Exploration of factors which influence treatment decisions of patients with Multiple Sclerosis*

AUSTIN HEALTH

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Introduction

The past ten years have brought a wide variety of therapeutic options to patients with Relapsing Remitting Multiple Sclerosis (RRMS). In Australia there are now 12 therapies approved for use in RRMS which can all be used as first, second or third line treatments. This brings both advantages and challenges, as neurologists and Multiple Sclerosis (MS) Nurses identify how best to inform, educate and assist patients in making complex treatment decisions. The World Health Organisation (WHO) has noted the importance of a multidisciplinary approach to promote adherence to long-term therapies[1]. Shared decision-making ensures that patients are actively involved, informed and engaged in their treatment choice, leading to improved expectations and outcomes[2]. The Neuroimmunology service, N-CRESS, at Austin Health, employs a therapeutic team approach, with patient, neurologist and MS Nurse contributing to discussions around treatment choice and decision-making.

In a complex treatment landscape for an unpredictable disease, it is important to understand the factors that influence decision-making. It is equally important to ensure that therapeutic teams know what information and support patients need to make complicated and educated treatment decisions. WHO recommends that adequate information, understanding of the thought processes involved in decision-making, and appropriate tools are utilised to support adherence[1]. In this study we assess how patients view the various factors and information sources that contribute to making an informed treatment choice, their satisfaction with the process, and confidence with their decision. Importantly, we identify which factors are most influential when making their treatment decision.

Objectives

- Identify the factor rated by Patients with RRMS (PwRRMS) as having most important influence on treatment choice
- Identify in rank order other factors important in making this decision
- Identify which information sources were useful
- Determine level of satisfaction with process around choosing treatment
- Determine level of certainty with treatment choice

Methods

This non-interventional, exploratory, single-centre study was approved as a Quality Improvement and Innovation project by the Human Research Ethics Committee at Austin Health.

We aimed to enrol a minimum of 75 PwRRMS split into 3 groups:

1. Commencing MS treatment for the first time (treatment naïve)
2. Switching to an alternate MS treatment
3. Stable on treatment for 12-24 months

- At least 25 patients in each group, to be enrolled from those attending the weekly MS clinic
- All patients must have had a treatment decision discussion with both a MS neurologist and MS Nurse
- Treatment naïve and patients switching treatments to be enrolled within one month of treatment decision.
- Written informed consent obtained; single survey completed

The survey asked them to consider how important each of the following **ten factors** were in **influencing treatment choice** for their new or current MS treatment, and then asked them to **rank** each of these factors from most important to least important:
- How safe they believe the medication to be
- How effective they believe the medication to be
- Ease of use or convenience
- How the medication is taken (injection/tablet/infusion)
- How the medication works in MS
- Whether the medication requires follow-up monitoring
- Perception of risk (side effects) vs benefit (likely effectiveness)
- Value of discussion with an MS neurologist
- Value of discussion with an MS Nurse
- Concern about being disabled by MS

The survey also asked:
- What tools, information, discussion/decision aids were useful?
- Can you suggest any tools, information, discussion/decision aids (not supplied) that would have been helpful?
- Were you satisfied with the way the process around choosing treatment was conducted?
- How comfortable/certain do you feel about your treatment choice, choosing one of the faces below (5 point Likert scale)
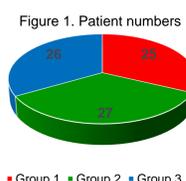
Results

78 participants (81% female) were enrolled to this study and assigned to one of three groups (see Figure 1):
Group 1: Treatment naïve
Group 2: Switching treatment
Group 3: Stable on treatment

Figure 1. Patient numbers
Group 1 (25), Group 2 (27), Group 3 (26)

The factors ranked first by most participants in influencing treatment choice were (in order):
1. Concern about being disabled by MS (31/78 participants)
2. Perception of efficacy (16/78 participants)
3. Perception of safety (11/78 participants)
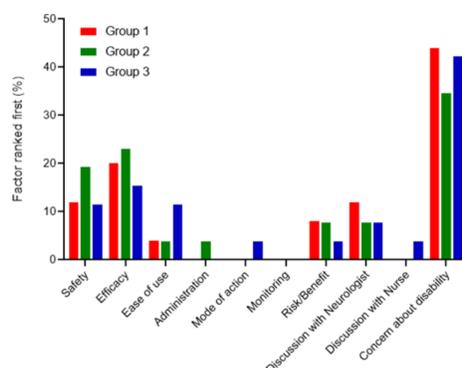This ranking order was consistent across all three groups (see Figure 2)

Figure 2. Primary factor rankings for each group. The horizontal axis shows the factors listed in the survey. The vertical axis indicates the percentage of each Group ranking that factor as "1" (most important). N=25, 27, 26 for Groups 1, 2 & 3, respectively. No significant differences were identified between groups 1, 2 and 3. Two-way ANOVA with post-hoc Tukey's multiple comparison test.

Ranked consistently of least importance was whether the medication required follow-up safety monitoring (eg. frequency of blood tests). Figure 3 shows complete rankings for combined groups.

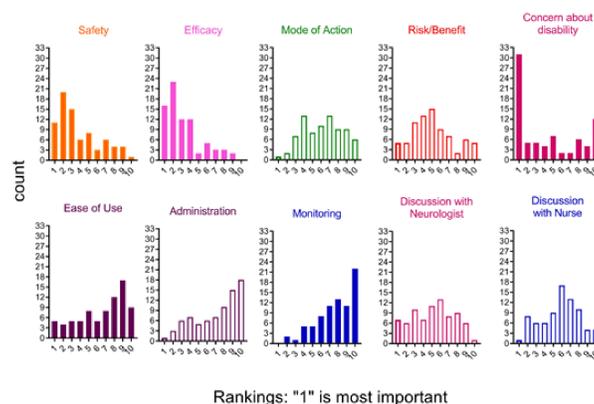Rankings: "1" is most important

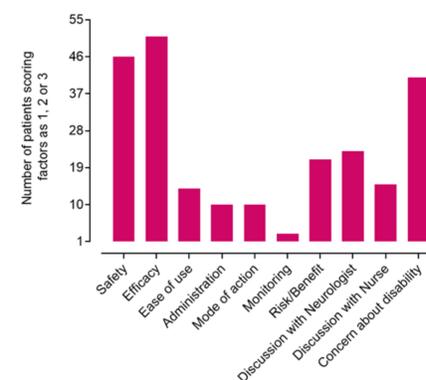Figure 3 shows the combined rankings of all three groups across all ten factors.

Figure 4 indicates that efficacy, safety and disability outweigh all other considerations (see combined rankings of 1, 2 and 3)

Combining rankings of 1, 2 and 3 (Figure 4) shows that efficacy, safety and disability are the predominant patient concerns.

97% of participants reported they **were satisfied** with the process around choosing treatment.

92% reported they felt **very or entirely comfortable** with their treatment decision.

When considering which **tools, information, discussion and decision aids** were useful in supporting their treatment decision-making, most participants reported that Consumer Medicine Information booklets were helpful (92%); as was the internet (72%).

Discussion with family and friends was equivocal (51%), and social media was not rated by many as helpful (24%).

Only a few patients had suggestions for additional information not supplied (18%).

No participants were excluded because they had not had a discussion with both an MS Nurse and MS Neurologist, reflecting our routine practice where treatment choices are only determined after a shared decision-making consultation process.

Conclusion

The results indicate that concern about preventing disability is the main driving factor for PwRRMS in choosing between treatments, regardless of whether they are starting for the first time, planning a switch in therapy or are currently stable on an MS medication. Perceptions of treatment efficacy and safety are also very important for patients when selecting an MS treatment.

Our findings show that patient-centered treatment choice discussions must take account of prognostic indicators of disability and the likelihood of improving this with treatment. Balanced discussion and education about the relative treatment efficacy and safety of drugs is also needed for patients to make informed treatment decisions.

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