

Impact of an adherence texting program in a large national specialty pharmacy



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Background

- \$100 to \$300 billion in healthcare spend has been attributed to nonadherence in the U.S. annually, representing 3% to 10% of total U.S. health care expenditure¹
- The number of adults who own a smartphone in the U.S reached almost 295 million in 2020²
- Optum Specialty Pharmacy (OSP) utilizes technology to improve adherence, with its newest innovation being the adherence texting program (ATP), which consists of medication dose reminders, motivational quotes, and adherence feedback
- The purpose of this study is to assess if participation in the ATP improves medication adherence and duration on therapy in patients serviced by OSP

End Points

- Proportion of days covered (PDC) in the whole cohort and within three largest subcategories: Multiple Sclerosis (MS), Inflammatory (INF) diseases, and Oncology (ONC)
- Secondary Endpoint: Days on therapy (DOT), additional fills, persistency, and gap days

Methods

- Single-center, IRB waived, retrospective cohort study comparing primary and secondary endpoints for ATP enrollees who haven't opted out of enrollment—Participants (P) versus those who did not enroll - Non-Participants (NP)
- Observation period was between June 2021 and April 2022
- Inclusion Criteria: Patients serviced by OSP with texting as a preferred communication method and who has not opted out of ATP enrollment
- Exclusion Criteria: Patients receiving infused medications and medications administered in the office, patients participating in adherence device program, disease states disqualified from the program due to as needed or irregular administration schedules
- Statistical Analysis: Adherence measured using PDC, DOT, additional fills, and gap days. Propensity score matching and independent t-test with a p value of <0.05 considered significant

Results

Table 1: Baseline Characteristics, Non-Participants vs. Participants

Participation	MS		INF		ONC	
	NP	P	NP	P	NP	P
Gender						
Female	87%	83%	70%	71%	64%	64%
Male	13%	17%	30%	29%	36%	36%
Age – yr						
Median	47	47	48	48	59	58

Figure 1: PDC in MS, INF, ONC, and all cohorts combined at 6 months

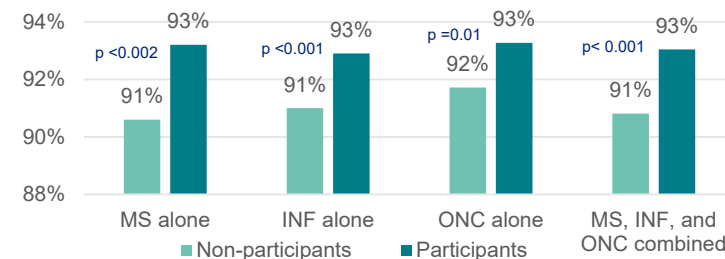
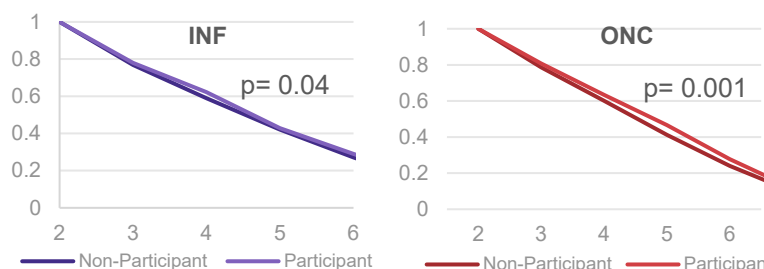


Table 2: Gap days in MS (8 months); INF and ONC (6 months)

Gap Days	MS			INF			ONC		
	NP	P	p value	NP	P	p value	NP	P	p value
Gap Days	16	11	0.002	12	9	<0.001	10	8	0.03

Figure 2: Persistency Curve



Discussion

- ATP has shown statistically significant improvement in PDC within MS, INF, ONC and all three cohorts combined in participant vs non-participant groups
- The program participants had significantly lower number of gap days in INF, MS, and ONC cohorts, and higher persistency in INF and ONC cohorts
- There was no significant increase in DOT and additional fills for MS, INF, and ONC
- Use of propensity score matching reduced covariates between participant and non-participant groups and lowered the risk for confounding biases
- This study shows that text technology can be effectively used to improve medication adherence and reduce gap days with a goal to improve healthcare outcomes

Limitations

- Lack of patient preferred language, race, and insurance type data at baseline to define cohort further
- Short observation period of 6 (INF and ONC) to 8 (MS) months
- Enrollees who refilled a prescription at least once over the study period were included in the participant group and analysis, even though they might have withdrawn from the program early

References

1. Chan AHY, Foot H, Pearce CJ, Home R, Foster JM, Harrison J. Effect of electronic adherence monitoring on adherence and outcomes in chronic conditions: A systematic review and meta-analysis. *PLoS One*. 2022;17(3):e0265715. doi:10.1371/journal.pone.0265715. Accessed May 10, 2022
2. Number of smartphone users in the United States from 2018 to 2025 (in millions)*. Statista. <https://www.statista.com/statistics/201182/forecast-of-smartphone-users-in-the-us/>. Accessed May 10, 2022

Disclosures/Contact

Authors of this presentation have the following to disclose:
Nothing to disclose

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