The MS-SUPPORT Decision Aid Promotes Collaborative Decision-making and Treatment Adherence for Multiple Sclerosis

THE MS DECISIONS STUDY
Research supported by Biogen*

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Background

- Clinical guidelines recommend incorporating patient preferences into decision-making about disease modifying treatments (DMTs) to improve acceptance of and adherence to DMTs for the treatment of multiple sclerosis (MS).[1]
- Adherence to DMTs is essential to achieve their full benefit and improve outcomes but can be a challenging for some patients.[2]
- We developed a novel shared decision making tool, MS-SUPPORT, that helps patients communicate their preferences to healthcare providers (HCPs) so they can be incorporated into decisions about DMT and potentially promote adherence.[3]

Objectives

- To develop a practical tool to help MS patients and healthcare providers (HCPs) make better collaborative treatment decisions, and to assess its usability, feasibility and clinical utility.
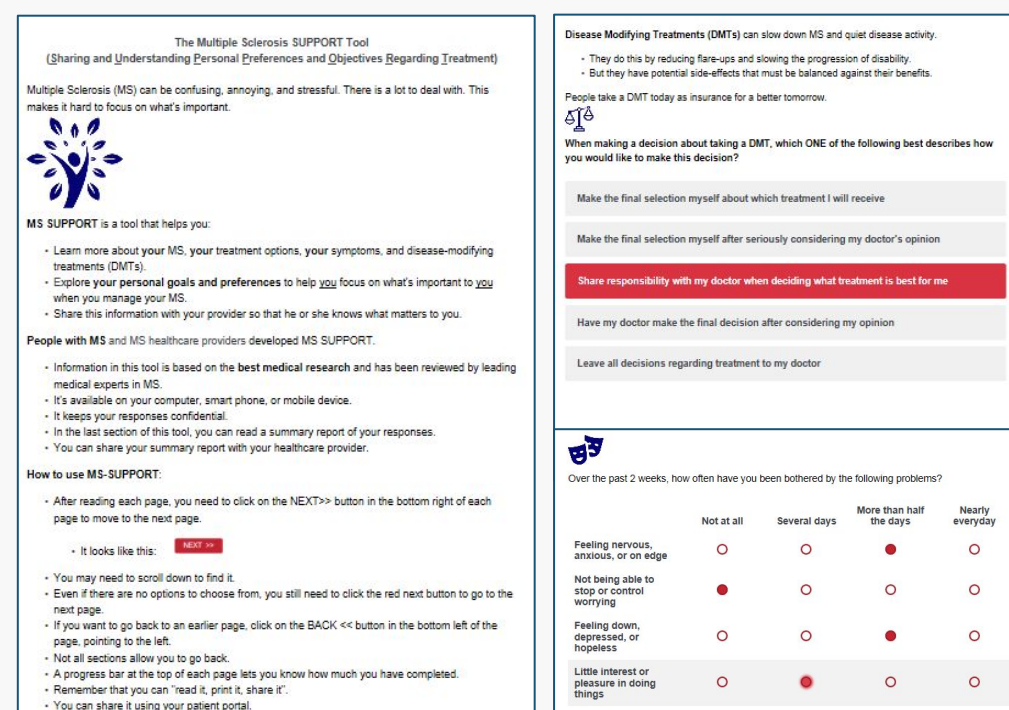
Participants

Patients:
- Confirmed MS diagnosis
- Age 21-75
- Web access
- Upcoming MS HCP appointment

HCPs:
- Neurologist
- Physician Assistants
- Registered Nurses
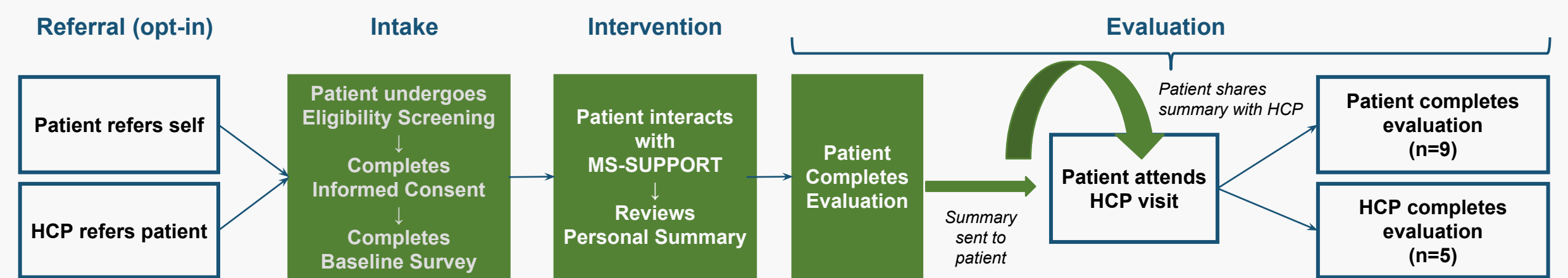- Nurse Practitioners

Intervention

MS-SUPPORT is an interactive, patient-centered, web-based tool (Figure 1)

- Designed for MS patients to complete before a clinic visit
  - Assesses their treatment goals, preferences, clinical situation, treatment history, health behaviors, and adherence behaviors;
  - Provides them with targeted educational feedback;
  - Generates a summary that can be shared with their HCP. (can be printed out, sent via a patient portal or by email)
  - Takes about 30 minutes to complete (can be saved and returned to at a later time)

Figure 1: Example of MS-SUPPORT User Experience

Schematic

Referral (opt-in)
- Patient refers self
- HCP refers patient

Intake
- Patient undergoes Eligibility Screening
  ↓
  Completes Informed Consent
  ↓
  Completes Baseline Survey

Intervention
- Patient interacts with MS-SUPPORT
  ↓
  Reviews Personal Summary
- Patient Completes Evaluation

Summary sent to patient

Evaluation
- Patient attends HCP visit
- Patient shares summary with HCP
- Patient completes evaluation (n=9)
- HCP completes evaluation (n=5)

Results

Table 1: Patient Characteristics (n=16)

Mean age	53.75 (37-71)
Gender, n (%)	
Male	2 (12.5)
Female	14 (87.5)
Race, n (%)	
White/Caucasian	11 (64.7)
Black or African American	5 (29.4)
Native American or Alaska Native	1 (5.9)
Education, n (%)	
2-year college or technical school	3 (18.8)
College graduate	10 (62.5)
Graduate school or professional degree	3 (18.8)
Type of MS, n (%)	
Relapsing remitting	12 (75.0)
Primary progressive	2 (12.5)
Secondary Progressive	1 (6.25)
Unsure	1 (6.25)
DMT Use, n (%)	
Current use	10 (62.5)
Past use only	2 (12.5)
Never	4 (25.0)
Last DMT switch, n (%)	
< 1 year ago	4 (33.3)
1-5 years ago	5 (41.7)
>5 years ago	2 (16.7)
Never switched	1 (8.3)
Not applicable	4 (n/a)

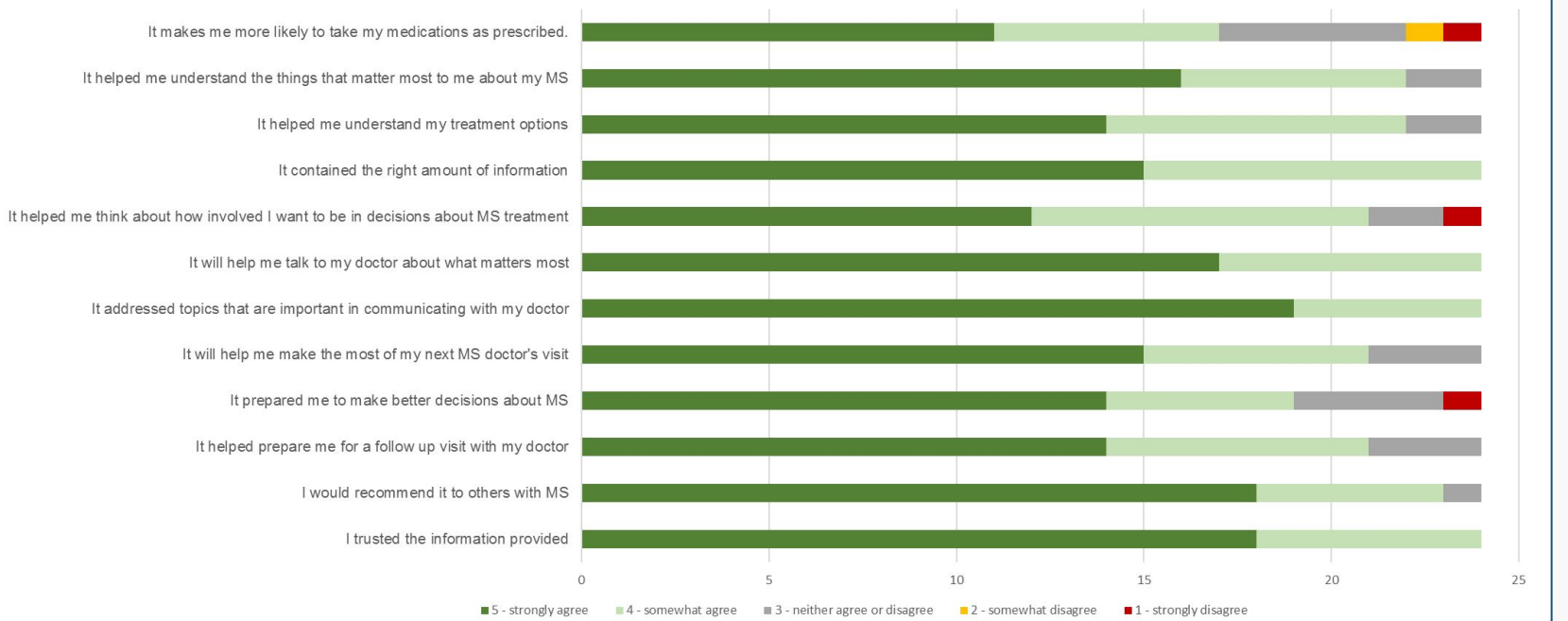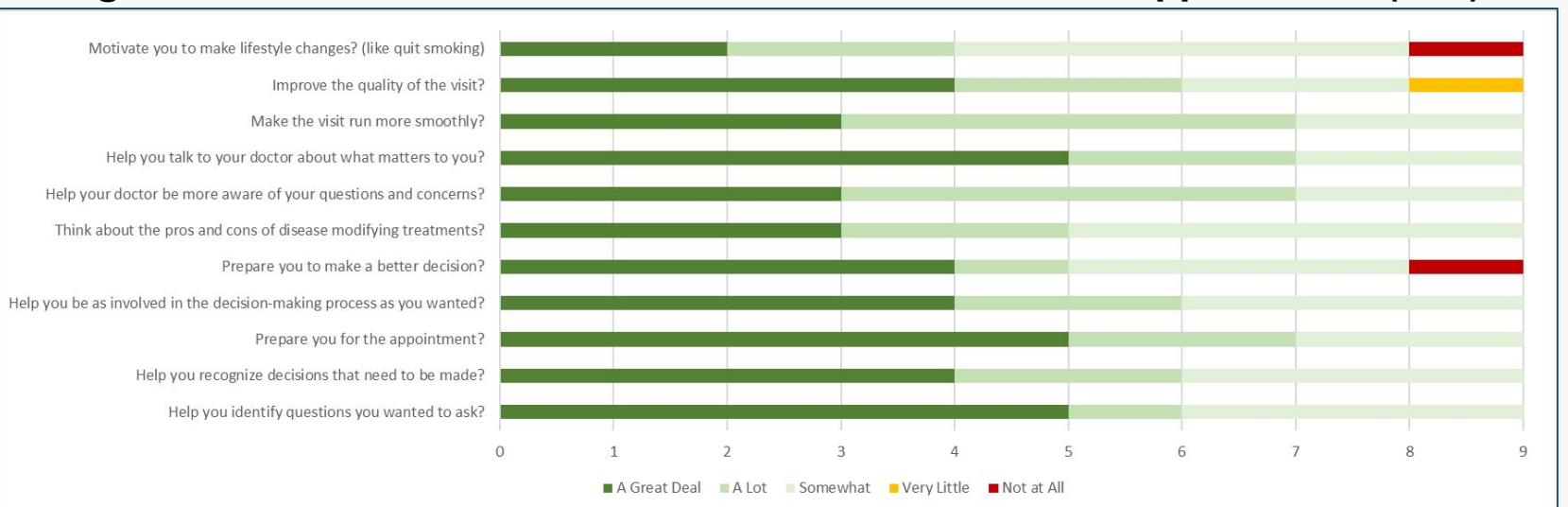### Figure 3. Patient Evaluation of MS-SUPPORT Before HCP appointment (n=24)

Figure 4: Patient Evaluation of MS-SUPPORT After HCP appointment (n=9)

Figure 5a: HCP Evaluation of MS-SUPPORT After HCP appointment (n=5)

HCPS were asked: *"In your opinion, to what extent did the use of MS SUPPORT by your patient…"*
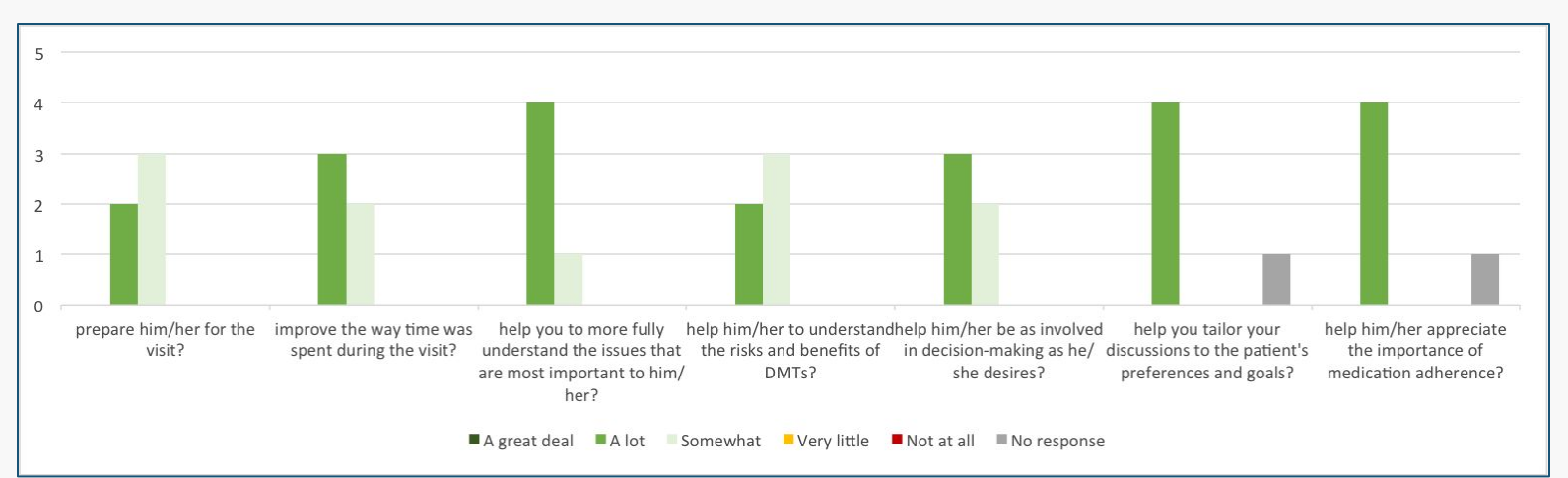
Figure 2. Patient Baseline Responses (n=16)

Evaluations

- MS-SUPPORT was evaluated by 24 patients* and 3 HCPs using web-based surveys.
- During alpha-testing, patients did not attend an HCP visit; so post-HCP visit evaluations were not collected; evaluations during this phase of development focused on usability (n=11).
- During beta-testing, patients attended an HCP visit; evaluations during this phase of development addressed impact on decision-making, communication, adherence, workflow and clinical visits (n=16).

*Note that 2 patients participated in both phases (n=24).

HCP Evaluation Responses

- 3 HCPs completed 5 evaluations of 5 patient encounters
- 3 patient summaries were received by HCPs (remainder were forgotten or unable to print); 2 were handed to HCP during visit, 1 was emailed
- All 3 summaries were reviewed by HCP, taking 1-5 minutes
- All reported the information in the summary was very or somewhat useful
- All would definitely or probably recommend MS-SUPPORT to a colleague

Figure 5b: HCP Evaluation of MS-SUPPORT After HCP appointment (n=5)

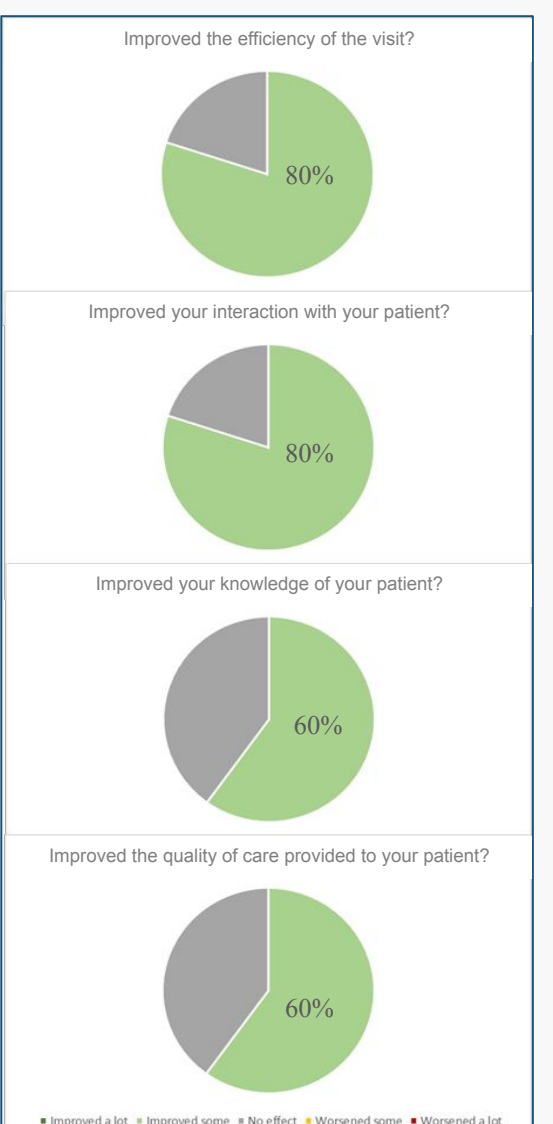HCPS were asked *"How do you think MS SUPPORT affected the following?"*

Key Findings

Patients:
- Patients found MS-SUPPORT easy to use, easy to understand, and trusted the information in the tool (Figure 3).
- MS-SUPPORT helped patients talk with their HCPs, prepare for the visit, and make decisions about treatment (Figure 4). It also:
  - improved the quality of the visit.
  - helped patients understand the importance of taking DMTs as prescribed
  - motivated positive lifestyle changes (exercise, smoking, weight management).
- All patients wanted to share their personal summary with their HCPs
  - 67% shared it with their HCP, finding it easy to share.

HCPs:
- HCPs reported a favorable impact on preparing the patient for the visit, quality of care provided, and efficiency of the visit (Figure 5a-b).

Implications

- MS-SUPPORT appears feasible for use by patients and HCPs in real-world clinical settings.
- MS-SUPPORT may facilitate collaborative decision-making, improve adherence, promote healthy lifestyles, and improve clinical efficiency.
- MS-SUPQPORT may help HCPs adhere to clinical guidelines recommending incorporating patient preferences into decision-making about DMTs.

Limitations

- Small sample size limits generalizability.
- Lack of a control group may have resulted in response bias.
- Low HCP response due to difficulty contacting non-referring HCPs.
- NOTE: Issues with printing and sharing the patient summary with HCPs were addressed during beta-testing.

Next Steps

- Randomized controlled trial to evaluate its impact on DMT use and decision-making processes.

References

1. Rae-Grant A, Day GS, Marrie RA, et al. Practice guideline recommendations summary: DMTs for adults with multiple sclerosis. Neurology Apr 2018, 90 (17) 777-788.
2. V. Devonshire, Y. Lapierre, R. Macdonell, et al. The Global Adherence Project (GAP): a multicenter observational study on adherence to disease-modifying therapies in patients with relapsing-remitting multiple sclerosis. 201. https://doi.org/10.1111/j.1468-1331.2010.03110.x
3. Col NF, Solomon AJ, Springmann V, Garbin C, Ionete C, Pbert L, Alvarez E, Tierman B, Hopson A, Kutz C, Berrios Morales I, Griffin C, Phillips G, Ngo L. Whose Preferences Matter? A Patient-Centered Approach for Eliciting Treatment Goals. Med Decis Making 2018; 38(1):44-55.