



Background

DMT adherence is critical to reducing MS disease activity. Despite this, research indicates that DMT adherence often falls below the standard acceptable threshold of 80% [1]. Studies show that patient support programs (PSPs) increase DMT adherence. In a study of 184 patients, PSPs showed a significantly higher average DMT adherence (92.9%) when compared with the control group (61.8%) [2].

Octave's Clinical Insights Program (a human tech PSP) expands upon standard PSP offerings by pairing a person with MS (PwMS) with an MS-certified nurse in a high-touch telehealth model supported by a patient mobile app. The program provides DMT adherence tracking, tolerance checks, dose reminders, bi-weekly nurse led video appointments and ongoing support via in-app chat functionality.

Objective and Hypothesis

We sought to determine whether Octave's Clinical Insights Program improves patient DMT adherence above that of the general MS population and to quantify the difference in adherence between oral and injectable DMTs. The non-parametric Mann Whitney U test was used to test the null hypothesis that the distribution underlying samples are similar.

Methods

PwMS used the Octave Cares mobile app to mark a DMT dose as "taken" or "skipped". If no response was entered, the system automatically marked a dose as missed. Data was then reviewed with the patient's nurse partner on a 2-week cadence.

- Missed Dose Ratio is the number of missed or skipped doses subtracted from the total number of doses divided by the total number of doses.
- Medication adherence was quantified based on two adherences: (i) optimistic based on doses that were marked only by the patients and (ii) pessimistic based on all marked doses (patient and backend system).

The actual adherence can be presumed to be within a range bounded by the optimistic and pessimistic estimates.

Results



Twenty-three PwMS (21 females, ages 28-62 years) from the intervention arm of an ongoing randomized control trial were included in these analyses [3]. Ten were prescribed injectable DMTs and thirteen oral DMTs (Figure 1).

Figure 1: Patient count per DMT and route of administration.

DISCLOSURES: This study was funded by Octave Bioscience. JG is an employee of The University of California, San Diego. She has received research support from Octave.

The Impact of Octave's Clinical Insights (a Patient Support Program) on Medication Adherence

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Oral DMTs had a higher adherence rate (96.7% and 100% for pessimistic and optimistic methods respectively) than injectable DMTs (91.6% and 100% for pessimistic and optimistic methods respectively) (Figure 2 and 3).

Figure 2: Pessimistic (red) and optimistic (blue) adherence rates by patient.

Results (continued)



Figure 3: Pessimistic and optimistic adherence rates for oral and injectable DMTs.

Conclusions

- The results indicate that Octave Clinical Insights participation supports a high level of DMT adherence.
- Higher adherence was seen in oral DMTs versus injectable routes of administration, highlighting the importance of matching patients with compatible modalities of treatment and following up closely on their satisfaction, tolerability, and adherence to medications.
- DMT adherence leads to better outcomes and lower costs [4]. PSPs have also shown a positive impact in patient-reported optimism and tolerance of disease uncertainty [5]. Based on these results, the Octave Clinical Insights program may lead better outcomes and reduced costs.
- Future studies will determine healthcare utilization and patient/physician satisfaction in a larger sample enrolled in the Octave **MOVING-MS Trial**.

References

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Presented at Consortium of Multiple Sclerosis Centers (CMSC), May 31 - June 3, 2023 in Aurora, Colorado.





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- Median duration of PwMS staying in the program was 320 (147) days.
- Median adherence rates were 94.6% and 100% for pessimistic and optimistic methods respectively (Figure 3).
- Adherence rates for both oral and injectable DMTs exceeded published rates of 53%-89.2% for oral and 47%-77.4% for injectable DMTs [6].
- Adherence rates were slightly higher (0.3%) at the 1-month time point compared to the total duration of the study (U=171)p=0.02).

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