.0118)
Overall Adherence	0.6174	(-1.1578-1.9498)

- Associated p-values did not indicate statistical significance to endorse improvement of adherence with the use of MedSync
- No significant change was observed for any study value
- Given the low rate of MedSync scheduled medications (0.04%), the observed values are unsurprising
- Few patients in the population enrolled into the medication synchronization program – roughly 140 prescriptions out of the 4000 eligible were enrolled
- The impact of such a small value on overall MPR values was predictably diminished

Discussion & Conclusions

- Medication synchronization programs appear to improve adherence rates in other studies; this evaluation yielded insufficient data and insignificant results due to low enrollment into MedSync
- MedSync adherence rates did not improve in the rural population of SunLife patients in Eloy, AZ for oral diabetes, dyslipidemia, and hypertension medications
- Given the rural setting, we anticipated increased participation and improved adherence; we had hoped to see similar results to previous studies given the rural population
- Previous studies emphasized the importance of adherence to health outcomes, which medications are more prone for poor MPR values, and the positive impact of synchronization programs on medication adherence

Limitations

- The study was framed in a rural setting
- Focus was limited to three primary Star Measures for quality improvement analysis: anti-hypertensive, anti-hyperlipidemic, and oral diabetic medication acquisition rates
- Many insurances were non-applicable to this program such as state funded prescription plans
- Our study had a small sample size and narrow evaluation time frame

Future Projects

- Continue to follow up in the future to assess MedSync's impact in the pharmacy
- Implement MedSync within the other more populated sites to gauge effectiveness and generalizability
- Assess health outcomes along with improved adherence rates

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