



**Identifying gaps in knowledge,
skills and confidence among
MS specialists to facilitate
Improved MS care**

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BACKGROUND

- Healthcare providers specializing in MS (HCP-MS) face an evolving treatment and clinical landscape, with a patient population who requires advanced care
- HCP-MS' ability to make clinical decisions and optimize patient care may be impacted by gaps in knowledge, skill and confidence, as well as contextual and systemic challenges

OBJECTIVES

- To assess HCP-MS' clinical practice gaps and challenges, their associated causes, and impact on the care of people with MS



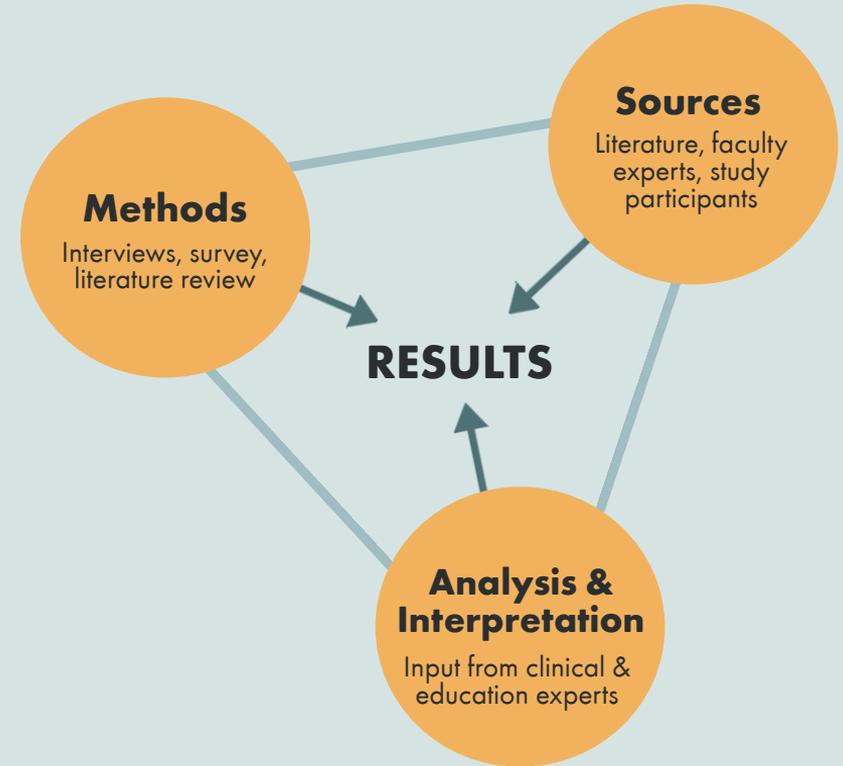
METHODS

- In this mixed-methods study, 333 neurologists and 135 advanced practice nurses in Canada, France, Germany, Italy, Spain, the United Kingdom and the United States participated by either:
 - ❖ Taking part in a 45 minutes in-depth, semi-structured qualitative interview
 - ❖ Completing a 15 minutes online survey where they responded to questions to assess their own level of knowledge, skills, and confidence

| | | COUNTRIES | | | | | | | Total |
|-------------|-----------|-----------|---------|-------|-------|----|----|--------|-------|
| | | France | Germany | Italy | Spain | UK | US | Canada | |
| Neurologist | Interview | 4 | 4 | 4 | 4 | 4 | 6 | 4 | 30 |
| | Survey | 41 | 41 | 40 | 41 | 40 | 60 | 40 | 303 |
| | Total | 45 | 45 | 44 | 45 | 44 | 66 | 44 | 333 |
| Nurse | Interview | 3 | 3 | 3 | 3 | 3 | 4 | 3 | 22 |
| | Survey | 16 | 15 | 15 | 15 | 15 | 20 | 16 | 113 |
| | Total | 19 | 18 | 18 | 18 | 18 | 24 | 19 | 135 |

METHODS

- **Qualitative data:** Thematic analysis using QSR International (2019) NVivo Qualitative Data Analysis Software version 12
- **Quantitative data:** Analyzed with IBMSPSS Statistics for Windows, version 26, using ANOVA and chi-squares for comparison by:
 - ❖ Country
 - ❖ Years of experience
 - ❖ Practice setting
 - ❖ MS certification status
- **Results triangulated** with data from the literature, and interpreted with educational and clinical experts



RESULTS: Use of guidelines

- Current guidelines perceived as insufficient to manage complex needs of MS patients
- As a result, neurologists rely on their experience to provide treatment, which can lead to inconsistent care:

“Guidelines are a basis; it’s no obligation; you can read up when you are indecisive; I usually don’t look them up. It’s more of a back-up. If somebody starts with a very strong flare, you can start with a highly potent product, one that you would normally give in the later course. Those decisions are made based on your experience; then you can deviate from the guidelines.”

- Neurologist, Germany

“Because there are several treatment options, and no guidelines likely to establish a specific sequence of products. As a result, sequencing and timing is left on individual physician’s sensitiveness.”

- Neurologist, Italy

“I find that in MS we miss clear guidelines that are shared with all, I have the impression that it is all about small groups working on their own and poorly sharing the information.”

- Neurologist, France

RESULTS: Assessing and Monitoring Disease Progression

- Tests of cognitive or neurological function perceived as time-consuming, potentially inaccurate
 - ❖ Many nurses and neurologists report low skills administering various tests and assessments used to monitor disease progression
- HCP-MS would prefer that these tests and assessments are administered by additional specialists, including psychiatrists

| % of nurses and neurologists who reported a skill gap** when interpreting and administering cognitive functioning tests | | Neurologists | Nurses |
|---|------------|--------------|--------|
| 25ft walking test | Administer | 42% | 61% |
| | Interpret | 44% | 67% |
| Standardized neurological assessments (EDSS, NEDA, NEPAD) | Administer | 38% | 67% |
| | Interpret | 36% | 66% |
| Cognitive functioning tests (e.g., SPFT, BICAMS or MACFIMS) | Administer | 68% | 67% |
| | Interpret | 70% | 75% |

“We do symbol digit modality testing yearly for all of our patients trying to monitor for cognition, but it’s one of those things that it’s so expensive to send a patient for neuro-psychological testing that we don’t always end up getting them in...”

- Nurse, US

“Disease progression is hard to establish [...] Some patients have their motion ability compromised; some others have their mental abilities compromised. A scale that only establishes standard motion values is not fully helpful in assessing disease progression for all patients, who may vice versa need additional neurological or urologic sort of evaluation criteria.”

- Neurologist, Italy

** A **skill gap** is when participants responded with 1, 2 or 3 on a 5-point scale, where 1=Very Low, 2=Low, 3=Low-acceptable, 4=Advanced, 5=Optimal

RESULTS: Individualizing and Optimizing Treatment

- 39% of neurologists (higher in the UK, Canada and Italy, $p < .05$) and 44% of nurses report low-acceptable skills integrating patient goals into treatment recommendations
- 28% of neurologists and 62% of nurses reported low-acceptable skills to make decisions about treatment sequencing

"...the question still is, should we use the high efficacy therapies early on and really blast the immune system and sort of suppress everything? Or should we not? That's a big challenge."

- Neurologist, Canada

| % (n) of HCPs who reported a skill gap** when: | | USA | UK | Canada | France | Spain | Germany | Italy | Total |
|---|-------------|-----|-----|--------|--------|-------|---------|-------|-------|
| Integrating patient's individual goals into treatment recommendations | Neurologist | 33% | 55% | 45% | 40% | 33% | 22% | 47% | 39%* |
| | Nurse | 25% | 40% | 38% | 63% | 53% | 53% | 40% | 44% |
| Making decisions about sequencing of MS treatments | Neurologist | 32% | 36% | 38% | 22% | 24% | 20% | 25% | 28% |
| | Nurse | 38% | 62% | 44% | 92% | 87% | 67% | 57% | 62%* |

* Significant difference at $p < .05$

** A **skill gap** is when participants responded with 1, 2 or 3 on a 5-point scale, where 1=Very Low, 2=Low, 3=Low-acceptable, 4=Advanced, 5=Optimal

RESULTS: Adverse Event Management

- Elevated numbers of HCP-MS reported low-acceptable skills identifying and managing infections and cardiac issues
- Conclusively identifying and managing the adverse event is a challenge when the HCP is unfamiliar with patient history or treatment used

“The hardest side effect outside of the real scary stuff is just the nebulous side effects, ‘I don’t feel as good’ [...] Especially when patients are well-controlled, it’s hard to want to switch them to something else [...] Is that just their situation? Is it the drug? What is it?”
- Nurse, US

| % (n) of HCPs who reported a skill gap** when: | | USA | UK | Canada | France | Spain | Germany | Italy | Total |
|--|-------------|-----|-----|--------|--------|-------|---------|-------|-------|
| Identifying changes in heart rate | Neurologist | 62% | 45% | 63% | 37% | 37% | 29% | 48% | 47%* |
| | Nurse | 48% | 53% | 44% | 63% | 73% | 27% | 47% | 48% |
| Managing changes in heart rate | Neurologist | 58% | 63% | 83% | 44% | 44% | 51% | 53% | 56% |
| | Nurse | 43% | 67% | 56% | 75% | 60% | 40% | 47% | 55% |
| Identifying opportunistic infections | Neurologist | 43% | 45% | 58% | 37% | 46% | 44% | 53% | 46% |
| | Nurse | 43% | 80% | 75% | 75% | 60% | 67% | 53% | 64% |
| Managing opportunistic infections | Neurologist | 43% | 45% | 58% | 37% | 46% | 44% | 53% | 46% |
| | Nurse | 43% | 80% | 75% | 75% | 60% | 67% | 53% | 64% |

* Significant difference at p<.05

** A **skill gap** is when participants responded with 1, 2 or 3 on a 5-point scale, where 1=Very Low, 2=Low, 3=Low-acceptable, 4=Advanced, 5=Optimal

CONCLUSION

- HCP-MS face significant challenges trying to provide best care to people with MS
- Current **guidelines are not perceived as useful or sufficiently adapted** to clinical practice realities
- Skill gaps were found in relation to use of **guidelines**, assessment and monitoring of disease progression using **cognitive and neurological functioning tests**, optimizing and **personalizing treatment**, and **adverse event monitoring**
- Professional development activities should focus on the **heterogeneity of MS presentation**, and include efforts to improve the competencies in need of intervention identified in this study

