MSProDiscuss™ is a useful tool to aid discussion of multiple sclerosis disease progression: Results from a large, real-world qualitative survey

Tjalf Ziemssen¹, Gavin Giovannoni², Enrique Alvarez³, Virender Bhan⁴, Carrie Hersh⁵, Olaf Hoffmann⁶, Celia Oreja-Guevara⁷, Rene R. Robles-Cedeño⁸, Maria Trojano⁹, Patrick Vermersch¹⁰, Pamela Dobay¹¹, Mudeer Khwaja¹², Bianca Stadler¹², Thomas Hach¹², Daniela Piani-Meier¹², Jason Burton¹³

Poster Session: P0885

¹Department of Neurology, University Clinic Carl-Gustav Carus, Dresden, Germany; ²Blizard Institute, Barts and the London School of Medicine and Dentistry, Queen Mary University of London, London, United Kingdom; ³University of Colorado School of Medicine, Aurora, CO, United States of America; ⁴University of British Columbia, Vancouver, BC, Canada; ⁵Cleveland Clinic Lou Ruvo Center for Brain Health, Las Vegas, NV, United States of America; ⁶Alexianer St. Josef Potsdam GmbH, Potsdam, Germany; ⁷Multiple Sclerosis Center at the University Hospital San Carlos, Madrid, Spain; ⁸Neuroimmunology and Multiple Sclerosis Unit, Girona, Spain; ⁹University of Bari, Bari, Italy; ¹⁰Univ. Lille, Inserm U1172, CHU Lille, FHU Imminent, Lille, France; ¹¹Real World Evidence Solutions, IQVIA Technology and Services, Basel, Switzerland, ¹²Novartis Pharma AG, Basel, Switzerland; ¹³Centre for Neuromuscular and Neurological Disorders, Western Australian Neuroscience Research Institute, The University of Western Australia, Perth, Australia
Disclosures

Tjalf Ziemssen has received compensation for consulting from Biogen, Bayer, Celgene, Novartis, Roche, Sanofi, and Teva and for research from Bayer, BAT, Biogen, Novartis, Teva, and Sanofi. GG has received compensation for consulting from AbbVie, Actelion, Atara Bio, Biogen, Celgene, Sanofi-Genzyme, Genentech, GlaxoSmithKline, Merck-Serono, Novartis, Roche and Teva, and for research from Biogen, Roche, Merck, Merck-Serono, Novartis, Sanofi-Genzyme and Takeda. He has received personal compensation from Elsevier for serving as an editor on MSARD.

Gavin Giovannoni is a steering committee member on the daclizumab trials for AbbVie, the BG12 and daclizumab trials for Biogen, the fingolimod and siponimod trials for Novartis, the laquinimod trials for Teva and the ocrelizumab trials for Roche. He has also received consultancy fees for advisory board meetings for oral cladribine trials for Merck KGaA and Sanofi-Genzyme, and in relation to DSMB activities for Synthon BV, as well as honoraria for speaking at the Physicians’ summit and several medical education meetings. He is also the Co-Chief Editor of Multiple Sclerosis and Related Disorders (Elsevier).

Enrique Alvarez has received compensation for consulting from Actelion, Biogen, Celgene, EMD Serono, Genentech, Genzyme, Novartis, Teva, and TG Therapeutics and for research from Biogen, Genentech, Novartis, and Rocky Mountain MS Center.

Virender Bhan has received compensation for consulting from Novartis.

Carrie Hersh has received compensation for consulting and research from Novartis, Biogen and Genentech and for consulting from EMD Serono and consulting and speaker bureau from Genzyme.

Olaf Hoffmann has received compensation for consulting from Biogen, Roche, Merck, Novartis, Sanofi, and Celgene, for non-CME activities from Alexion, Novartis, Roche and Sanofi and for research from Novartis, Sanofi and Biogen and travel support from Celgene.

Celia Oreja-Guevara has received compensation for speaking and/or consultancy from Biogen, Sanofi-Genzyme, Merck, Roche, Teva, and Novartis.

Rene R. Robles-Cedeño has received compensation for consulting from Biogen, Roche, Novartis, Merck, Sanofi, Genzyme and Teva.

Maria Trojano has received compensation for consulting and speaker bureau from Biogen, Merck, Roche and Novartis.

Patrick Vermersch has received honoraria and consulting fees from Biogen, Sanofi, Teva, Novartis, Merck, Celgene and Roche, and research support from Biogen, Sanofi, Roche and Merck. Pamela Dobay is an employee of IQVIA Technology and Services AG, Basel, Switzerland, which conducted this survey.

Jason Burton has received compensation for consulting and speaker bureau from Novartis.

Mudeer Khwaja, Bianca Stadler, Thomas Hach, and Daniela Piani-Meier are employees of Novartis.

The study was funded by Novartis Pharma AG, Basel, Switzerland.

Medical writing support was provided by Gillipsie Minhas and Uma Kundu (employees of Novartis Healthcare Pvt. Ltd., Hyderabad, India). The final responsibility for the content lies with the authors.
Background and objective

- Multiple Sclerosis Progression Discussion (MSProDiscuss™) tool intended to facilitate physician-patient discussion on MS disease progression and to sensitize about the risk of transitioning from RRMS to SPMS\(^1\)-\(^3\)
- The tool is freely available online at [www.msprodiscuss.com](http://www.msprodiscuss.com) and on neurocompass educational portal

**Objective**

To evaluate the usability and usefulness of MSProDiscuss tool in discussing disease progression in daily clinical practice
Methodology

HCPs consented for participation in an online survey-based feedback on usability and usefulness of MSProDiscuss tool.

**Initial questionnaire**
HCPs completed individual questionnaire after each patient consultation.

**Final questionnaire**
HCPs completed final questionnaire to capture overall experience, feedback, and recommendations.

**Data analysis**
Feedback after completing the initial and final questionnaire were compiled separately and presented descriptively.¹

**Step 1**
- HCPs used MSProDiscuss on a broad range of MS patients excluding patients with CIS and PPMS.

**Step 2**
- Initial questionnaire
- HCPs completed individual questionnaire after each patient consultation.

**Step 3**
- Final questionnaire
- HCPs completed final questionnaire to capture overall experience, feedback, and recommendations.

**Evaluation parameters**
- Time needed for completion, comprehensibility of the questions included, usability and usefulness (initial questionnaire); additionally, integration into clinical practice (final questionnaire).²

**Step 4**
- Data analysis
- Feedback after completing the initial and final questionnaire were compiled separately and presented descriptively.¹

**Target patient population**
- Understanding, usefulness, usability, and integration/adoption of the MSProDiscuss tool into daily clinical practice.

**Test parameters**
- Both weighted and unweighted percentages were calculated. Feedback was provided on a 5-point Likert scale.

CIS, clinically isolated syndrome; HCP, healthcare practitioner; MS, multiple sclerosis; PPMS, primary progressive MS.
Results

Survey Participants

Global survey: HCPs came from 34 countries

HCPs from North America, Europe, Asia, South America, Africa, and Australia participated in the usability and usefulness testing

There were 301 HCPs who participated in the survey

- 246 MS specialist neurologists
- 25 General neurologists
- 23 MS Nurses
- 6 Neurology nurse practitioners / physicians assistants
- 1 Other specialization

Tool was tested on a large number of patients

>6974 MS patients
77% RRMS

- HCPs participated in the online survey to provide their feedback between July and December 2019
- A total of 301 HCPs provided feedback on at least one questionnaire
- The HCPs also provided general feedback and recommendations for further improvement of the tool

HCP, healthcare practitioner; MS, multiple sclerosis; RRMS, relapsing-remitting MS
Majority of HCPs agreed or strongly agreed that MSProDiscuss is beneficial in their practice

- In over **97%** of the instances, HCPs indicated that the time taken to complete the tool was considered satisfactory (1–4 minutes)
- In **94%** of cases, HCPs felt that the patients understood the questions well
- **91%** were willing to use the tool again in the same patient
- The tool was found useful in discussing disease progression in general, MS symptoms and its impact on daily activities in **88%** of cases and cognitive function in **79%**

Results as of 31 Dec 2019. *Percentages are based on unweighted results; weighted results were similar*

HCP, healthcare practitioner; MS, multiple sclerosis

---

<table>
<thead>
<tr>
<th>Feedback from initial questionnairea</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time to completion</td>
<td>6000</td>
</tr>
<tr>
<td>Comprehensibility of questions</td>
<td>6000</td>
</tr>
<tr>
<td>Repeat use of MSProDiscuss™ in a patient</td>
<td>6000</td>
</tr>
<tr>
<td>Discussion of MS symptoms and impact on daily activities</td>
<td>6000</td>
</tr>
<tr>
<td>Discussion of progression</td>
<td>6000</td>
</tr>
<tr>
<td>Traffic light system in progression discussion</td>
<td>6000</td>
</tr>
<tr>
<td>Discussion of MS symptoms and impact on cognitive function</td>
<td>6000</td>
</tr>
</tbody>
</table>

- **Time to completion**: 97.3%
- **Comprehensibility of questions**: 93.5%
- **Repeat use of MSProDiscuss™ in a patient**: 90.5%
- **Discussion of MS symptoms and impact on daily activities**: 87.8%
- **Discussion of progression**: 87.5%
- **Traffic light system in progression discussion**: 87.4%
- **Discussion of MS symptoms and impact on cognitive function**: 78.6%
Majority of HCPs think that it is feasible to integrate MSProDiscuss in their daily clinical practice

- Overall feedback was similar to and consistent with the findings from the individual questionnaires.
- 9 out of 10 HCPs would recommend MSProDiscuss to a colleague and willing to integrate MSProDiscuss into their clinical practice.

Results as of 31 Dec 2019. *Percentages are based on unweighted results; weighted results were similar. HCP, healthcare practitioner; MS, multiple sclerosis.
Recommendations on possible improvements

Several of the recommendations for improvement have already been implemented.

**Themes for improvement**

- Expand tool components/questions
- Improve/expand cognitive assessment
- Include additional variables
- Improve tool sensitivity
- Include longitudinal follow-up
- Improve user interface
- Provide self-administered version
- Traffic lights should be explained more or quantified

**Recommendations for expanding MSProDiscuss, including additional variables that can be included**

- Add time of disease progression or duration of disease
- Expand cognitive function and fatigue evaluation
- Add adherence to treatment
- Add more details on impact of disease on daily activities, e.g., relationships, social, work, sexuality, emotional state, etc.
- Include/interface with cognitive assessment scales

HCPs described MSProDiscuss as a "good," "helpful," and "easy to use" tool in clinical practice.
Feedback and improvements already implemented

Include longitudinal follow-up
Integration of MSProDiscuss in electronic-health record systems are ongoing, which will not only facilitate the tool’s use, but also allow easier longitudinal follow-up and better visualization of results.

Improve user interface
The user interface has been enhanced for easier navigation, and have eliminated any unnecessary interactions for a streamlined, less time-consuming experience.

Improve tool sensitivity
The sensitivity of the tool was further improved for patients with lower EDSS scores and with confounding symptoms like fatigue.

Provide self-administered version for patients
A patient version of the tool has been created (available at www.yourms.com) which can be pre-filled by the patient, potentially with help from the caregiver. YourMS covers all MS symptoms, and ensures that the patient comes to the consultation prepared.

EDSS, Expanded Disability Status Scale; HCPs, healthcare practitioner
Conclusions

• MSProDiscuss is a usable and useful tool to facilitate physician-patient discussion on disease progression in daily clinical practice by capturing structured disease history

• The findings from this real-world study suggest that:
  - MSProDiscuss is easy to use (time taken to complete within routine consultation ranged from 1-4 mins)
  - Questions included in MSProDiscuss are easy to comprehend by patients, and are similar to what an HCP would normally ask in a consultation
  - MSProDiscuss is easy to integrate into clinical practice

Thank you