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Italian Delphi Consensus on Maternity Care in Multiple Sclerosis: Toward an Interdisciplinary Model of Care

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ABSTRACT

Background: Reproductive health is a critical component of care for women with multiple sclerosis (MS), yet standardized interdisciplinary approaches remain limited.

Objectives: This Delphi consensus aimed to develop an interdisciplinary, evidence-informed care model tailored to the Italian healthcare system.

Results: A two-round Delphi process was conducted in Italy (June–July 2025), involving MS experts (Round 1: 107, Round 2: 95), including neurologists, gynecologists, pediatricians, nurses, and patient representatives. Participants evaluated key aspects of the reproductive care pathway, from preconception counseling to postpartum follow-up, to identify priorities and areas of agreement across disciplines. Strong consensus was achieved on the importance of early counseling, coordinated interdisciplinary management, and individualized treatment planning across the reproductive continuum. The central role of nurses in patient education was also emphasized. Divergence emerged regarding the continuation of specific therapies during pregnancy and the role of neonatal immunological monitoring following exposure to depleting agents, reflecting areas of ongoing uncertainty and limited evidence.

Conclusions: This consensus proposes the first interdisciplinary framework for reproductive care in MS within the Italian context. It emphasizes patient-centered decision-making, collaboration across specialties, and the integration of reproductive health into routine MS management. By identifying both shared priorities and unresolved challenges, it provides a foundation for more harmonized, evidence-informed clinical practice and future research.

Emilio Portaccio, Paola Cavalla, Lucia Moiola, and Francesco Patti contributed equally to the study.

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1 | Introduction

Multiple sclerosis (MS) is a chronic, neuroinflammatory, and neurodegenerative disease of the central nervous system predominantly affecting women of childbearing age, making reproductive health a central issue in MS care [1–3]. Managing fertility, pregnancy, postpartum, and breastfeeding requires an interdisciplinary approach grounded in evolving evidence.

The advent of disease-modifying therapies (DMTs) has reshaped MS management, but reproductive planning remains challenging due to limited safety data from clinical trials involving pregnant or breastfeeding women. As a result, real-world evidence and expert consensus are essential [4, 5].

In the context of pregnancy planning, balancing optimal disease control with reproductive goals is crucial. This phase calls for early, individualized preconception counseling and a collaborative treatment plan tailored to the woman's priorities. Proactive dialog between the patient and the interdisciplinary care team is essential to align therapeutic choices with fertility preservation, timing of conception, and overall maternal health [6].

While pregnancy may reduce disease activity, relapse risk increases in the postpartum, particularly after DMT discontinuation [7, 8]. Most DMT labels advise suspension before conception and discourage use during lactation, complicating decisions, especially in highly active MS [9–12].

Concerns about fetal safety during pregnancy and infant exposure to medication through breast milk often overshadow consideration of maternal health [5], underscoring the need for shared decision-making and coordinated counseling. Despite growing evidence, structured care models remain scarce in the international landscape. Italian guidelines by the Società Italiana di Neurologia [13], providing general recommendations on DMTs use in pregnancy, lack specific protocols and would benefit from regular updates and greater integration with interdisciplinary clinical practice. As a result, care practices are fragmented and vary widely across Italian regions.

There is a growing need for a consensus-based, interdisciplinary model of care aligned with the Italian healthcare system. International guidelines provide valuable frameworks but still lack the specificity required for consistent, cross-specialty application. Both clinical and health system–related factors—including increasing maternal age at conception, comorbidities, the need to ensure disease stability before conception, assessment of individual relapse risk, timely access to fertility services, and optimization of time to pregnancy—strongly influence treatment decisions [11, 14, 15]. Variation in relapse management, MRI monitoring, and vaccination planning further complicates standardized care [2, 13].

This Delphi initiative responds to these challenges by engaging neurologists, gynecologists, pediatricians, nurses, and patient representatives to define a coordinated, evidence-based approach to reproductive care in MS.

2 | Methods

2.1 | Study Design

This two-round Delphi study was conducted in Italy (June–July 2025) to develop a consensus-based care model for reproductive health in MS. A Scientific Board of 5 neurologists, 1 gynecologist, 1 pediatrician, 1 nurse, and 2 experts from the Italian Multiple Sclerosis Patient Association (AISM) oversaw study design, questionnaire development, and data interpretation. The Delphi method is widely used in health research to build expert consensus [16–24].

2.2 | Participants and Recruitment

Participants were recruited through national professional networks and the Italian Multiple Sclerosis Association (AISM). The expert panel included neurologists, gynecologists, pediatricians/neonatologists, nurses, and patient representatives, selected based on their clinical expertise, involvement in multiple sclerosis care, or active participation in patient advocacy. Efforts were made to ensure representation across different specialties, clinical settings (academic and non-academic centers), and geographical areas within Italy.

While no formal sampling framework was applied, the recruitment strategy aimed to include a broad range of perspectives relevant to reproductive care in MS.

Eligible panelists included neurologists, gynecologists, pediatricians/neonatologists, nurses, and experts from AISM representing people with MS (PReps). All received supporting literature and completed a Delphi online survey on a voluntary basis. In Round 1, a total of 107 respondents completed the survey: 90 healthcare professionals (HCPs) (including 46 neurologists, 18 gynecologists, 7 pediatricians/neonatologists, and 19 nurses) and 15 patient representatives (PReps).

In Round 2, 95 participants completed the second questionnaire, including 86 HCPs and 9 PReps.

2.3 | Delphi Procedure

The Delphi process was conducted in two sequential rounds using structured online questionnaires. Round 1 included open and semi-structured items on preconception counseling, treatment, pregnancy, and postpartum care. Responses were synthesized into thematic statements:

1. General/Transversal
2. Family Planning and Conception
3. Pregnancy
4. Postpartum and Breastfeeding.

Different Likert scales have been used across Delphi studies, with no universally accepted standard [16, 23]. Participants

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rated each statement on a 5-point Likert scale (1 = strongly disagree, 5 = strongly agree). Consensus was defined as > 85% of respondents selecting either 4 or 5. This threshold was chosen to ensure a high level of agreement across a heterogeneous panel of stakeholders and to reflect strong consensus. The Delphi methodology, originally developed as a structured process for achieving consensus among experts, was applied according to established principles [23, 24]. Qualitative feedback provided during Round 1 was systematically reviewed by the Scientific Board and used to refine the statements. Statements lacking consensus, as well as those receiving substantial feedback suggesting potential improvements in clarity, clinical relevance, or consistency with available evidence, were reformulated accordingly and resubmitted in Round 2 for re-evaluation by the panel, in line with established Delphi methodology [16, 23]. A list of all statements is available in the Table 1.

2.4 | Data Collection and Analysis

Personal data, including name and institutional affiliation, were collected for contribution acknowledgment, while survey responses were anonymized prior to analysis. Data were collected via an online platform and analyzed in aggregate form. Quantitative data were described by reporting agreement levels for each item across the full panel and subgroups. Qualitative comments were used to guide interpretation and refine statements between rounds. All statistical analyses were conducted independently by a statistician blind to participant identity, using standard software (Microsoft Excel and IBM SPSS).

2.5 | Ethical Considerations

All participants, recruited among HCPs and PReps, provided digital informed consent. The study complied with EU and national data protection regulations (GDPR).

3 | Results

The survey was completed by 107 participants in round 1 (92 HCPs and 15 PReps) and 95 in round 2 (86 HCPs and 9 PReps). In detail, among HCPs, 50% were neurologists (46 in round 1, 45 in round 2), 22% nurses (20 in round 1, 16 in round 2), 20% gynecologists (18 in round 1, 17 in round 2), and 9% pediatricians (8 in round 1 and 2). Among the 15 PReps, 9 also participated in round 2.

Overall, 74 out of 82 statements achieved consensus (defined as > 85% agreement). A list of the agreement percentages for each statement voted on in the Delphi process is available in the Table S2. Among the 18 statements shared with both HCPs and PReps, only one failed to reach consensus, while two—though approved—elicited substantial feedback. Of the 20 statements

TABLE 1 | Key suggestions emerging from the Delphi process.

Area	Suggestion
Interdisciplinary Care	• Establish formal interdisciplinary care pathways with structured communication among specialties, spanning the entire reproductive lifespan. • Recognize and enhance the specific contribution of each specialist throughout the reproductive care pathway.
Health Reproductive Counseling	• Ensure counseling for people with MS across all stages—including preconception, conception, pregnancy, and postpartum—with specific attention to contraceptive planning and vaccination guidance. • Extend counseling to include the patient's partner and/or caregiver.
Patient Empowerment	• Ensure shared decision-making throughout all phases of reproductive health. • Develop a tailored treatment plan that integrates clinical and MRI measures of disease activity to guide pregnancy timing and DMT management. • Discuss mode of delivery and options for pain relief, taking into account disease status and patient preferences. • Explore postpartum and breastfeeding strategies, balancing maternal treatment needs with infant safety and breastfeeding goals, supported by clear, evidence-based counseling on therapeutic options.
Family planning	• Plan pregnancy after 6–12 months of disease stability, taking into account the DMT in use. • Assess disease stability using both clinical (annualized relapse rate, ARR) and radiological (MRI) parameters. • Plan postpartum monitoring—including breastfeeding support and neurological follow-up—and discuss timing of treatment resumption. • Discuss prenatal care.
Treatment Stratification	• Select the most appropriate DMT on the basis of individual family-planning decisions. • Optimize DMT management through personalized risk–benefit evaluation to protect both maternal and neonatal health.

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presented only to HCPs, consensus was not reached in three statements, and three additional ones were revised based on participant comments. All eight PRep-only statements reached consensus in the first round.

Figures 1–6 show the distributions of scores given by each category of participants for each statement. Whenever the green (dark or light) bars extend to the left of the black vertical line (pre-defined 85% threshold of agreement), the consensus for a given statement was reached by the respondent category.

In the initial set of general statements (Figure 1), the recommendation to plan pregnancy after a minimum of 6 months of disease stability failed to achieve consensus among neurologists and PReps. When reformulated to "6–12 months" (Figure 6), the revised version gained widespread approval across all groups, except for a slight shortfall among pediatricians (83%).

For five of the following set of statements represented in Figure 1 (PG_CP_06–11), the consensus was reached in every HCP group, with the only peculiarity that the statement "Reproductive health counseling for women with MS should also include the promotion of vaccinations" did not reach the consensus threshold in PReps. Similarly, the statement advocating the use of telemedicine to support interdisciplinary communication did not reach the consensus threshold of 85%, with only nurses and pediatricians expressing strong agreement (Bonferroni-adjusted Mann–Whitney $p < 0.05$). Nonetheless, the statement was not resubmitted for re-voting, as panel members agreed that further modification would not provide additional value.

Regarding the three statements proposed to both HCPs and PReps in the section "Planning and conception" (Figure 3—MA1_CP_01–03), the consensus was consistently reached. On the other hand, for three of the five statements proposed to HCPs (Figure 2—MA1_C_01–05), the 85% threshold was not consistently reached. For instance, the proposal to use MRI to assess disease stability before conception was supported primarily by neurologists, while other professional groups showed lower levels of agreement. Likewise, early interdisciplinary fertility assessment and pre-emptive planning for pregnancy complications related to DMT use were less frequently endorsed by neurologists than by nurses and gynecologists ($p < 0.05$). Conversely, neurologists showed higher agreement than other professionals

FIGURE 1 | General Part: Statements common to HCPs and PReps.

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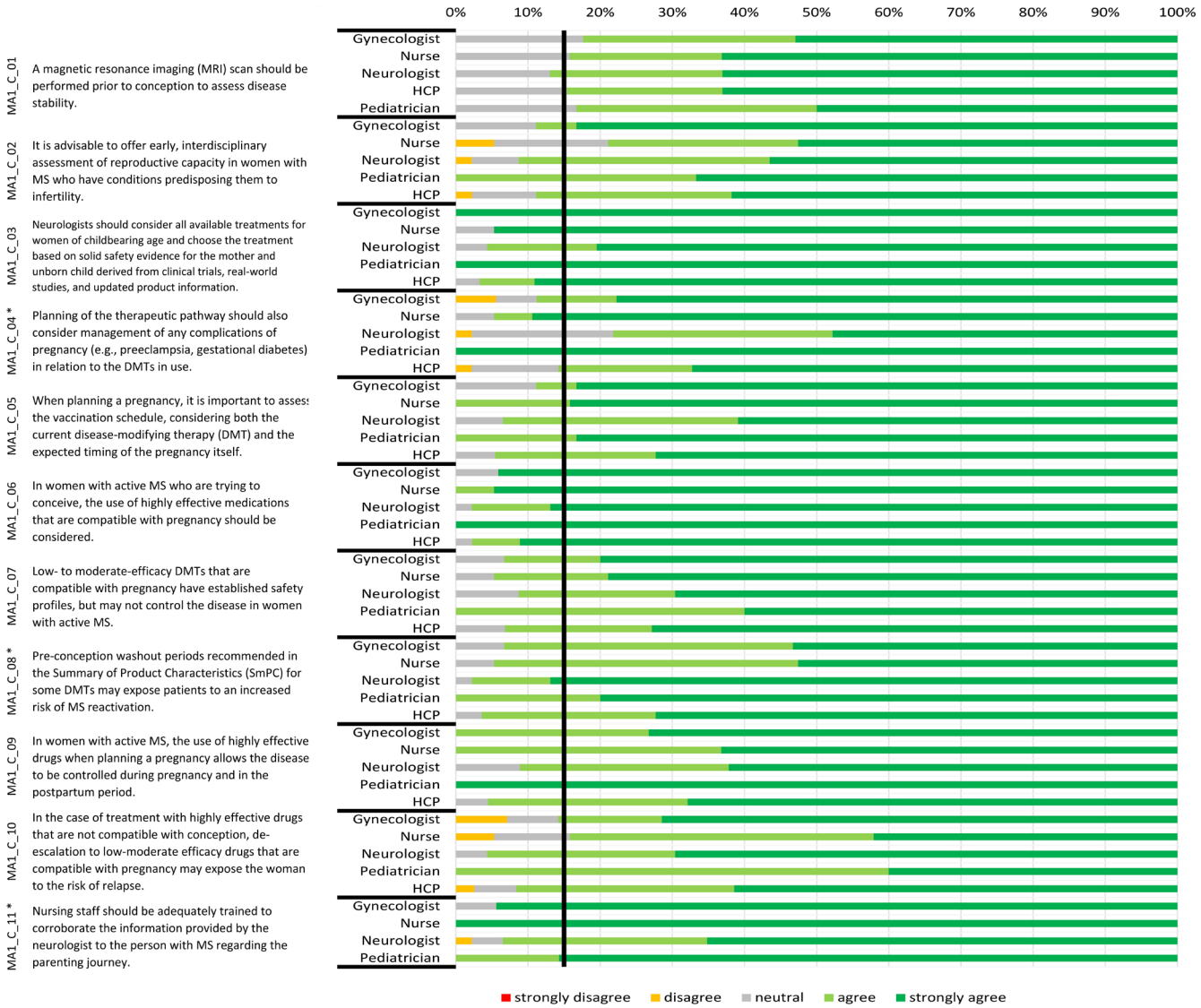

FIGURE 2 | Macro Area 1: Planning and Conception – Statements for Clinicians.

with the statement that washout periods may increase relapse risk. Nurses, in turn, unanimously supported their role in reinforcing counseling provided by neurologists.

All four PRep-only statements on family planning were approved in the first round (Figure 5—MA1_P_01–04).

Considering the two statements proposed to both HCPs and PReps about pregnancy (Figure 3—MA2_CP_01–02), the agreement was consistently reached for "Women with MS should be actively involved in decisions on mode of delivery and labor analgesia, according to their clinical condition and disease severity." A substantial agreement was also observed for "Pregnant women with MS, regardless of the DMT in use, should adhere to the standard pregnancy vaccination schedule, in which vaccines against influenza, pertussis, diphtheria, tetanus, respiratory syncytial virus (RSV), and COVID-19 are strongly recommended.", although the 85% threshold was not strictly reached among nurses and PReps.

Three pregnancy-related statements were proposed to HCPs only (Figure 4—MA2_C_01–03). Consensus was not reached for the second statement ("If low- to moderate-efficacy, pregnancy-compatible DMTs are discontinued during pregnancy, several months may be required after their reintroduction in the postpartum before clinical efficacy is restored, with a potential risk of inadequate disease control.") in any of the groups, with some nurses and, to a lesser extent, some neurologists expressing disagreement, including instances of strong disagreement. On the other hand, a strong consensus was found for the two statements of the pregnancy section proposed to PReps (Figure 5—MA2_P_01–02).

Again, an agreement was found for the two statements about post-partum and breastfeeding proposed to both HCPs and PReps (Figure 3—MA3_CP_01–02).

Of the six statements presented exclusively to HCPs (Figure 4—MA3_C_01–06), only the following failed to reach consensus:

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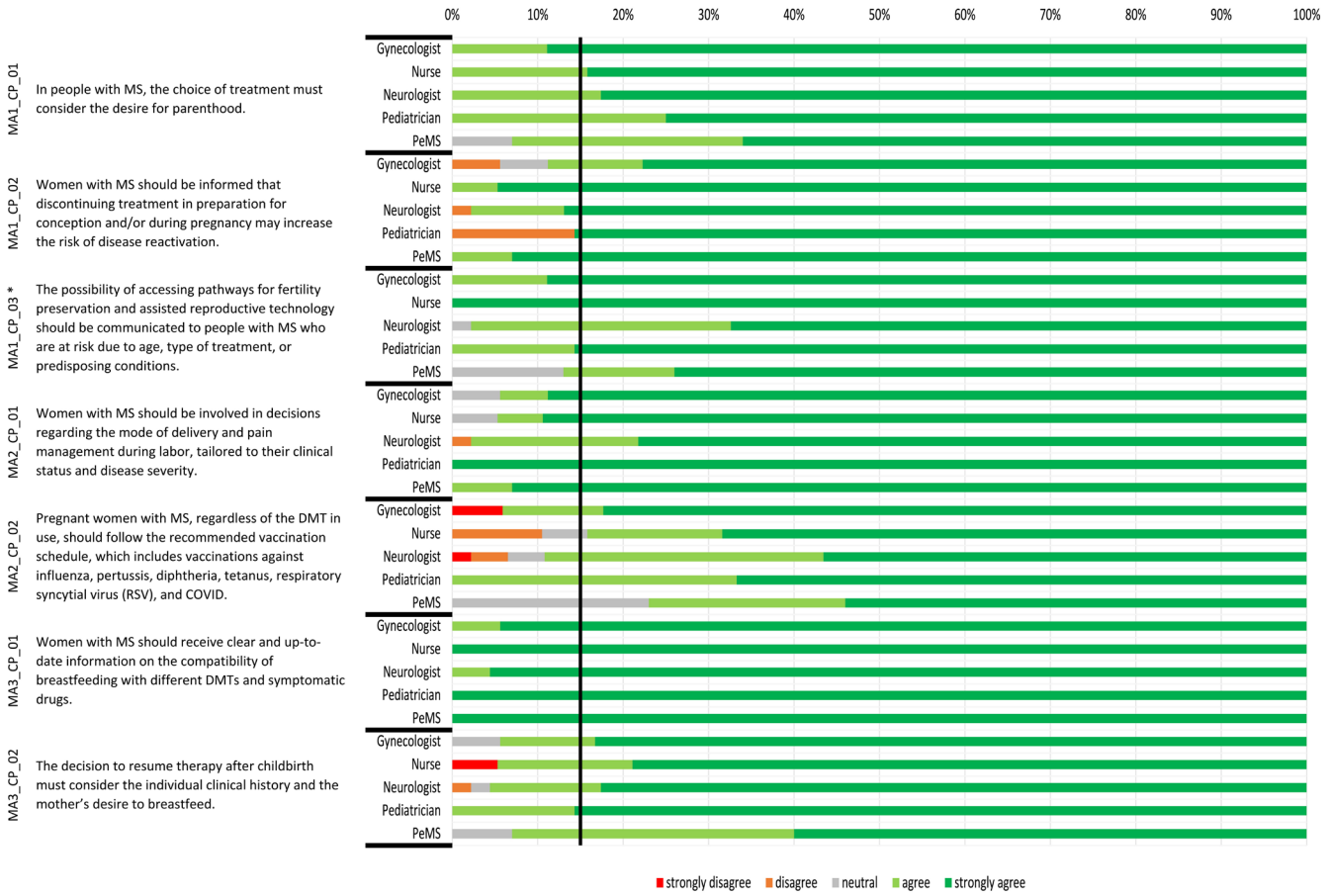

FIGURE 3 | Macro Areas 1–3: Planning and Conception, Pregnancy, Postpartum and breastfeeding – Statements common to HCPs and PReps.

"Evaluation of vaccine responses may serve as an indicator for monitoring the immune status of infants exposed to DMTs in utero and/or through breastfeeding." For the statement "It is advisable to monitor the immunological status of the newborn in case of exposure to depleting agents in utero or through lactation," substantial agreement was observed in all professional groups except nurses; however, the agreement scores were lower than those recorded for statements 01–04 in this section.

Four reformulated statements were reassessed in Round 2 (Figure 6). Consensus was achieved on the need to confirm disease stability before conception using both clinical (ARR) and radiological (MRI) evaluations. In contrast, the revised statement supporting the continuation of moderate-efficacy DMTs during pregnancy met the consensus threshold only among gynecologists and pediatricians. A second attempt to endorse vaccine-response monitoring in neonates exposed to depleting therapies likewise failed to reach consensus. This divergence does not reflect a lack of concern but rather highlights the need for updated, long-term safety data to inform postnatal monitoring protocols in this population.

Key suggestions emerging from the Delphi process are synthesized in Table 1, which summarizes the core recommendations across five domains: Establishing structured interdisciplinary care pathways; Ensuring continuous counseling throughout the reproductive journey; Promoting shared decision-making and patient empowerment; Defining criteria for family planning and pregnancy timing based on clinical and radiological stability; and Guiding treatment stratification through individualized benefit–risk evaluation.

4 | Discussion

This Delphi consensus offers the first interdisciplinary model for managing reproductive health in people with MS tailored to the Italian healthcare system. With strong participation from 107 experts in Round 1 and 95 in Round 2—including neurologists, gynecologists, pediatricians, nurses, and PReps—the Delphi process reached consensus on 74 of 82 statements. This work represents a consensus-based Delphi study rather than a formal evidence synthesis with graded recommendations, reflecting the need to integrate multidisciplinary expertise in areas where evidence remains limited or evolving, with available reviews highlighting ongoing uncertainties in treatment management and safety during pregnancy and postpartum [25]. This high level of agreement reflects a shared commitment to structured, coordinated care across specialties. Participants strongly endorsed the creation of formal interdisciplinary care pathways, with shared referral protocols and clearly defined professional responsibilities. This finding is consistent with previous reports describing fragmented pregnancy care in Italy and calling for better integration between services and specialties [15, 21, 22]. International data similarly point to disparities in MS pregnancy care associated with the absence of structured, coordinated protocols [6, 26].

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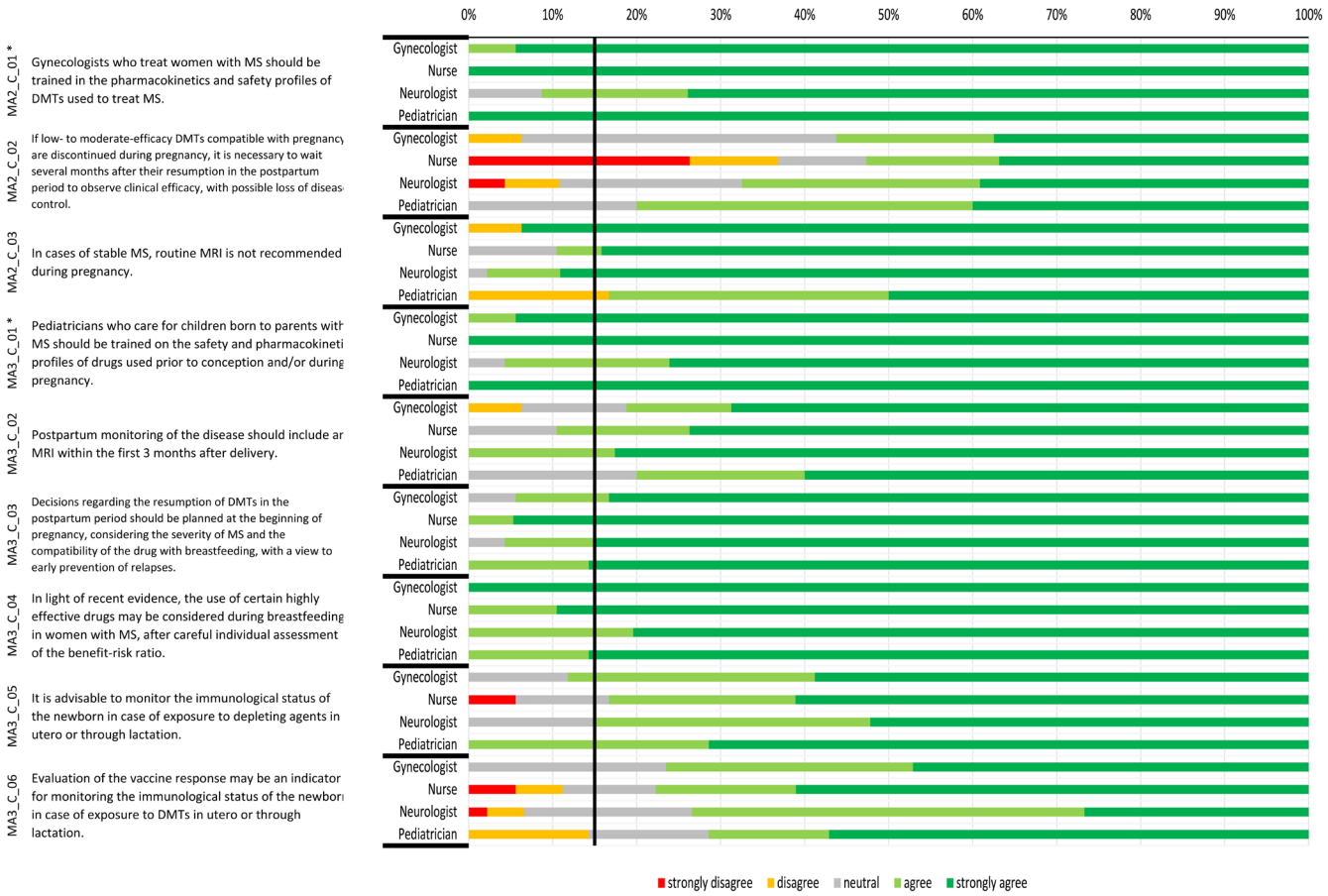

FIGURE 4 | Macro Areas 2–3: Pregnancy and Postpartum and breastfeeding – Statements for HCPs.

Although telemedicine was proposed as a tool to enhance coordination between disciplines, this statement did not reach consensus. Feedback revealed shared skepticism about its adequacy for complex reproductive management, despite its perceived value in facilitating communication.

Early preconception counseling, reproductive care, and treatment stratification were widely endorsed—ideally initiated at the time of diagnosis. Participants emphasized integrating these components into routine MS care from diagnosis onward. This vision aligns with international recommendations [11, 27, 28] and Italian data supporting early interdisciplinary interventions [29–31]. Nonetheless, real-world implementation remains uneven. While all stakeholder groups recognized the importance of structured referral systems and clearly defined clinical roles, nurses particularly emphasized their educational function, calling for dedicated training programs to reinforce consistent communication throughout the reproductive journey.

Strengthening pharmacovigilance systems, especially for neonatal outcomes, is essential to bridge current knowledge gaps in DMT safety.

Postpartum management also received strong support, particularly regarding treatment resumption, neurological follow-up, and breastfeeding guidance. The panel highlighted the importance of involving women in decisions on delivery mode and pain management, reinforcing principles of person-centered care. These recommendations reflect growing awareness of the need to empower patients and tailor reproductive strategies to individual goals and clinical context [12, 32].

However, consensus was not achieved on some nuanced topics. For example, an area of strong debate concerned the differential implications of moderate- vs. high-efficacy DMTs during pregnancy and the postpartum period. Differences in drugs' mechanisms of action, pharmacokinetic and pharmacodynamic profiles, and compatibility with gestation and lactation, together with individual disease activity, influence decisions regarding treatment management during pregnancy and the postpartum period, as highlighted in recent reviews addressing the complexity of treatment decision-making across different DMT classes and the heterogeneity of clinical approaches in this setting [25, 33]. These perspectives highlight the need to tailor therapeutic choices rather than apply uniform recommendations. The lack of consensus in these areas likely reflects several factors, including the heterogeneity of available evidence, differences in clinical priorities across specialties, and the inherent complexity of balancing maternal disease control with fetal and neonatal safety. These challenges are particularly evident in decisions regarding treatment management, MRI use during pregnancy and postpartum, and early life immunological monitoring, where evidence remains limited or evolving and clinical practices vary across settings. In addition, a gap may exist between recommended approaches and real-world clinical practice. Certain evaluations, such as infants' immunological assessments or

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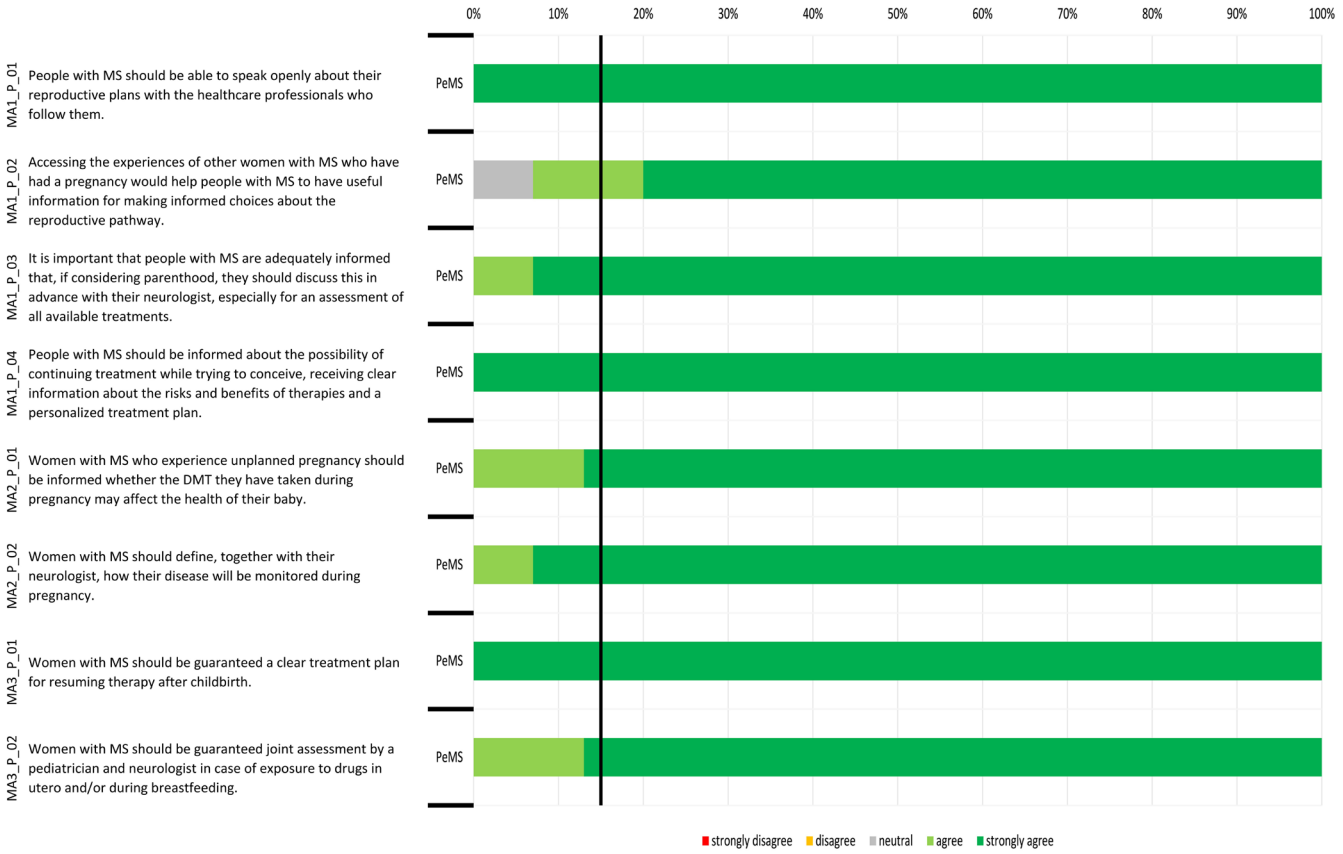

FIGURE 5 | Macro Areas 1–3: Planning and Conception, Pregnancy, and Postpartum and breastfeeding – Statements for PReps.

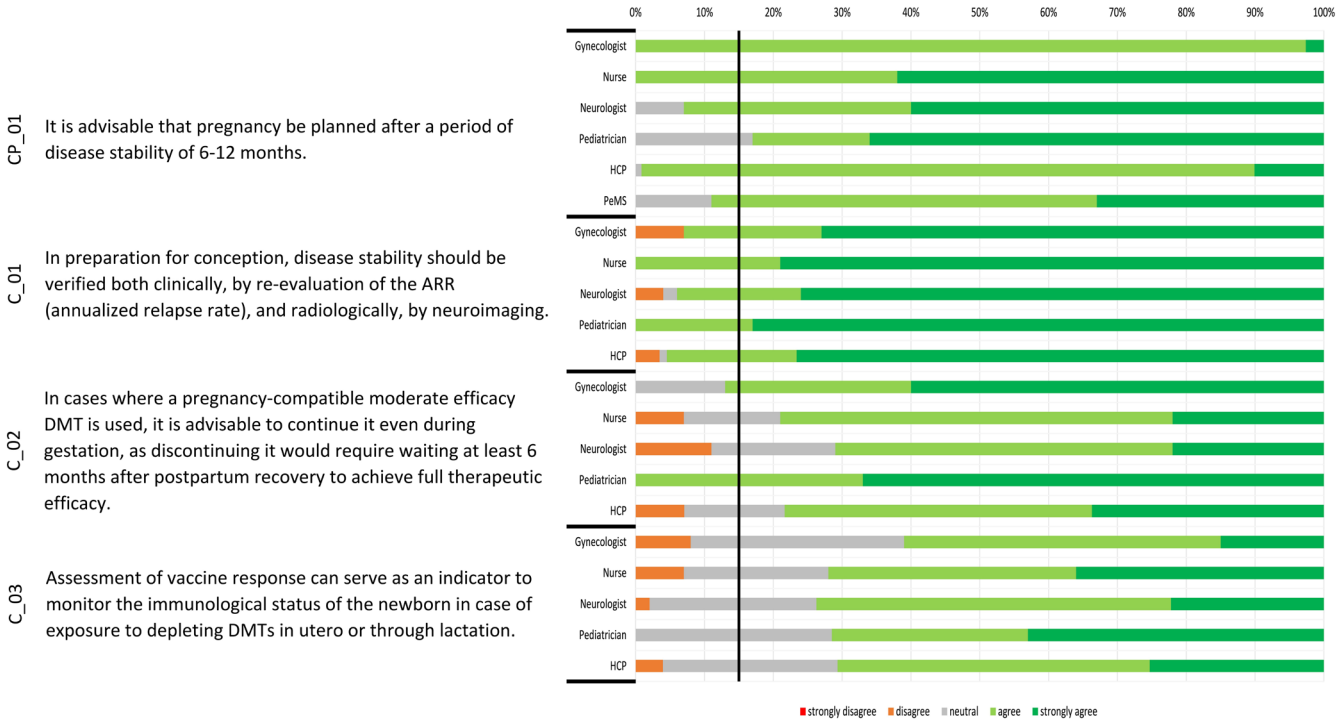

FIGURE 6 | Four statements reformulated in Round 2.

laboratory monitoring, may not be routinely performed unless clinically indicated, reflecting considerations of feasibility and resource availability.

This variability is further compounded by the presence of evolving and, in some cases, conflicting evidence, particularly regarding MRI safety, early life immune monitoring, and the

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management of moderate-efficacy therapies during pregnancy and breastfeeding.

This pattern is consistent with the nature of interdisciplinary Delphi processes, in which agreement is typically higher on organizational and patient-centered aspects than on highly technical clinical decisions.

These findings should also be interpreted in light of the inherent limitations of grouping heterogeneous disease-modifying therapies within single statements. While this approach may reduce clinical specificity, it was necessary to enable interdisciplinary agreement across stakeholders with different areas of expertise. This may partly explain the lower levels of consensus observed in treatment-specific statements and highlights the need for more granular, drug-specific recommendations in future consensus efforts. Clinical decisions should therefore rely on individual drug characteristics, as outlined in the summary of product characteristics, together with real-world evidence (Table S3).

Pregnancy itself is generally associated with reduced disease activity, whereas the postpartum period remains a phase of increased relapse risk [34, 35]. Importantly, the consensus does not imply universal treatment during pregnancy but rather supports individualized decision-making based on disease activity, patient preferences, and a careful risk–benefit evaluation.

This need for individualized treatment planning is reflected in the consensus reached on two reformulated statements. The first recommends planning pregnancy after a period of disease stability of 6–12 months, supporting a tailored approach that balances reproductive goals with the risk of disease reactivation. The second endorses the combined use of clinical parameters—such as annualized relapse rate—and radiological evaluation through MRI to assess disease stability before conception. Together, these statements emphasize the importance of a structured, risk-adapted strategy in guiding treatment decisions around conception.

Although some experts supported evaluating infant vaccine response or immune status, others questioned its feasibility or clinical value. This divergence likely reflects differences in clinical roles and perspectives across stakeholder groups, with varying levels of involvement in vaccination counseling and follow-up care. In particular, pediatricians and neonatologists may place greater emphasis on postnatal immune monitoring, whereas other specialists may prioritize feasibility and clinical utility within routine practice. Evidence from rheumatologic and gastroenterological cohorts suggests that in utero exposure to biologics does not significantly impair infant immune responses [6, 36, 37], and early data from two phase IV prospective studies that have been presented recently (MINORE and SOPRANINO [38]) are reassuring. In both studies, all infants with in utero or breastfeeding exposure to ocrelizumab showed B-cell levels that were above the age-specific lower limit of normal. Similarly, a smaller prospective study investigating ofatumumab exposure during breastfeeding [39] reported comparable findings. Overall, available data indicate that infant immune competence is generally preserved after maternal treatment exposure during pregnancy and breastfeeding, although further evidence from ongoing and future studies with longer follow-up will help consolidate these observations [38, 39].

Taken together, the Delphi process yielded broad agreement on most statements, with remaining uncertainties primarily concerning the individualized timing of DMT management and early life immunological monitoring. These unresolved issues do not reflect disagreement on core principles but rather highlight evidence gaps that should guide future investigations. The Delphi process thus provides not only a framework for harmonized care but also a research agenda for addressing persistent uncertainties. Embedding reproductive health into longitudinal MS management, with attention to maternal and infant outcomes, will be crucial for aligning practice with patient-centered values and emerging scientific data [40]. These findings may serve as a useful foundation for updating national and local clinical guidelines, with the aim of enhancing consistency and quality of reproductive care for people with MS across diverse healthcare settings.

This study was initiated by Roche S.p.A. in collaboration with an independent Scientific Board, including representatives from the Italian Multiple Sclerosis Patient Association (AISM). Roche S.p.A. contributed to project coordination and facilitated the involvement of healthcare professionals and AISM in line with their respective areas of expertise and the shared project objectives.

Despite the strengths of the project design, several limitations should be acknowledged. The reduction in participation of patient representatives between rounds (from 15 in Round 1 to 9 in Round 2) may reflect logistical factors, such as survey burden or timing of the second round, rather than systematic exclusion. However, the reduction in patient participation between rounds should be interpreted with caution. In Round 2, patient input was limited to a single, clinically oriented statement, which may have influenced engagement. Patient representatives remained actively involved throughout the process, including in Round 1 and within the Scientific Board.

Importantly, patient representatives were identified through established patient associations, supporting the representativeness of their perspectives. Their contribution was particularly relevant in Round 1, during which statements were generated and refined based on multidisciplinary and patient-informed feedback. Agreement among patient respondents in Round 2 was high and aligned with that of healthcare professionals, although the smaller sample limits the generalizability of patient-specific perspectives for this item.

In addition, although efforts were made to ensure multidisciplinary and geographical representation, the panel may not fully reflect the entire spectrum of Italian experts involved in MS and reproductive care, and some degree of selection bias cannot be excluded. The use of broadly defined treatment categories may have further limited the clinical granularity of some recommendations, particularly for therapies with distinct pharmacological profiles.

Moreover, specific aspects of reproductive care, such as contraceptive counseling and the use of assisted reproductive

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technologies, were not addressed in detail within this Delphi process, despite their clinical relevance. Similarly, the scope of this consensus did not explicitly include all dimensions of reproductive health, such as sexual wellbeing. These areas warrant further investigation and more focused consensus efforts to ensure a more comprehensive approach to reproductive care in people with MS.

5 | Conclusions

This Italian Delphi consensus successfully defined a much-needed interdisciplinary framework for managing MS across the reproductive lifespan. The model, developed through a structured consensus process, provides practical guidance tailored to the Italian healthcare system and emphasizes patient safety, disease control, and coordinated care. The panel supported its formal adoption through defined referral pathways and structured communication among neurologists, gynecologists, pediatricians, nurses, and PReps.

Key recommendations include integrating early counseling, individualized treatment planning, and postpartum monitoring into routine MS care. Patient-centered strategies and shared decision-making are consistently prioritized to support autonomy and treatment adherence.

Benefit–risk considerations emerged as a central component of therapeutic decision-making, underscoring the need for a holistic evaluation of treatment options in the context of reproductive planning, where safety is only one of several critical factors and decisions should be informed by current evidence from interventional clinical trials, real-world data, and guidelines. This individualized approach, endorsed by recent international recommendations [41, 42], is critical to ensure therapeutic consistency and equitable care across clinical settings.

Unresolved topics, such as the management of moderate-efficacy DMTs around pregnancy and immunological follow-up of exposed neonates, reflect evidence gaps rather than fundamental disagreement. These areas define priorities for future research and protocol development.

This consensus offers a practical, patient-oriented framework to reduce care variability and support harmonized clinical pathways. It establishes a foundation for future updates as new evidence emerges and underscores the need for ongoing interdisciplinary training and collaboration. Safety considerations emerged as a central component of therapeutic decision-making, with emphasis on comparative assessment of treatment options grounded in RPCs and the most up-to-date scientific evidence. This approach is essential to support individualized care and promote consistency across clinical settings.

Author Contributions

Valentina Sara Barbiero: conceptualization, writing – original draft, methodology, writing – review and editing, data curation. **Alessia Villani:** conceptualization, writing – original draft, methodology, writing – review and editing, data curation. **Lucia Moiola:** conceptualization, writing – original draft, methodology, writing – review and editing, data curation. **Paolo Palma:** conceptualization, writing – original draft, methodology, writing – review and editing, data curation. **Daniela Facchinello:** data curation, methodology, conceptualization, writing – original draft, writing – review and editing. **Emilio Portaccio:** conceptualization, writing – original draft, writing – review and editing, methodology, data curation. **Federica Balzani:** conceptualization, writing – original draft, methodology, writing – review and editing, data curation. **Girolama Alessandra Marfia:** conceptualization, writing – original draft, methodology, writing – review and editing, data curation. **Francesco Patti:** conceptualization, writing – original draft, methodology, writing – review and editing, data curation. **Paola Cavalla:** conceptualization, methodology, data curation, writing – original draft, writing – review and editing. **Raffaella Robello:** conceptualization, writing – original draft, methodology, writing – review and editing, data curation. **Luca Marozio:** conceptualization, methodology, writing – review and editing, writing – original draft, data curation. **Martina Campobasso:** conceptualization, writing – original draft, methodology, writing – review and editing, data curation.

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Ethics Statement

The authors have nothing to report.

Conflicts of Interest

E. Portaccio received compensation for travel grants, participation in advisory boards, and/or speaking activities from Biogen, Merck Serono, Sanofi, Teva, Roche, BMS Celgene, Janssen, Neuraxpharm, and Novartis; serves on the editorial board of Frontiers in Neurology and Brain Sciences. P. Cavalla received travel grants, honoraria for participation in advisory boards and/or speaking activities from Alexion, Biogen, BMS Celgene, Merck-Serono, Neuraxpharm, Novartis, Sanofi-Genzyme, Roche, and Janssen. She is a principal investigator in clinical trials for Merck Serono, Novartis, Roche, and Sanofi-Genzyme. L. Moiola received honoraria for speaking and/or for participating in advisory boards from Merck, Celgene, Biogen, Sanofi, Novartis, Roche, Alexion, Amgen, and Neuraxpharm. F. Patti received speaking honoraria or served on advisory boards, consulting activities, or grant research from Alexion, Almirall, Amgen, Biogen, Bristol Myers and Squibb, Janssen, Merck, Neuraxpharm, Novartis, Roche, Sanofi, FISM, Reload, and MUR. P. Palma received honoraria for speaking and participating in educational masterclasses and congresses from Med-Ex Learning, MSD. M. Campobasso received honoraria for speaking and/or for participating in advisory boards from Biogen, Sanofi, Novartis, and Roche. *F. Balzani*, L. Marozio, and A. Villani declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article. G.A. Marfia is an Advisory Board member

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of Biogen Idec, Genzyme, Merck-Serono, Novartis, Roche, and received honoraria for speaking or consultation fees from Almirall, Amgen, Alexion, Biogen Idec, Merck Serono, Neuraxpharm, Novartis, Sanofi-Genzyme, Roche, and BMS. She is the principal investigator in clinical trials for Merck Serono, Novartis, Roche, Sanofi-Genzyme, and BMS. V.S. Barbiero, D. Facchinello, and R. Robello are Roche employees.

Data Availability Statement

The data that support the findings of this study are available from the corresponding author upon reasonable request.

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Supporting Information

Additional supporting information can be found online in the Supporting Information section. **Table S1:** List of all statements voted on in the Delphi process. **Table S2:** Number of voters and percentages of agreement for each statement voted on in the Delphi process. **Table S3:** Infographic overview of main approved disease-modifying therapies in MS: Guidance for use during family planning in adult patients. The information presented in this table is based on the approved Summary of Product Characteristics (SmPC) available on the Regulatory Agency Websites, at the time of manuscript redaction (October 2025). Please always refer to the latest approved SmPC for further details on the therapies.

Appendix A

Collaborators in the Maternity Care Delphi Expert Panel: Lucia Abate, Sant'Anna Hospital, Como, Italy; Rossella Agosta, AOU of Parma, Parma, Italy; Alessandra Allodi, San Martino Polyclinic, Genoa, Italy; Maria Pia Amato, Careggi Hospital—University of Florence, Florence, Italy; Marta Angelini, Santa Maria della Misericordia Hospital, ASUFC, Udine, Italy; Paola Anserini, IRCCS San Martino General Hospital, Genoa, Italy; Stefania Barone, UOC Neurology, AOU 'Renato Dulbecco', University Hospital, Catanzaro, Italy; Gianna Bogana, AOU di Padova, Padua, Italy; Simona Bonavita, University of Campania 'Luigi Vanvitelli', Naples, Italy; Francesca Branciforte, Medical Clinic, Catania, Italy; Giulia Bravar, Santa Maria della Misericordia Hospital, ASUFC, Udine, Italy; Elisa Bressan, AULSS8 Berica—San Bortolo Hospital, Vicenza, Italy; Marika Buffo, ULSS2 Marca Trevigiana—Ca' Foncello Hospital, Treviso, Italy; Francesca Caleri, Merano Hospital 'F. Tappeiner', Merano, Italy; Emilie Marion Canuto, S. Anna Hospital—Città della Salute e della Scienza, Turin, Italy; Marco Capobianco, SC Neurology, AO Santa Croce e Carle, Cuneo, Italy; Luigi Carbone, Federico II University Hospital, Naples, Italy; Daniela Cargnelutti, Santa Maria della Misericordia Hospital, ASUFC, Udine, Italy; Salvatorica Carta, Binaghi Hospital, Cagliari, Italy; Elisabetta Casella, Sant'Anna Hospital, Como, Italy; Ornella Castrataro, IRCCS NEUROMED, Pozzilli (Isernia), Italy; Raffaella Cerqua, Neurological Clinic of the Marche University Hospital, Ancona, Italy; Clara Chisari, General hospital—University of the Studies, Catania, Italy; Raffaella Clerici, Valduce Hospital, Como, Italy; Eleonora Cocco, Neurology—University of Cagliari, Cagliari, Italy; Elena Colombo, Mondino Foundation IRCCS, Pavia, Italy; Cinzia Cordioli, ASST Spedali Civili of Brescia, Brescia, Italy; Paola Crociani, IRCCS Casa Sollievo della Sofferenza, San Giovanni Rotondo (Foggia), Italy; Vincenzo Dattola, Neurology Unit—Bianchi Melacrino Morelli Metropolitan Hospital, Reggio Calabria, Italy; Giovanna De Luca, SS Annunziata Polyclinic Neurological Clinic, Chieti, Italy; Francesca Di Sebastiano, SS Annunziata Hospital, Chieti, Italy; Mariagrazia Esposito, ASST Niguarda Metropolitan Hospital, Milan, Italy; Cristina Fabiani, ASL Roma 2, Rome, Italy; Roberta Fantozzi, IRCCS Neuromed, Pozzilli (Syracuse), Italy; Lisa Federle, ULSS8 Berica, San Bortolo Hospital in Vicenza, Vicenza, Italy; Vincenzo Felica, Miulli Regional General Hospital, Acquaviva delle Fonti (Bari), Italy; Giuseppe Fenu, SC Neurology and Stroke Unit, ARNAS Brotzu, Cagliari, Italy; Diana Ferraro, AOU di Modena, Modena, Italy; Elisabetta Ferraro, San Filippo Neri Hospital, Rome, Italy; Annamaria Ferrero, SCDU Gynecology and Obstetrics AO Ordine Mauriziano di Torino, Turin, Italy; Antonio Gallo, University of Campania 'Luigi Vanvitelli', Naples, Italy; Valentina Gasparini, ASST Valle Olona—Gallarate Hospital, Gallarate (Varese), Italy; Matilde Inglese, DINOGMI—University of Genoa, Genoa, Italy; Doriana Landi, UOSD Multiple Sclerosis, Tor Vergata University, Rome, Italy; Roberta Lanzillo, Federico II University, Naples, Italy; Carmela Leone, Asp 7 Ragusa, Ragusa, Italy; Roberta Lorenzi, E. Muscatello Hospital, Augusta (Syracuse), Italy; Giulia Lucenteforte, IRCCS NEUROMED, Pozzilli (Isernia), Italy; Giorgia Maniscalco, AORN Cardarelli, Naples, Italy; Vittorio Mantero, ASST Lecco, Lecco, Italy; Elisabetta Marzo, IRCCS San Raffaele, Milan, Italy; Francesca Matta, ARNAS Garibaldi, Catania, Italy; Liliana Mereu, Rodolico-San Marco Polyclinic in Catania, Catania, Italy; Elena Mutta, ASST della Valle Olona, Gallarate (Varese), Italy; Livia Pasquali, AOU Pisana, Neurology Unit, University

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