

## BACKGROUND

- Symptom management, an important component in the care of patients with multiple sclerosis (PwMS), can be achieved by using a patient app tool to manage symptoms and track/store symptom issues to share with clinicians.
- Multiple Sclerosis Association of America (MSAA) and @Point of Care collaborated to develop complementary apps for use by patients and their clinicians that facilitate sharing of data: *My MS Manager*<sup>™</sup>, a HIPAA compliant patient app, and Multiple Sclerosis @Point of Care, a clinician app. By enhancing the patient app with validated symptom management tools, patients can track and manage their symptoms and improve their quality of life.

## OBJECTIVE

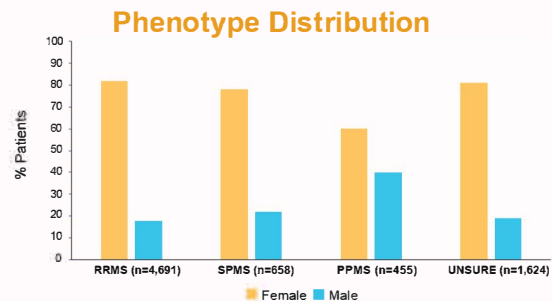
- Evaluate the impact of patient app in assessing differences in symptom severity based on clinical phenotype and in empowering patients to track/manage their MS symptoms.

## METHODS

- MSAA and @Point of Care included validated measures to the *My MS Manager*<sup>™</sup> app to facilitate tracking of
  - Bladder control (Bladder Control Scale; BLC; 11/2019)
  - Depression (Patient Health Questionnaire Score for Depression; PHQ-9; 08/2019)
  - Cognitive function (PROMIS Cognitive Function-Short Form 8a; 03/2019)
- Patient data were analyzed to assess:
  - 1) symptom severity by phenotype,
  - 2) quality of life (QOL) factors most affected by symptom severity, and
  - 3) benefits of frequent app use (> 28 visits) on symptoms.

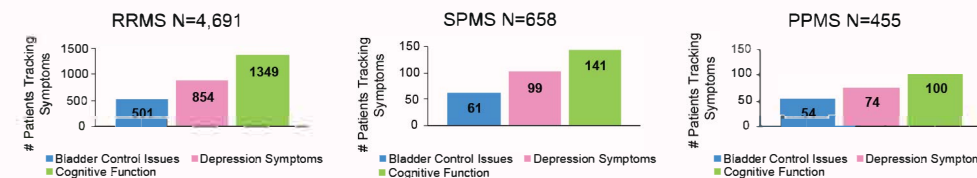
## RESULTS

- 7,428 patients registered on the *My MS Manager* app have already identified their clinical phenotype and/or tracked their bladder control, depression, and cognitive function



## Symptom Tracking

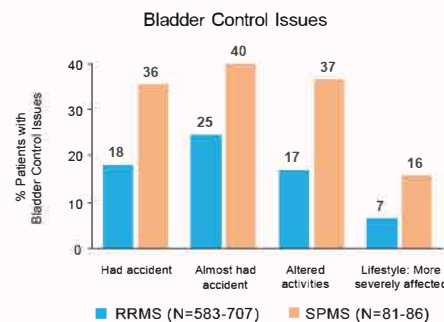
- 7,428 users identified their clinical phenotype and tracked symptoms



## SPMS Patients Compared With RRMS Patients

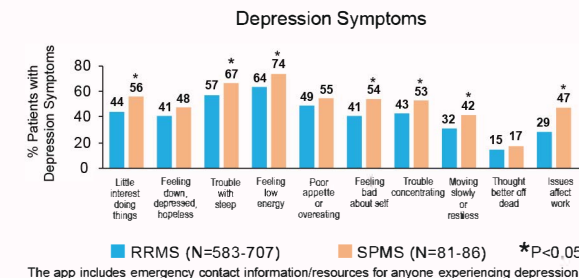
### Bladder Control Issues

- SPMS patients compared to RRMS patients have significantly greater bladder control issues that
  - Increased accidents (36% vs 18%;  $P = 0.0002$ )
  - Increased tendency to have accidents (40% vs 25%;  $P = 0.005$ )
  - Negatively altered their activities (37% vs 17%;  $P = 0.000034$ )
  - Severely affected their lifestyle (16% vs 7%;  $P = 0.014$ )



### Depression

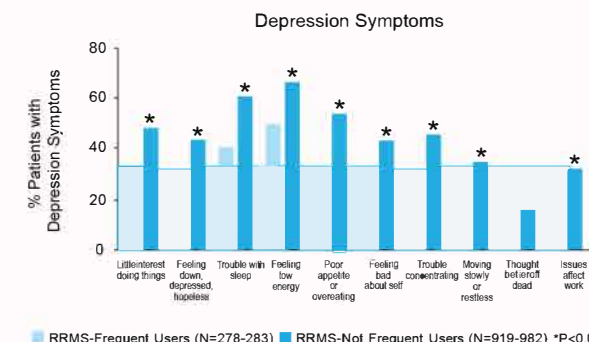
- SPMS patients compared to RRMS patients have significantly greater depression symptoms that
  - Occur "more than half the days/nearly every day"
  - More severely affect their work (>18% difference)



- PPMS compared to RRMS/SPMS patients showed no significant differences in bladder dysfunction, depression, and cognitive function

## Frequent Users Compared to Infrequent Users of My MS Manager App

- RRMS frequent users of the *My MS Manager* app compared to infrequent users show significant benefits in using this app
- Infrequent RRMS users ( $\leq 28$  visits) of the *My MS Manager* app as opposed to frequent RRMS users (>28 visits) experienced significantly **higher** levels of
  - Overall depression severity
  - Loss of interest in doing things
  - Feeling down, depressed, hopeless
  - Trouble falling/staying asleep; sleeping too much
  - Feeling tired/lacking energy
  - Poor appetite or overeating
  - Feeling bad about self/have let myself and family down
  - Trouble concentrating
  - Moving/speaking slowly or being fidgety
  - Difficulty or extreme difficulty in doing their work



## CONCLUSIONS

- 7,428 patients registered on the *My MS Manager* app have already identified their clinical phenotype and/or tracked their bladder control, depression, and cognitive function
- Our data shows that SPMS patients compared to RRMS patients have significantly greater bladder control issues and depression symptoms
- Infrequent RRMS users ( $\leq 28$  visits) of the *My MS Manager* app as opposed to frequent RRMS users (>28 visits) experience significantly **higher** levels of depression severity
- The *My MS Manager* patient app facilitates the ability of patients with MS to record their symptoms utilizing validated measures and empowers them to track, manage and discuss their symptoms with their clinicians.

## Reference

Proprietary data from *My MS Manager* app, 2021.

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