

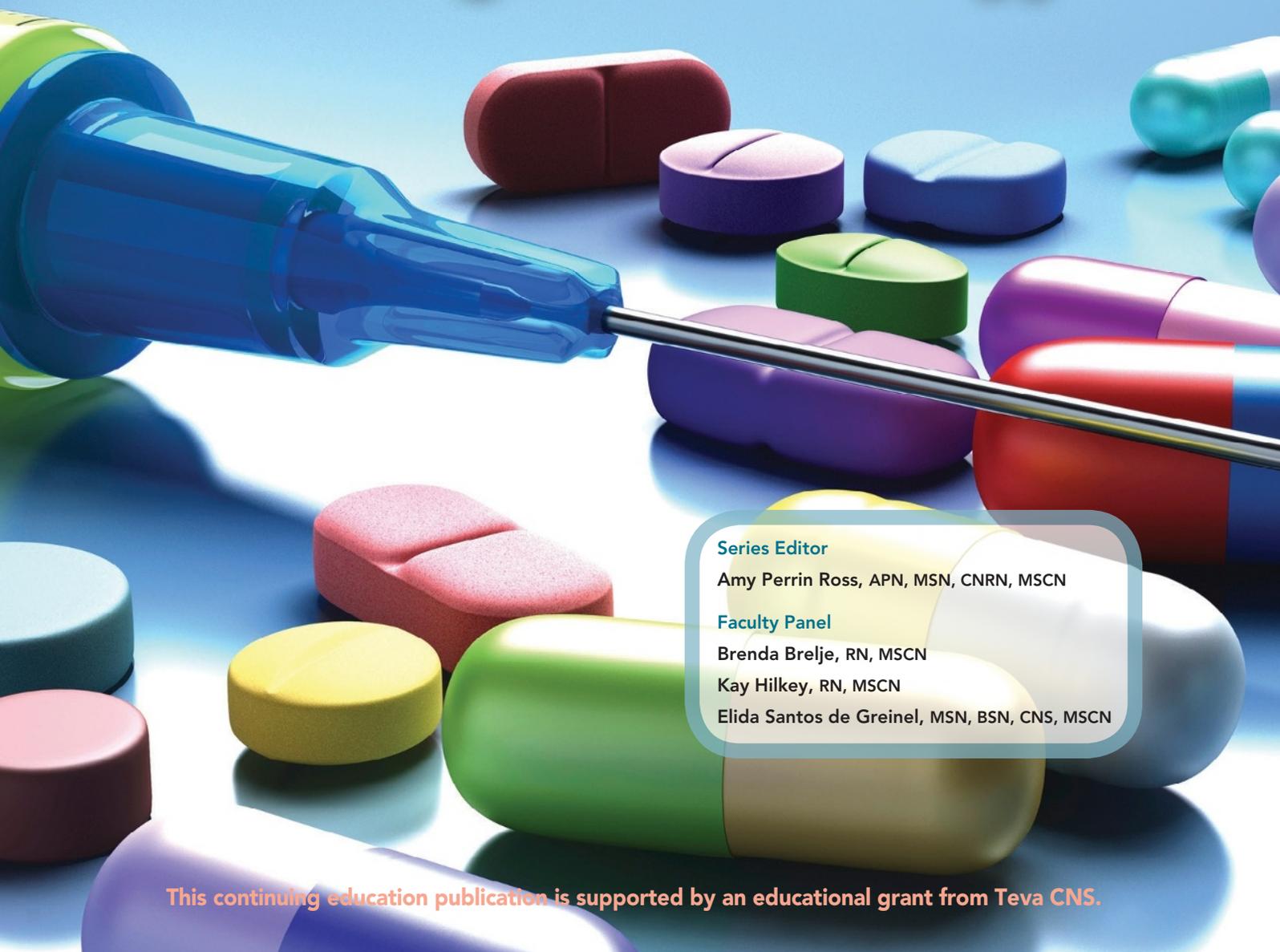
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# Counseling Points™

Enhancing Patient Communication for the MS Nurse

## Addressing the New Adherence Challenges in MS Therapy



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# Counseling Points™

## Addressing the New Adherence Challenges in MS Therapy

## Continuing Education Information

### Target Audience

This educational activity is designed to meet the needs of nurses who treat or who have an interest in patients with multiple sclerosis (MS).

### Purpose

To provide nurses with information and strategies for counseling patients on the topic of adherence to disease-modifying therapies for MS.

### Learning Objectives

*Upon completion of this educational activity, the participant should be able to:*

- Analyze adherence challenges in chronic disease and how they affect MS therapies
- Describe how nonadherence affects the safety and efficacy of disease-modifying therapy for MS
- Recognize adherence concerns arising from the introduction of new therapies for MS
- Discuss strategies for counseling patients about adherence to medications and monitoring

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# welcome

Dear Colleague,

Ensuring patient adherence to therapy has long been a key issue for nurses, especially in the care of people with chronic diseases. With expanding therapeutic options for multiple sclerosis (MS), managing adherence has not necessarily become easier. Instead, it has become a broader issue encompassing monitoring, safety, tolerability, and lifestyle factors.

The literature defines the term *concordance* as “the nature of the interaction between clinician and patient,” while *adherence* and *compliance* refer mainly to drug-taking behaviors.\* These concepts are applicable to MS care today. MS nurses are not simply reminding patients to take their medications, but are involved in selection of therapies that fit best with people’s lifestyles, arranging for screening and safety monitoring, and helping patients adjust to the effects of these therapies.

Side effects are among the most common reasons that patients discontinue MS disease-modifying therapies, and some of the current treatments have introduced a new set of systemic and potentially serious adverse events. In the increasingly complex environment of MS care, nurses need to be educated about the effects of treatment, and about how to apply this information to the care of their patients. Our goal for this issue is to address some of these challenging questions related to adherence in MS.



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\*Bell JS, Airaksinen MS, Lyles A, et al. Concordance is not synonymous with compliance or adherence. *Br J Clin Pharmacol.* 2007;64(5):710-711.

# Addressing the New Adherence Challenges in MS Therapy

**P**oor adherence to medication and treatment plans is an ongoing and pervasive problem in the management of multiple sclerosis (MS).<sup>1,2</sup> Failure to use medications as directed has been described as the “single greatest detractor to efficacy” for many people with MS.<sup>3-5</sup>

When patients have breakthrough signs or symptoms while on disease-modifying therapy (DMT), MS practitioners often switch them to a different drug in an effort to reduce relapses and prevent further disease progression.<sup>6-8</sup> However, the root of the problem might not lie with the medication’s mechanism of action, but whether it is being administered correctly. In an article on improving adherence in MS, authors Bruce and Lynch suggest that the difference in outcomes when a person with MS takes their medication as prescribed—versus taking the drug sporadically—may outweigh any incremental differences between the available agents.<sup>9</sup> As a World Health Organization (WHO) report states, “increasing the effectiveness of adherence interventions may have a far greater impact on the health of the population than any improvement in specific medical treatments.”<sup>10</sup>

Addressing adherence issues in MS care is challenging and highly patient-specific.<sup>11</sup> The role of monitoring adherence and resolving problems often falls under the nurse’s set of responsibilities, but many nurses lack training in specific steps for improving adherence.<sup>3,12,13</sup>

## Assessing Adherence to MS Therapies

True adherence to therapy is difficult to measure because it relies on people’s honest recounting

of the medication doses they’ve taken. Studies comparing patient self-reports to findings from electronic dose-monitoring systems suggest that at least 80% of patients overestimate their adherence.<sup>14</sup> Physicians and other health care providers also overestimate the degree to which their patients are taking the therapies they prescribe.<sup>15</sup>

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Adherence rates are relatively high in controlled trials, but in clinical practice people with MS are estimated to miss about 30% of their DMT doses.<sup>16</sup> One study following patients on injectable MS therapies found that one in 10 patients missed more than 10 doses over a 6-month period.<sup>17</sup> In a 2-year retrospective study of adherence to interferon beta-1a, interferon beta-1b, or glatiramer acetate in 682 patients from the time of therapy initiation, adherence rates were similar for all of the injectable agents but declined steadily over time.<sup>18</sup> By the 2-year follow-up period, up to 60% of patients had discontinued treatment (**Figure 1**).

It can be difficult for patients to admit that they are not using their MS medications. Some may feel that—given the great deal of time, effort, and money that has gone into providing this treatment—they have an obligation to adhere to therapy. At the same time, busy lifestyles, drug side effects, difficulty with or fear of self-injecting,

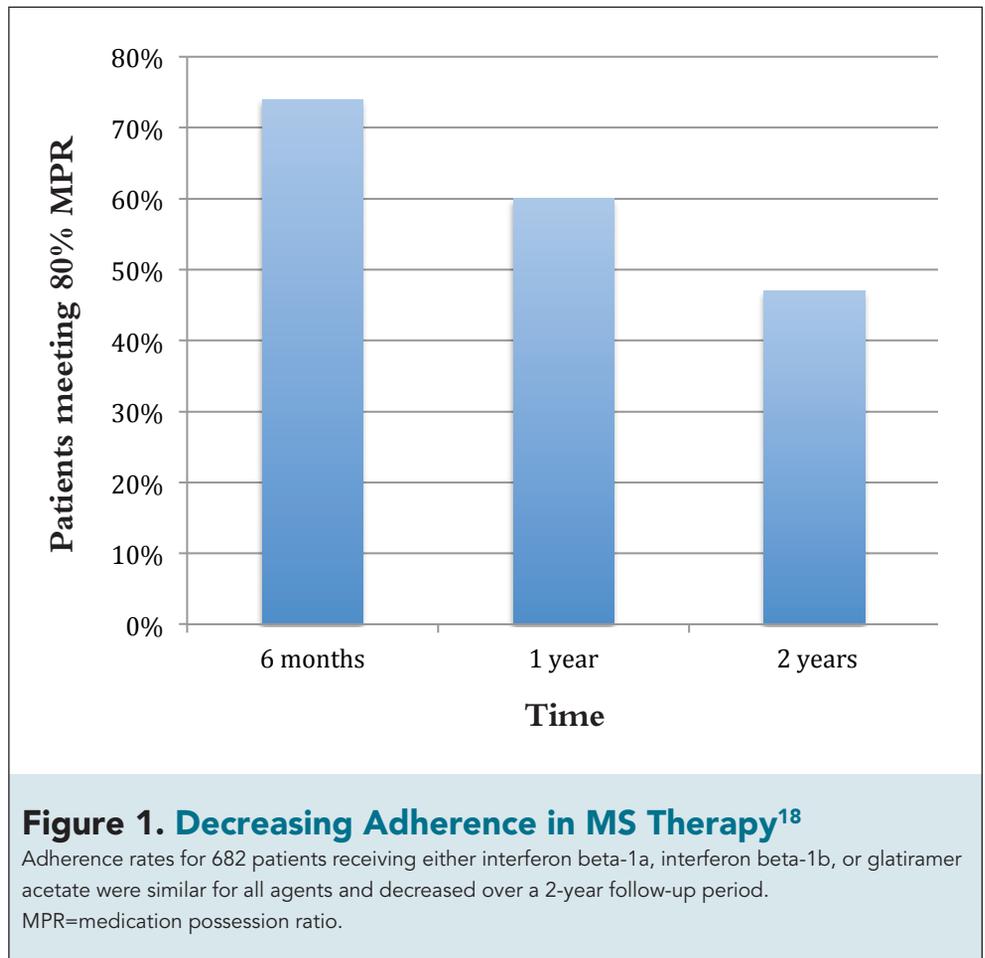
and often a lack of belief in the effectiveness of the drug present a compelling conflict for them. As a result, patients may report that they are using their medications consistently, rather than making the effort to examine their reasons for nonadherence. Having a close relationship with physicians, nurses, and support services such as manufacturer-sponsored nurse providers has been shown to increase adherence in MS.<sup>3,12,16</sup>

## MS-specific Challenges in Adherence

The WHO estimates that adherence to therapy for any chronic disease is about 50% in developed countries.<sup>10</sup> Certain features of MS contribute to even lower adherence rates. As suggested in **Figure 2**, multiple factors influence adherence to therapy in any given patient.<sup>19</sup>

### Is the Drug Really Working?

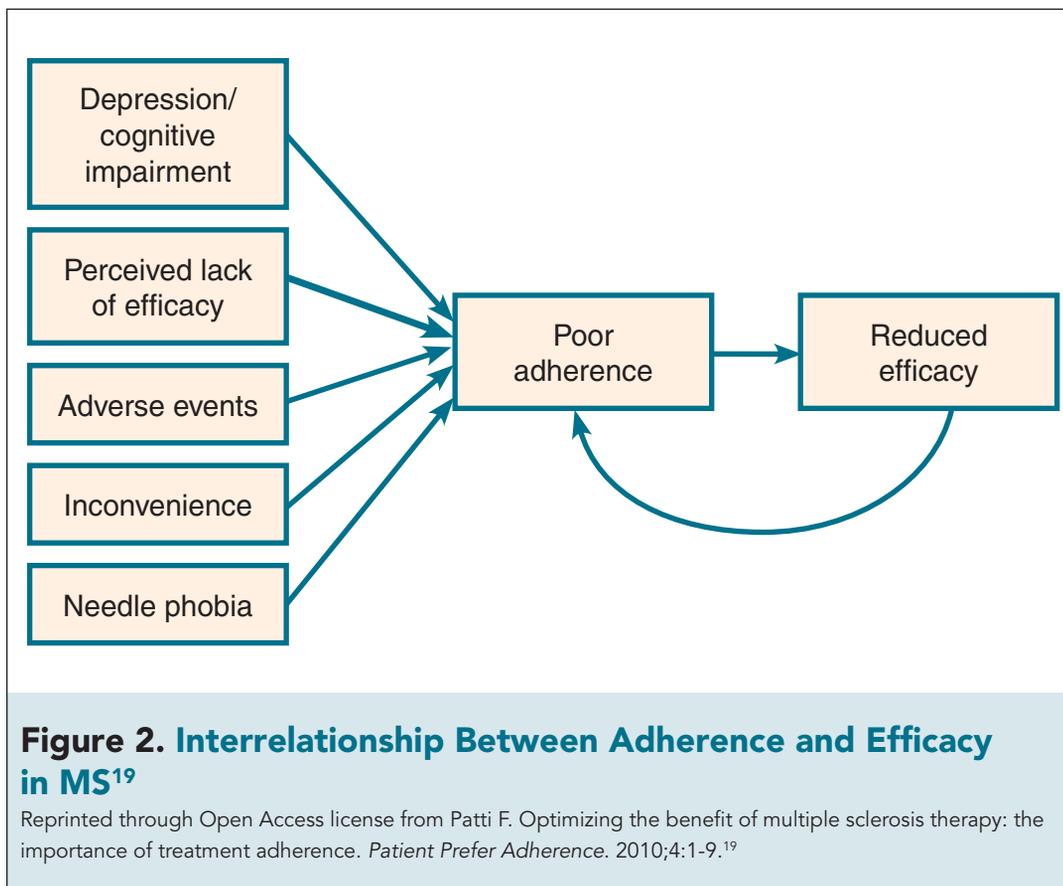
Perceived lack of efficacy is one of the most commonly cited reasons by patients for missing doses and discontinuing therapy.<sup>13,17,20</sup> People with MS may not “feel” the effects of the disease they are treating, and they do not necessarily notice beneficial effects on their health and well-being when they take a DMT.<sup>19</sup> The unpredictable nature of the MS disease course makes it particularly difficult to appreciate the importance of treatment adherence. Despite the many studies showing the overall benefits of treatment in this population, it is still not possible to predict how any individ-



ual’s MS disease might progress if they were not receiving treatment.<sup>21</sup> Unrealistic expectations of DMT have been shown to be highly predictive of premature discontinuation.<sup>1,21,22</sup> Other factors shown to influence adherence in MS are shown in **Table 1**.<sup>2,12,13,17,23–26</sup>

### Forgetfulness

As with many drug therapies, difficulty remembering to take a medication is a primary reason for nonadherence in MS. In one study, forgetfulness was the top reason given for missing injections, reported by 39% of patients.<sup>2</sup> A Spanish study of patients on interferon beta-1b indicated the same, with 64% of patients forgetting to administer their injections.<sup>27</sup> Forgetfulness is also one of the reasons that adherence rates tend to decrease when a medication regimen is more complex and increase



months soon after initiation of therapy.<sup>32</sup>

Some people with MS adapt to treatment with injectable medications with relatively little difficulty, while others struggle with adherence and subsequently abandon their medication.<sup>35</sup> However, many factors related to adherence in MS are not associated with injection issues.<sup>28</sup> One study examined adherence practices in patients using glatiramer acetate daily for MS and

when a regimen is simplified.<sup>28</sup> Since intramuscular interferon is administered once weekly, patients on this preparation have been shown to have a lower overall percentage of missed doses compared with other injectable therapies.<sup>29,30</sup>

A study comparing patients' reasons for nonadherence with physicians' perceptions showed that the top reasons for both parties were side effects in general, the sense that the disease was showing no signs of decline, injection-site reactions, and patients' being fed up with or emotionally drained from having to take the drug.<sup>31</sup>

### Injection Issues

Injection anxiety, injection-site reactions, and "injection fatigue" have been reported as significant reasons for nonadherence for many patients, particularly those using injectable therapies over a long-term period.<sup>32-34</sup> "Injection anxiety" has been shown to predict lower levels of adherence in the

assessed the underlying attitudes that contributed to better or worse adherence.<sup>35</sup> Among 341 patients with relapsing-remitting MS (RRMS) in the study, 225 were classified as adherent and 116 were nonadherent. The most significant predictors of adherence were:

- self-efficacy (control);
- hope (evaluated via the Herth Hope Index);
- the perception that health professionals were supportive of the individual taking the drug; and
- no previous use of other immunomodulators.<sup>35</sup>

### Adherence to Oral Therapies

The availability of oral therapy changes some of the adherence issues seen in MS, but does not resolve them completely. Because oral therapies are relatively new in the MS market, adherence data on oral therapies in the "real world" (outside of clinical trials) remain limited and reflect

## Table 1. Factors That Influence Adherence to MS Disease-modifying Therapy

### Factors that positively influence adherence

- Patient is well-informed about the disease and the purpose of treatment<sup>2</sup>
- Patient receives care at a specialized MS care center<sup>13</sup>
- Efforts are made to increase the convenience of dosing (e.g., autoinjector use)<sup>23</sup>
- Patient receives sponsor support and self-injection training<sup>12</sup>

### Factors that negatively influence adherence

- Stable disease status (patients do not believe their condition requires treatment)<sup>24</sup>
- Depression<sup>1,26</sup>
- Alcohol use<sup>25</sup>
- Secondary-progressive MS<sup>13</sup>
- Adverse effects and injection-site reactions<sup>23</sup>

relatively short time periods. Adverse effects observed with oral therapies include diarrhea, gastrointestinal discomfort, and flushing, and may be severe enough to cause patients to discontinue therapy.<sup>6,36</sup>

It may seem that the relative ease of taking a pill versus self-injecting would overcome most adherence problems. Unfortunately, adherence to oral therapies among people with other chronic health conditions is low and tends to decrease with time in a pattern similar to that seen with injectable therapies.<sup>36,37</sup> Even when an oral drug has the potential to noticeably reduce symptoms or would yield nearly 100% efficacy (such as with oral contraceptives), adherence tends to be low.<sup>38</sup> Hence, a similar scenario can be anticipated with MS oral medications.

## Early Discontinuation of Therapy

Data from multiple studies show that people with MS who discontinue treatment tend to do so within the first 12 months of therapy.<sup>13,16,17,39</sup>

Adverse effects are high on the list given by both patients and physicians as reasons for stopping therapy. If a patient does discontinue due to adverse effects, this tends to occur soon after treatment initiation.<sup>40</sup>

Usually patients who discontinue therapy for any reason do so without seeking medical advice. An analysis of 396 people with MS who stopped their immunomodulatory treatment showed that 75% of patients made this decision on their own.<sup>41</sup> Perceived lack of efficacy was the reason for withdrawal for about half of those who discontinued (Table 2).<sup>41</sup> Of those who withdrew, approximately half of patients said they wanted to restart therapy, but 200 patients did not want to restart a DMT.<sup>41</sup>

## Table 2. Reasons for Discontinuing and Staying Off Disease-modifying Therapy<sup>41</sup>

Reasons for discontinuing	(n=396)
Proven or putative lack of efficacy	51.4%
Side effects	58%
Reasons for not restarting therapy	(n=200)
Lack of conviction that therapy influences the disease	29.4%
Fear of injection	18.7%
Fear of bringing disease to mind regularly	17.9%
Doubts about the diagnosis	11.2%

Data adapted from Bischoff C, et al. *J Neurol.* 2012;259(11):2347-2353.

## Effects of Nonadherence on Disease Progression

Because of the unpredictable nature of MS, it is difficult to determine for certain what effect adherence or nonadherence to therapy may have on outcomes for any individual patient. People who do not adhere to therapy are unlikely to

receive the full potential of treatment and thus may be at risk for poorer outcomes.<sup>19</sup> A number of studies have attempted to demonstrate the effects of low adherence or nonadherence on outcomes in MS. For instance, in a study of 632 patients with RRMS, patients who discontinued therapy had significantly higher Expanded Disability Status Scale (EDSS) scores at 2-year follow-up than patients who remained on treatment.<sup>13</sup> The proportions of patients who were relapse-free and progression-free were significantly higher among those who remained on therapy than among those who discontinued therapy.<sup>13</sup>

A poster presented at an international meeting in 2008 investigated the effects of gaps in MS treatment with an interferon or glatiramer acetate on the incidence of severe MS relapses (hospitalization or emergency department visits). These authors found that patients who had gaps in therapy of  $\geq 90$  days had a nearly two-fold greater probability of experiencing a severe relapse than patients with shorter gaps in therapy.<sup>42</sup>

In another study based on a large US administrative claims database, medication possession ratios (MPRs) were used to assess the effects of adherence on outcomes and cost of treatment in MS.<sup>43</sup> MPR  $\geq 80\%$  was defined as adherent to treatment. Patients who were adherent to therapies had a lower rate of severe relapses (12.4% versus 19.9%,  $P=0.013$ ) and lower direct and indirect treatment costs (\$14,095 versus \$16,638,  $P=0.048$ ) over the 2-year study period.<sup>43</sup> In another study derived from an administrative claims database, 60% of the 2,446 patients studied were shown to be adherent ( $\geq 80\%$  MPR).<sup>44</sup> Those who were adherent were significantly less likely to require MS-related inpatient hospital services or to have an MS relapse. The adherent group also had lower medical costs over 2 years

(\$3,380 versus \$4,348,  $P=0.003$ ).<sup>44</sup> In all of these studies, low adherence was associated with poorer outcomes, but it should be noted that direct causality cannot be inferred and other factors may have contributed to the difference in outcomes.<sup>43</sup>

## Adherence to Monitoring Protocols for MS Therapies

Regardless of which DMT is used, safety monitoring is a necessary step that cannot be overlooked by people with MS or those involved in their care. Increasingly, payers and health care organizations are requiring that patients remain current on blood work and other necessary evaluations before they will approve prescription refills for MS drugs or authorize reimbursement. All MS therapies require follow-up and monitoring to ensure safety and tolerability, but newly introduced therapies have prompted different types of monitoring not previously used in MS care practices. As more new agents are introduced, the list for required monitoring will likely expand, with a greater variety of tests needed to ensure the safety of patients receiving these treatments.<sup>6,38,45</sup>

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*Increasingly, payers and health care organizations are requiring that patients remain current on blood work and other necessary evaluations before they will approve prescription refills for MS drugs or authorize reimbursement.*

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Depending upon where lab tests and other monitoring tests such as eye exams are done, patients may need to keep track of results and provide the records to their MS center or practice. This adds to the complexity of MS care, and may be especially difficult for some patients, such as those who have cognitive impairment. Prac-

tioners can assist by developing and utilizing reminder systems suitable to the specific adherence and monitoring requirements.<sup>38</sup> However, patients and/or caregivers need to be advised about how to accept responsibility for their care and take on the onus of monitoring and follow-up when possible.

## Discussing Adherence with Patients

Helping people to overcome adherence problems is a long-standing and complex challenge in medical practice.<sup>15</sup> Part of the problem stems from the paternalistic notion that physicians' orders must

be obeyed, which is implied in the term "compliance." In the book *Improving Medication Adherence: How to Talk With Patients About Their Medications*, author Shawn Christopher Shea, MD, uses the term "medication interest" to reflect the "continuum of interest" that occurs when people use medications.<sup>46</sup> Interest in taking medications usually starts out high and drops off over time. To increase interest or adherence, Shea suggests that practitioners learn about patients' attitudes and beliefs, and help them gain a sense that they are collaborators in the decision-making process (**Table 3**).<sup>46</sup>

**Table 3. Tips for Improving Medication Adherence<sup>46</sup>**

1. Learn patients' belief sets
  - Help patients understand the significance of their condition
  - Are patients motivated to take medication for the condition?
  - Do patients believe pros of taking medication outweigh the cons?
  - Have patients lost motivation to treat the disease because they are feeling good, or because they don't believe the medication is helping?
2. Inquire into lost dreams
  - Is there anything the disease is keeping patients from doing that they would like to do again?
3. Become familiar with family history, priorities, and cultural beliefs
  - Are patients motivated to remain healthy for children or other family members?
  - Do patients have a family member whose condition worsened because they failed to take a medication? Would it help them to keep a photo of this person near the medication as a reminder of this motivation?
4. Give patients a sense of collaboration in the decision-making process
  - Work together to select medications that patients have a genuine "interest" in taking and that will help them maintain independence for a longer time and reduce the risk of having frequent relapses
5. Learn patients' attitudes about taking medications in general
  - Past negative experiences
  - Patterns of taking medications in the past; schedules that worked best
  - Ask: "Do you take your medication as prescribed?" If they respond negatively, follow up by asking why
6. Give just as much attention to follow-up appointments as initial ones. Focus on:
  - side effects
  - effectiveness of medication
  - missed doses
  - continued affordability of the medication
  - pros and cons of the medication use that arise

Adapted from: Shea SC. *Improving Medication Adherence: How to Talk With Patients About Their Medications*. Philadelphia, Pa: Lippincott Williams & Wilkins; 2006.<sup>46</sup>

Patients may exaggerate their extent of adherence in order to avoid confrontation or the appearance of being uncooperative.<sup>2</sup> When the MS nurse helps the person to acknowledge the issues underlying nonadherence, this admission can be a great relief and a turning point for a dialogue about adherence. Once the conversation has been started, the nurse should attempt to identify any barriers that can be overcome, potentially with an adjustment in medication delivery or therapeutic approach. These barriers and solutions have been summarized by Costello and colleagues (Table 4).<sup>3</sup>

## Nurse Support Services and Effect on Adherence

As MS treatments become more varied and potentially more complex, there is a greater need than ever for a high level of patient support and education. However, some MS nurse specialists fear that the opposite may be happening—patients may be prescribed a pill for MS without gaining a full understanding of the long-term implications of therapy and the need for regular medical follow-up. Patients may go home with a pill and “forget they have MS,” but they may encounter problems related to low lymphocyte counts, infec-

**Table 4. Barriers to Adherence and Strategies to Overcome Them<sup>3</sup>**

Unrealistic expectations	<ul style="list-style-type: none"> <li>• Acknowledge that relapses may still occur</li> <li>• Emphasize that relapses may be more frequent or severe without treatment</li> <li>• Emphasize that treatment can help maintain function and quality of life</li> </ul>
Injection/needle phobia	<ul style="list-style-type: none"> <li>• Educate about proper injection preparation and technique</li> <li>• Allay fears about self-injection</li> <li>• Consider cognitive reframing or relaxation techniques</li> </ul>
Adverse events Flulike symptoms	<ul style="list-style-type: none"> <li>• Inform patients of specific symptoms to expect</li> <li>• Gradually titrate the dose to the prescribed dose</li> <li>• Recommend prophylactic administration of analgesics</li> <li>• Time or schedule injections on days when symptoms will be least disruptive</li> </ul>
Injection-site reactions/pain	<p>Instruct patients to:</p> <ul style="list-style-type: none"> <li>• Routinely rotate injection sites</li> <li>• Thoroughly wash hands before injecting</li> <li>• Clean injection site with alcohol or soap and water and allow to dry</li> <li>• Allow medications to warm to room temperature</li> <li>• Cool or warm injection site for 30 to 60 seconds before injecting</li> <li>• Ensure complete needle penetration to prevent intradermal injections with use of autoinjectors</li> <li>• Use local anesthetics to minimize pain</li> </ul>
Complacency	<ul style="list-style-type: none"> <li>• Remind patients that although they are in remission, their disease may be active at a subclinical level</li> </ul>
Treatment fatigue	<ul style="list-style-type: none"> <li>• Reinforce the importance of therapy for maintaining health and quality of life</li> <li>• Readjust the injection schedule to better fit their lifestyle</li> </ul>
Cognitive deficits/deteriorating fine motor skills	<ul style="list-style-type: none"> <li>• Recommend reminder systems (e.g., alarms, notes, smartphone apps)</li> <li>• Recommend therapies that are premixed in prefilled injectors</li> </ul>
Changed family or financial circumstances	<ul style="list-style-type: none"> <li>• Have family member prepare and administer injections</li> <li>• Discuss changes and arrange for home care nurse, if necessary</li> <li>• Refer patient to assistance programs offered by pharmaceutical companies</li> </ul>

Adapted with permission from Costello K, et al. *Medscape J Med*. 2008;10:225. Available at: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2580090/table/T1/>.<sup>3</sup>

tions, or other complications that could have been identified with appropriate monitoring.

The difficulty of finding accurate sources of consumer information is another problem that can lead to adherence problems. If one looks at web-based discussion groups about MS, it is clear that there is a great need for peer support and accurate information. However, many of these services exist without professional oversight and disseminate inaccurate or misleading information.

Nursing support, peer support, and other services provided by pharmaceutical manufacturers can be valuable additions to MS care that enhance adherence (**Table 5**). In a study involving 5,825 patients with MS, those who received manufacturer-provided glatiramer acetate injection-training were 40% more likely to reach adherence goals, and those who received copayment assistance were 30.6% more likely to achieve these goals.<sup>12</sup>

### Table 5. Benefits of Manufacturer-provided Support Services in MS

- In-home medication administration training (injection training) and refresher training
- 24/7 phone access to nursing support services
- Educational materials (teleconferences, training videos)
- Tools for maintaining correct dosage and tracking adherence to medication
- Peer support programs
- Family member support services
- Assistance with benefits and copayments

### Conclusion

One of the basic tenets of adherence is that a person's perceived need for a medication must outweigh the downsides, such as inconvenience, cost, and possible adverse effects.<sup>47</sup> This is truer in MS now than ever before, with a greater variety of therapies available and a greater need to bal-

ance the risks and benefits of these therapies. MS nurses must be aware of the importance of adherence in making therapeutic decisions, considering safety risks, and evaluating the potential efficacy of DMTs, and gain the skills to effectively counsel patients with MS about these issues.

### References

1. Saunders C, Caon C, Smrka J, et al. Factors that influence adherence and strategies to maintain adherence to injected therapies for patients with multiple sclerosis. *J Neurosci Nurs*. 2010;42(5 Suppl):S10-S18.
2. de Seze J, Borgel F, Brudon F. Patient perceptions of multiple sclerosis and its treatment. *Patient Prefer Adherence*. 2012;6:263-273.
3. Costello K, Kennedy P, Scanzillo J. Recognizing nonadherence in patients with multiple sclerosis and maintaining treatment adherence in the long term. *Medscape J Med*. 2008;10(9):225.
4. Klauer T, Zettl UK. Compliance, adherence, and the treatment of multiple sclerosis. *J Neurol*. 2008;255(Suppl 6):87-92.
5. Haynes RB, Yao X, Degani A, et al. Interventions to enhance medication adherence. *Cochrane Database Syst Rev*. 2005(4):CD000011.
6. Fox EJ. Emerging oral agents for multiple sclerosis. *Am J Manag Care*. 2010;16(8 Suppl):S219-S226.
7. Giovannoni G. Promising emerging therapies for multiple sclerosis. *Neurol Clin*. 2011;29(2):435-448.
8. Johnson KP. Glatiramer acetate for treatment of relapsing-remitting multiple sclerosis. *Expert Rev Neurother*. 2012;12(4):371-384.
9. Bruce JM, Lynch SG. Multiple sclerosis: MS treatment adherence—how to keep patients on medication? *Nat Rev Neurol*. 2011;7(8):421-422.
10. World Health Organization (WHO). *Adherence to Long-term Therapies: Evidence for Action*. Geneva, Switzerland: WHO, 2003.
11. Haynes RB, McDonald H, Garg AX, et al. Interventions for helping patients to follow prescriptions for medications. *Cochrane Database Syst Rev*. 2002(2):CD000011.
12. Jones J, Scheidt D, Kaushal R, et al. Assessing the role of patient support services on adherence rates in patients using glatiramer acetate for relapsing-remitting multiple sclerosis. *J Med Econ*. 2013;16(2):213-220.
13. Rio J, Porcel J, Tellez N, et al. Factors related with treatment adherence to interferon beta and glatiramer acetate therapy in multiple sclerosis. *Mult Scler*. 2005;11(3):306-309.
14. Zeller A, Ramseier E, Teagtmeyer A, et al. Patients' self-reported adherence to cardiovascular medication using electronic monitors as comparators. *Hypertens Res*. 2008;31(11):2037-2043.
15. Lugaresi A, Ziemssen T, Oreja-Guevara C, et al. Improving patient-physician dialog: commentary on the results of the MS Choices survey. *Patient Prefer Adherence*. 2012;6:143-152.
16. Jongen PJ, Hengstman G, Hupperts R, et al. Drug adherence and multidisciplinary care in patients with multiple sclerosis: protocol of a prospective, web-based, patient-centred, nation-wide, Dutch cohort study in glatiramer acetate treated patients (CAIR study). *BMC Neurol*. 2011;11:40.
17. Tremlett HL, Oger J. Interrupted therapy: stopping and switching of the beta-interferons prescribed for MS. *Neurology*. 2003;61(4):551-554.
18. Wong J, Gomes T, Mamdani M, et al. Adherence to multiple sclerosis disease-modifying therapies in Ontario is low. *Can J Neurol Sci*. 2011;38(3):429-433.
19. Patti F. Optimizing the benefit of multiple sclerosis therapy: the importance of treatment adherence. *Patient Prefer Adherence*. 2010;4:1-9.
20. Clerico M, Barbero P, Contessa G, et al. Adherence to interferon-beta treatment and results of therapy switching. *J Neurol Sci*. 2007;259(1-2):104-108.
21. Caon C, Saunders C, Smrka J, et al. Introduction: adherence to disease-modifying therapies—key to optimizing outcomes in relapsing multiple sclerosis. *J Neurosci Nurs*. 2010;42(5 Suppl):S1-S4.

22. Mohr DC, Goodkin DE, Likosky W, et al. Therapeutic expectations of patients with multiple sclerosis upon initiating interferon beta-1b: relationship to adherence to treatment. *Mult Scler*. 1996;2(5):222-226.
23. Lugaresi A, Florio C, Brescia-Morra V, et al. Patient adherence to and tolerability of self-administered interferon beta-1a using an electronic auto-injection device: a multicentre, open-label, phase IV study. *BMC Neurol*. 2012;12:7.
24. Hancock LM, Bruce JM, Lynch SG. Exacerbation history is associated with medication and appointment adherence in MS. *J Behav Med*. 2011;34(5):330-338.
25. Tremlett H, Van der Mei I, Pittas F, et al. Adherence to the immunomodulatory drugs for multiple sclerosis: contrasting factors affect stopping drug and missing doses. *Pharmacoepidemiol Drug Safety*. 2008;17(6):565-576.
26. Tarrants M, Oleen-Burkey M, Castelli-Haley J, et al. The impact of comorbid depression on adherence to therapy for multiple sclerosis. *Mult Scler Int*. 2011;2011:271321.
27. Fernandez O, Aguera E, Izquierdo G, et al. Adherence to interferon beta-1b treatment in patients with multiple sclerosis in Spain. *PLoS One*. 2012;7(5):e35600.
28. Treadaway K, Cutter G, Salter A, et al. Factors that influence adherence with disease-modifying therapy in MS. *J Neurol*. 2009;256(4):568-576.
29. Halpern R, Agarwal S, Dembek C, et al. Comparison of adherence and persistence among multiple sclerosis patients treated with disease-modifying therapies: a retrospective administrative claims analysis. *Patient Prefer Adherence*. 2011;5:73-84.
30. Kleinman NL, Beren IA, Rajagopalan K, et al. Medication adherence with disease modifying treatments for multiple sclerosis among US employees. *J Med Econ*. 2010;13(4):633-640.
31. Rinon A, Buch M, Holley D, et al. The MS Choices Survey: findings of a study assessing physician and patient perspectives on living with and managing multiple sclerosis. *Patient Prefer Adherence*. 2011;5:629-643.
32. Turner AP, Williams RM, Sloan AP, et al. Injection anxiety remains a long-term barrier to medication adherence in multiple sclerosis. *Rehabil Psychol*. 2009;54(1):116-121.
33. Beer K, Muller M, Hew-Winzeler AM, et al. The prevalence of injection-site reactions with disease-modifying therapies and their effect on adherence in patients with multiple sclerosis: an observational study. *BMC Neurol*. 2011;11:144.
34. Verdun di Cantogno E, Russell S, Snow T. Understanding and meeting injection device needs in multiple sclerosis: a survey of patient attitudes and practices. *Patient Prefer Adherence*. 2011;5:173-180.
35. Fraser C, Hadjimichael O, Vollmer T. Predictors of adherence to Copaxone therapy in individuals with relapsing-remitting multiple sclerosis. *J Neurosci Nurs*. 2001;33(5):231-239.
36. Killestein J, Rudick RA, Polman CH. Oral treatment for multiple sclerosis. *Lancet Neurol*. 2011;10(11):1026-1034.
37. Markowitz CE. The current landscape and unmet needs in multiple sclerosis. *Am J Manag Care*. 2010;16(8 Suppl):S211-218.
38. Girouard N, Soucy N. Patient considerations in the management of multiple sclerosis: development and clinical utility of oral agents. *Patient Prefer Adherence*. 2011;5:101-108.
39. Giovannoni G, Southam E, Waubant E. Systematic review of disease-modifying therapies to assess unmet needs in multiple sclerosis: tolerability and adherence. *Mult Scler*. 2012;18(7):932-946.
40. O'Rourke KE, Hutchinson M. Stopping beta-interferon therapy in multiple sclerosis: an analysis of stopping patterns. *Mult Scler*. 2005;11(1):46-50.
41. Bischoff C, Schreiber H, Bergmann A. Background information on multiple sclerosis patients stopping ongoing immunomodulatory therapy: a multicenter study in a community-based environment. *J Neurol*. 2012;259(11):2347-2353.
42. Al-Sabbagh A, Bennet R, Kozma C, et al. Medication gaps in disease-modifying therapy for multiple sclerosis are associated with an increased risk of relapse: findings from a national managed care database. Posters and abstracts of 18th meeting of the European Neurological Society, Nice, France, June 6-11, 2008, Abstract 79.
43. Ivanova JI, Bergman RE, Birnbaum HG, et al. Impact of medication adherence to disease-modifying drugs on severe relapse, and direct and indirect costs among employees with multiple sclerosis in the US. *J Med Econ*. 2012;15(3):601-609.
44. Tan H, Cai Q, Agarwal S, et al. Impact of adherence to disease-modifying therapies on clinical and economic outcomes among patients with multiple sclerosis. *Adv Ther*. 2011;28(1):51-61.
45. Gasperini C, Ruggieri S. Development of oral agent in the treatment of multiple sclerosis: how the first available oral therapy, fingolimod will change therapeutic paradigm approach. *Drug Des Devel Ther*. 2012;6:175-186.
46. Shea SC. *Improving Medication Adherence: How to Talk With Patients About Their Medications*. Philadelphia, Pa.: Lippincott Williams & Wilkins; 2006.
47. Horne R, Weinman J. Patients' beliefs about prescribed medicines and their role in adherence to treatment in chronic physical illness. *J Psychosomat Res*. 1999;47:555-567.

# CP Counseling Points™

## Addressing the New Adherence Challenges in MS Therapy

- Poor adherence is an ongoing, pervasive problem in the management of multiple sclerosis (MS). Addressing adherence issues in MS care is challenging and highly patient-specific.
- The difference in outcomes when a person with MS takes a disease-modifying therapy (DMT) as prescribed versus taking it sporadically may outweigh any incremental efficacy differences between the available agents.
- True adherence to therapy is difficult to measure because it relies on a person's honest response. People with MS are estimated to miss about 30% of their DMT doses.
- MS-specific reasons for nonadherence include perceived lack of efficacy; forgetfulness; inconvenience of the regimen; adverse effects/tolerability issues; and injection fatigue and/or anxiety.
- Factors associated with better adherence include patients who are well-informed about the disease and believe in the need for therapy; patients who receive care from a specialized MS center; and patients who receive manufacturer-sponsored training or support.
- Discontinuation of MS therapy tends to occur within the first 12 months of treatment, with adverse events being the main cause for discontinuation.
- Studies suggest that patients who remain on their DMT have a significantly greater likelihood of being relapse-free and progression-free versus those who discontinue treatment.
- Newly introduced therapies have prompted different types of monitoring not previously required in MS care practices. This adds to the complexity of MS care.
- As MS treatments become more complex, there is a greater need for patient support and education. MS nurses must be aware of the importance of adherence in making therapeutic decisions, considering safety risks, and evaluating the potential efficacy of an agent.

# Counseling Points™

## Addressing the New Adherence Challenges in MS Therapy

### Continuing Education Post-test

To receive contact hours, please read the program in its entirety, answer the following post-test questions, and complete the program evaluation. A certificate will be awarded for a score of 80% (9 correct) or better. A certificate will be mailed within 4 to 6 weeks. There is no charge for CNE credit.

**By Mail:** Delaware Media Group, 66 S. Maple Ave., Ridgewood, NJ 07450

**By Fax:** (201) 612-8282

**Via the Web:** Applicants can access this program at the International Organization of MS Nurses' website, [www.IOMSN.org](http://www.IOMSN.org). Click on *Counseling Points* and follow the instructions to complete the online post-test and application forms.

#### PLEASE SELECT THE BEST ANSWER

- According to a World Health Organization (WHO) report on adherence:**
  - there is a need for more powerful drugs that will work despite the problem of nonadherence
  - improving adherence may have a greater impact on health than improving medical treatments
  - nonadherence is mainly a problem in developing countries
  - all of the above
- When asked directly about their adherence to medication regimens, most patients:**
  - accurately describe the number of doses taken
  - admit they are nonadherent but promise to do better
  - overestimate their degree of adherence
  - can't remember whether they took the medication or not
- Perceived lack of efficacy is a major cause of nonadherence in MS because:**
  - people with MS may not "feel" the effects of a disease-modifying drug on their disease
  - it is not possible to predict how the disease might progress if the person were not receiving treatment
  - patients may have unrealistic expectations about a drug's potential benefits
  - all of the above
- Compared with patients who have highly symptomatic MS, those with stable disease may have:**
  - better adherence, because they are more motivated to limit disease progression
  - similar rates of adherence
  - poorer adherence, because they don't recognize or accept the need for the drug
  - a greater likelihood of switching therapies
- Forgetfulness is a main reason associated with missed doses of MS injectable agents.**
  - True
  - False
- With the availability of oral therapies, rates of adherence to MS disease-modifying therapy (DMT) can be expected to:**
  - improve dramatically, due to the greater ease of taking oral drugs
  - remain problematic, based on patterns seen with other oral therapies
  - be easier to track, due to better pharmacy tracking systems
  - start out low but improve as patients get used to oral drug adverse effects
- Patients who discontinue DMTs tend to do so in what time period?**
  - The first 12 months of therapy
  - Between 1 and 2 years of therapy
  - After 3 to 4 years of therapy
  - Discontinuation patterns have not been determined
- Gaps in DMT lasting ≥90 days have been associated with what outcome in MS?**
  - No outcomes can be specifically attributed to gaps in therapy
  - Patients have an increased risk of experiencing a severe relapse
  - Patients will require a washout period before restarting therapy
  - Patients are more likely to transition to progressive disease
- Safety monitoring of patients on MS therapies is an increasingly important aspect of adherence because:**
  - patients may be unable to refill a prescription without requisite blood work or tests
  - patients and practitioners may overlook the importance of ongoing monitoring
  - required monitoring steps have expanded with newer medications
  - all of the above
- For patients who demonstrate complacency about MS therapy, Costello and colleagues advise nurses to:**
  - tell patients that you can switch their therapy if they are responding poorly to their current medication
  - tell patients that taking the drug will prevent them from having MS relapses
  - remind patients that, although they're in remission, the disease may be active subclinically
  - tell patients that it's their choice if they want to take the drug or not—they are responsible for their own care
- According to Shea, steps in improving adherence include all of the following EXCEPT:**
  - learning patients' belief sets
  - giving patients a sense of collaboration
  - expressing how disappointed you are in patients' adherence practices
  - learning about patients' attitudes toward medications in general
- Nursing support services sponsored by manufacturers have been shown to:**
  - cause confusion because they conflict with neurology nurses' orders
  - help mainly at the time of initial introduction to therapy
  - help mainly if a person needs financial assistance with the medication
  - help patients reach adherence goals



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