FIBROMYALGIA in Primary Care:
Incorporating Patient Insights into Patient Care

A Series of Live CME Teleconferences/Webinars, an Enduring Web Archive and Online Slides with Transcript

Target audience: Primary care physicians

Needs Assessment
EXECUTIVE SUMMARY

Burden
Fibromyalgia (FM) is a common disorder, affecting an estimated 5 million US adults.\(^1\)[See Appendix (1) Public Health Sources & (2) Literature Review] FM can occur alone or accompany other chronic diseases.\(^2\)-\(^4\) Most people diagnosed are middle aged, but symptoms can occur at any age. In a large 2010 Internet survey of more than 10,000 individuals with FM, 36.3% of individuals were born between 1950 and 1959 (aged 51-60 years), and 26.7% were born between 1960 and 1969 (aged 41-50 years).\(^5\)[See Appendix (3) Understanding Fibromyalgia & Improving Care, 2010 Patient Survey] FM can cause pain, fatigue, and a variety of other symptoms, which can significantly affect patients’ ability to carry on daily activities and negatively impact their lives.\(^1\);\(^6\) The socioeconomic burden of FM to society, the medical system, and individuals includes more frequent medical visits, greater mean annual healthcare expenditure (similar to rheumatoid arthritis [RA]), a greater number of missed workdays, decreased productivity at work, and premature retirement compared with the general population.\(^7\)-\(^9\)[See Appendix (2) Literature Review] For example, when asked how many workdays patients have missed over the past 12 months because of FM, 51.4% had not been employed in the past months, 17.7% had missed 1 to 9 days, 9.1% missed 10 to 20 days, 11.1% missed more than 20 days, and only 10.7% had not missed any days.\(^5\)[See Appendix (3) Understanding Fibromyalgia & Improving Care, 2010 Patient Survey]

Presenting Symptoms
A spectrum of different clinical symptoms constitute FM, and any given patient may differ in how they manifest these particular symptoms; for example, in 1 patient, pain may be the predominant issue, but another patient may be able to tolerate the pain, but the fatigue, dyscognition, or sleep disturbance predominate.[See Appendix (1) Public Health Sources & (2) Literature Review] A 2007 Internet survey conducted by the National Fibromyalgia Association (NFA) demonstrated the frequency of symptoms that were expressed by at least 25% of the respondents (Figure 1).\(^10\) The 2010 Internet survey found that more than 30% of FM patients experience chronic widespread pain; problems sleeping, fatigue; heightened sensitivity to touch; difficulty concentrating; poor memory; feelings of depression; joint pain; stiffness; and sensitivity to loud noises, bright lights, odors, and cold that they rate the severity as $\geq 8$ out of 10\(^5\)[See Appendix (3) Understanding Fibromyalgia & Improving Care, 2010 Patient Survey]. These major clinical manifestations of FM have not changed, but their prevalence, associations, relative importance to the patient, and scientific underpinnings are increasingly better understood.\(^11\);\(^12\) At least 50% of respondents rated the following symptoms as “very” or “extremely” disruptive to their overall quality of life (QOL): chronic widespread pain, problems sleeping and fatigue; at least 40% of respondents rated the following symptoms as “very” or “extremely” disruptive to their overall QOL: problems with physical function, difficulty concentrating, poor memory, joint pain, and stiffness.\(^5\) Therefore, physicians should individually assess the symptoms domain for each patient, which will also help influence the choice of therapies.\(^13\);\(^14\) A comprehensive
assessment of the multiple symptoms domains associated with FM and the impact of FM on multidimensional aspects of function should be a routine part of the care of FM patients.\(^6\)

Figure 1. Internet Survey: Current Symptoms & Comorbidities\(^{10}\)

However, in a baseline pretest survey of primary care physicians (PCPs) from the recent *Fibromyalgia in Primary Care: What You Need to Know Now! Practical Applications for Patient Care* CME Teleconference/Webinar Series, up to a third of respondents would “never” or “sometimes” evaluate a FM patient for a variety of symptoms (eg, physical function, depression, other psychologic problems, sleep disturbance, health-related QOL, stiffness, and dyscognition).\(^{15}\) The proportion of respondents who would “always” evaluate a FM patient for the array of symptom domains increased following the educational activity.\(^{16}\) [See Appendix (4): PCP Pretest/Evaluation/Posttest/Outcomes Data]

An emailed online survey of primary care clinicians revealed that clinicians ranked “presenting symptoms” among the top 3 areas of educational content that should be included in an educational program on FM\(^{17}\). [See Appendix (5): Primary Care Clinician Survey].

**Diagnosis**

**Importance of Timely Diagnosis**

Often, once the diagnosis of FM is made, patients’ healthcare expenditures will decrease, with more appropriate utilization that is targeted to improve their function and QOL, and less diagnostic testing\(^2;18\) (Not all studies have demonstrated this reduction in healthcare expenditures)\(^{19}\). This demonstrates the importance of timely diagnosis. However, research shows that patients with FM typically see many doctors before receiving the diagnosis, and that the road to diagnosis is frequently long and stressful.\(^{10;20}\) [See Appendix (1)]
In the 2007 NFA Internet survey of individuals diagnosed with FM, 46% of respondents had consulted between 3 and 6 healthcare providers before obtaining the diagnosis of FM (25% had seen more than 6 providers). One reason for this may be that the main symptoms of FM overlap with many other conditions. Another reason is that there are currently no generally accepted, objective diagnostic laboratory tests, or radiographic or imaging findings that can confirm FM, and the tender point exam utilizing palpation of soft tissue sites—which has been advocated for diagnosis—is highly subjective. In addition, there is a discrepancy between symptom severity and absence of defined tissue pathology (other than emerging data about grey matter volume). As a result, some clinicians may conclude that a patient’s report of pain and other symptoms is not valid, or that a diagnosis of FM provides the patient with a medical label that leads to greater illness behavior. In the 2007 NFA Internet survey, almost one-third of respondents felt that their healthcare provider did not view FM as a “very legitimate” disorder. This still occurs despite advances in the understanding of the pathophysiology of FM as a disease of predominately neurobiologic dysregulation. In addition, the 2010 Internet survey found that 49.9% of patients delayed visiting their PCP about their FM symptoms because they thought that the symptoms might go away by themselves, 42.1% thought that they could manage the symptoms themselves, and 28.3% were afraid that their PCP would not take them seriously. [See Appendix (3) Understanding Fibromyalgia & Improving Care, 2010 Patient Survey] Overall, 56.5% of patients rated their experience in receiving a FM diagnosis as “very” or “somewhat” difficult.

Diagnostic Criteria
Diagnosis of FM should be within the domain of the PCP. While rheumatologists are responsible for the diagnoses of approximately 42% of FM patients, PCPs also make a large number of diagnoses (23%, family physicians; 12% internists); in addition, rheumatologists provide ongoing care for fewer than 20% of individuals with FM. The 2010 Internet survey found that 44.6% of patients were first diagnosed by a rheumatologist, but this was closely followed with 28.3% by a general or family practitioner, and 9% by an internist [See Appendix (3) Understanding Fibromyalgia & Improving Care, 2010 Patient Survey]. Furthermore, for 52.5% of the patients who responded to this survey, their FM symptoms were currently managed by a general or family practitioner, and 16.9% by an internist, compared with 33.4% by a rheumatologist. Therefore, it is important that PCPs are able to recognize this disorder early in order to provide appropriate management and reduce unnecessary healthcare utilization.

The 1990 American College of Rheumatology (ACR) classification criteria for FM required a history of widespread pain for at least 3 months, and the presence of diffuse tender points in at least 11 of 18 predefined sites. These criteria were originally developed for research purposes—to standardize and group together homogeneous patients, rather than to diagnose an individual patient. Since the publication of the ACR classification criteria 20 years ago, the prevalence, associations, relative importance to the patient, and scientific underpinnings of the major clinical manifestations of FM are increasingly better understood. The ACR has recently published new preliminary diagnostic criteria for FM that are suitable for use in primary care and specialty care, to complement the classification criteria for research.
diagnostic criteria were designed to address certain clinical realities. First, the clinical diagnosis in primary care does not usually involve a tender point count, or it is not adequately executed when performed. Second, the case definition of FM has changed somewhat with increasing recognition of the importance of cognitive problems and somatic symptoms. The new criteria included:

- Remove tender points from the criteria and as the central element in the FM definition
- Change the case definition of FM
- Recognize the importance of quantitative measures of widespread pain: the widespread pain index (WPI)
- Incorporate key FM symptoms into the criteria
- Provide symptom severity (SS) scales to measure the extent of widespread pain and symptom severity

It was put forward that tender points distracted from understanding the patient’s problems. The new criteria considers symptoms as being almost equal to pain extent, and requires that the clinician fully understand the patient’s problems, as one cannot determine the extent of fatigue, unrefreshed sleep, cognitive problems, multiplicity of symptoms, and extent of pain without a detailed interview. In effect, the new criteria obligates clinicians to “pay careful attention to the patient if you want to diagnose fibromyalgia.” The SS scale will be especially useful in the longitudinal evaluation of patients with marked symptom variability. This is not to suggest that PCPs should not be performing a carefully structured physical examination when assessing patients. For example, a physical examination is necessary to rule out joint abnormalities, which are consistent with RA, or proximal muscle tenderness, which is consistent with polymyalgia rheumatica.
More than 50% of PCP respondents to a baseline pretest survey from the recent Fibromyalgia in Primary Care: What You Need to Know Now! Practical Applications for Patient Care CME Teleconference/Webinar Series diagnosed less than 10% of their current FM patients. However, following this activity: \[15,16\] [See Appendix (4): PCP Pretest/Evaluation/Posttest/Outcomes Data]

- 76% of PCPs said that they would implement a change in how they identify and evaluate the symptom domains for a FM patient
- 49% of PCPs said that they would change their practices of referring patients with FM or treating them in their own practice
  - The number of PCPs who do not make the diagnosis of FM decreased from 24.6% to 11.2% \[15,16\]
  - Many PCPs indicated in their comments that they would now try 1 or 2 medications before referring patients who do not respond

The activity evaluation demonstrated that many PCPs found that learning to incorporate new diagnostic tools to be the most important facet of educational programs. \[16\] At the time (February-March, 2010) of the CME Teleconference/Webinar Series, the new ACR preliminary diagnostic criteria for FM had not yet been published, but their development was mentioned, together with an outline of the new criteria as 1 of the program faculty was an author of the guidelines. \[16\]

There were multiple comments from PCPs favoring the new emphasis of the diagnostic criteria

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### Needs Assessment

**Criteria**

A patient satisfies diagnostic criteria for fibromyalgia if the following 3 conditions are met:

1. Widespread pain index (WPI) \[\geq 7\] and symptom severity (SS) scale score \[\geq 5\] or WPI \([3-6]\) and SS scale score \([\geq 9]\).
2. Symptoms have been present for a similar level for at least 3 months.
3. The patient does not have a disorder that would otherwise explain the pain.

**Assessment**

1. WPI: note the number areas in which the patient has had pain over the last week. In how many areas has the patient had pain? Score will be between 0 and 19.
   - Shoulder girdle, left
   - Hip (buttock, trochanter), left
   - Jaw, left
   - Upper back
   - Shoulder girdle, right
   - Hip (buttock, trochanter), right
   - Jaw, right
   - Lower back
   - Upper arm, right
   - Upper leg, left
   - Chest
   - Abdomen
   - Lower arm, left
   - Lower leg, left
   - Neck
   - Lower leg, right

2. SS scale score:
   - Fatigue
   - Waking unrefreshed
   - Cognitive symptoms

   For each of the 3 symptoms above, indicate the level of severity for the past week using the following scale:
   - 0 = no problem
   - 1 = slight or mild problems, generally mild or intermittent
   - 2 = moderate, considerable problems, often present and/or at a moderate level
   - 3 = severe, pervasive, continuous, life-disturbing problems

   Considering somatic symptoms in general, indicate whether the patient has:
   - 0 = no symptoms
   - 1 = few symptoms
   - 2 = a moderate number of symptoms
   - 3 = a great deal of symptoms

   The SS scale score is the sum of the severity of the 3 symptoms (fatigue, waking unrefreshed, cognitive symptoms) plus the extent (severity) of somatic symptoms in general. The final score is between 0 and 12.
away from tender point examination to encompass symptom severity; comments occurred in the context of:

- Most effective aspect(s) of the activity
- How participants will change their practice

**Management**

**Medical Home**

FM does not have a medical home, unlike other well-accepted disease states such as RA or spondyloarthopathies (rheumatology), irritable bowel syndrome (gastroenterology), headache (neurology), and depression (psychiatry). Although patients with FM would be ideally managed in a multidisciplinary setting, in reality only a small proportion of patients are likely to be treated in such an optimal setting [See Appendix (2) Literature Review]. Experts have proposed that PCPs are the most appropriate physicians to manage FM patients—they are experienced in managing complex conditions, and accustomed to working with patients to improve their health through multidisciplinary means, such as exercise, self-help techniques, goal-setting, and pharmacotherapy management.

A survey of primary care clinicians distributed by email in April 2009 found that the respondents were more interested in their own ability to understand the presenting symptoms, make the diagnosis, and pharmacologic management, than they were in a collaborative approach, referral resources, and dealing with disability issues [See Appendix (5): Primary Care Clinician Survey]. This is consistent with recommendations that PCPs are the most appropriate specialty to assume the management of FM patients.

**Treatment Options**

There is no cure for FM, but pharmacologic and nonpharmacologic interventions do have clinical benefit, addressing not only pain, but also the array of symptom domains that may be present, in order to improve function and QOL [See Appendix (1) Public Health Sources & (2) Literature Review]. A variety of medications developed and approved for other purposes are used to treat FM, but progress in the understanding of FM has led to more therapeutic options. FM is now considered a central nervous system problem with how patients process, transmit, modulate, and experience pain. Parallel with this research were clinical trials with drugs targeted to the dysregulated pathways in FM. Since June 2007, the US Food and Drug Administration (FDA) has approved 3 drugs to treat FM. However, prior to a recent educational activity, the percentage of PCPs who were aware that FDA-approved drugs for FM were available was low, but this awareness increased substantially immediately following the program, and remained high 2.5 months later [See Appendix (4): PCP Pretest/Evaluation/Posttest/Outcomes Data]. Clinicians may be reluctant to diagnose FM if they are unaware that effective treatments are available.

<table>
<thead>
<tr>
<th>Proportion identifying agent as FDA-approved for FM:</th>
<th>Pretest</th>
<th>Posttest</th>
<th>2.5 month outcomes</th>
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<tbody>
<tr>
<td>Duloxetine</td>
<td>38%</td>
<td>83%</td>
<td>70%</td>
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<tr>
<td>Milnacipran</td>
<td>25%</td>
<td>85%</td>
<td>70%</td>
</tr>
<tr>
<td>Pregabalin</td>
<td>54%</td>
<td>90%</td>
<td>90%</td>
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</table>

**Needs Assessment**
The current guidelines for FM were developed prior to drugs being approved for FM by the FDA\textsuperscript{23,31} (More recent guidelines were developed for nurse practitioners\textsuperscript{32}) [See Appendix (2) Literature Review]. Because there is no consensus on the best first agent to give, it is important that PCPs listen to the symptoms a patient is experiencing.\textsuperscript{14} A number of factors are important to selecting appropriate treatment, including an individual’s key symptoms and drug-specific side-effect profiles.\textsuperscript{12-14,33} For example, if the patient complains of unrefreshing sleep and resulting fatigue, pregabalin taken toward bedtime, may be an appropriate first choice, as it has been shown to improve quality of sleep and fatigue, as well as pain.\textsuperscript{13,14,34,35} For mood disturbance and pain, maybe duloxetine; a patient with significant fatigue and pain, maybe milnacipran.\textsuperscript{13,14} Because it is unlikely that a single medication will address all of the symptom domains, trials are being developed to assess the potential additive or synergistic effects of combined pharmacotherapy and the safety/tolerability of this approach.\textsuperscript{22} In the meantime, expert advice can help PCPs to rationally combine pharmacotherapy treatments to more completely treat the various manifestations of FM, as well as nondrug therapies such as exercise and cognitive behavioral therapy. The 2010 Internet survey found that 22.6\% of patients were currently taking 5 or more medications for their FM, 13.3\% were taking 4 medications, 19.9\% were taking 3, and 21.5\% were taking 2 medications\textsuperscript{5} [See Appendix (3) Understanding Fibromyalgia & Improving Care, 2010 Patient Survey]. As other therapies become available, PCPs should consider how to add them into their pharmacopoeia to maximize pharmacologic effects.

**Evaluating Efficacy of Management**

Once a diagnosis of FM is confirmed and comorbid disorders have been identified, a clinician should educate the patient and begin treatment with evidence-based medications and appropriate nonpharmacologic treatments [See Appendix (2) Literature Review]. A stepwise treatment plan for FM is recommended, and a symptom-based approach to pharmacologic management in a busy clinical practice has been developed.\textsuperscript{36,37} PCPs should be able to utilize such a system of patient assessment, which provides a basis for individualized treatment selection, with symptom quantitation that combines symptom scores from a modified form of the Fibromyalgia Impact Questionnaire (FIQ) and options for medications that can be used to treat the individual symptoms.

The activity evaluation from the *Fibromyalgia in Primary Care: What You Need to Know Now!* Practical Applications for Patient Care CME Teleconference/Webinar Series demonstrated that many PCPs found that using questionnaires to assess the impact of symptoms was one of the most important facets of educational programs\textsuperscript{16} [See Appendix (4): PCP Pretest/Evaluation/Posttest/Outcomes Data].

However, the 2010 Internet survey found that only 2.6\% of patients were “extremely” satisfied with their treatment’s ability to relieve their FM symptoms, and only 9.5\% were “very” satisfied\textsuperscript{5} [See Appendix (3) Understanding Fibromyalgia & Improving Care, 2010 Patient Survey]. In contrast, 16.8\% were “not at all” satisfied, and 31.8\% were “not very” satisfied.\textsuperscript{5}
Symptoms that at least 50% of respondents reported were “not at all well managed” or “not well managed” were chronic widespread pain, fatigue, problems with physical function, difficulty concentrating, poor memory, joint pain, and stiffness.5

Case-Based Education
FM patients’ myriad of presenting symptoms can seem overwhelming to deal with during a brief office visit, so PCPs need strategies to prioritize aspects of FM patients’ care over time. A common theme that occurred in PCP’s evaluation of the educational Teleconference/Webinar series, which included a single case study, was that case-based learning with patient-centered issues enhanced their learning and put the information presented into perspective16 [See Appendix (4): PCP Pretest/Evaluation/Posttest/Outcomes Data]. More cases were requested by the participants, particularly to aid understanding of the applicability of pharmacologic options in different patients.

Patients’ experiences can demonstrate to PCPs the importance of education and communication. The 2010 Internet survey found that at least 50% of patients “strongly agreed” that:5 [See Appendix (3) Understanding Fibromyalgia & Improving Care, 2010 Patient Survey]

- FM patients need physicians to help them explain their condition to family, friends, coworkers, and employers
- Physicians need to help FM patients to communicate the symptoms they are experiencing
- FM patients have encountered at least 1 physician who questioned the legitimacy of the FM diagnosis
- FM patients had at least 1 experience where a physician did not take them seriously

In contrast, less than 10% of patients “strongly agreed” that:5

- Physicians are well trained to diagnose and treat FM
- Physicians are compassionate with their FM patients
IMPLICATIONS FOR CME & CURRENT ACTIVITY

This needs assessment identified multiple gaps in knowledge and practice that ultimately impact patient health. Educational gaps include:

- Many PCPs consider FM difficult to diagnose and many patients consult with multiple providers before diagnosis—however, new, simpler diagnostic criteria are available
- New diagnostic criteria require a PCP to fully understand patients’ symptoms—but many PCPs do not evaluate the array of symptoms
- Many PCPs are not aware that effective treatments for FM are available
- Many PCPs are unsure how to implement pharmacologic and nonpharmacologic treatment into the management of individual FM patients, and require more case-based examples

A portion of the needs identified in this assessment, in particular those from the activity evaluation data are “perceived needs” because they are the perceptions of the target audiences themselves. This makes them no less important to medical educators than the “real needs” identified via current literature, knowledge, and practice assessments, and the content of educational interventions should address both real and perceived needs. However, emphasizing perceived need in recruitment materials may better attract participation of the target audience.

The activity evaluation data also revealed that PCPs value time to interact with expert faculty in extended question and answer sessions, and find the interaction between faculty members to be valuable.

Learning Objectives

At the conclusion of this activity, participants should be able to:

- Apply diagnostic criteria to identify patients with FM
- Evaluate the overall impact of FM on patients’ well being (physical, psychosocial, QOL)
- Formulate a treatment plan for individual patients with FM using available options based on their predominant symptoms
- Evaluate the efficacy of management on patients’ symptoms and QOL using tools such as the FIQ
### SUMMARY GAP ANALYSIS

#### GAP ANALYSIS—OUTCOMES DESIGNATION—LEARNING OBJECTIVES LINKAGE WORKSHEET

<table>
<thead>
<tr>
<th>BEST PRACTICE (What should be)</th>
<th>CURRENT PRACTICE (What is)</th>
<th>RESULTING GAPS (What interventions are indicated?)</th>
<th>OUTCOME INDICATED (Improvement in . . .)</th>
<th>LEARNING OBJECTIVE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Key Point:</strong> PCPs should be able to diagnose patients with FM.</td>
<td><strong>Key Point:</strong> FM patients typically see many doctors before receiving the diagnosis. In the NFA Internet survey of individuals diagnosed with FM, 46% of respondents had consulted between 3 and 6 healthcare providers before obtaining the diagnosis of FM (25% had seen more than 6 providers).</td>
<td>Provide PCPs with the diagnostic criteria for FM and how to apply these in practice for individual patients</td>
<td>☑ Competence ☑ Performance ☐ Patient Outcomes</td>
<td>Apply diagnostic criteria to identify patients with FM</td>
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**Key Point:** More than 50% of PCP respondents to a baseline pretest survey from the recent CME Teleconference/Webinar Series diagnosed less than 10% of their current FM patients.


**Key Point:** More than 50% of PCP respondents to a baseline pretest survey from the recent CME Teleconference/Webinar Series diagnosed less than 10% of their current FM patients.

**Root Cause:** ☑ K ☑ C ☐ P

**Needs Assessment**
### Key Point:

63% of patients “strongly agreed” and 16.4% “somewhat agreed” that FM patients have encountered at least 1 physician who questioned the legitimacy of the FM diagnosis. In addition, 70.2% of patients “strongly agreed” and 14.3% “somewhat agreed” that FM patients have had at least 1 experience where physician did not take them seriously.

**Source:** PCG. Understanding Fibromyalgia & Improving Care, 2010 Patient Survey.

### Key Point:

New diagnostic criteria require a PCP to fully understand patients’ symptoms.


**Key Point:** A comprehensive assessment of the multiple symptoms domains associated with FM and the impact of FM on multidimensional aspects of function should be a routine part of the care of FM patients.


### Key Point:

Many PCPs do not evaluate the array of symptoms

**Source:** PCG. Fibromyalgia in Primary Care: What You Need to Know Now! Practical Applications for Patient Care. Teleconference/Webinar Series. Baseline Pretest Survey Report. 2010.


### Key Point:

Provide education on the presentation and impact of patient’s symptoms using case-based learning as a focus. The major clinical manifestations of FM have not changed, but their prevalence, associations, relative importance to the patient, and scientific underpinnings are becoming better understood.

**Root Cause:**

- **K**: Competence
- **C**: Performance
- **P**: Patient Outcomes

**Evaluate the overall impact of FM on patients’ well being (physical, psychosocial, QOL)**

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**Needs Assessment**
### Key Point: Effective treatments are available for the treatment of patients with FM.


### Key Point: Since June 2007, the FDA has approved 3 drugs to treat FM. However, prior to a recent educational activity, the percentage of PCPs who were aware that FDA-approved drugs for FM were available was low, but this awareness increased substantially immediately following the program, and remained high 2.5 months later. Clinicians may be reluctant to diagnose FM if they are unaware that effective treatments are available.

**Source:** PCG. Fibromyalgia in Primary Care: What You Need to Know Now! Practical Applications for Patient Care. Teleconference/Webinar Series. Baseline Pretest Survey Report. 2010.

### Key Point: The current guidelines for FM were developed prior to drugs being approved for FM by the FDA. Because there is no consensus on the best first agent to give, it is important that PCPs listen to the symptoms a patient is experiencing when selecting an agent.

**Root Cause:**

- K
- C
- P

### Key Point: A stepwise treatment plan for FM is recommended, and a symptom-based approach to pharmacologic management in a busy clinical practice has been developed. PCPs should be able to utilize such a system of patient assessment, which provides a basis for individualized treatment selection, with symptom quantitation that combines symptom scores from a modified form of the Fibromyalgia Impact Questionnaire (FIQ) and options for medications that can be used to treat the individual symptoms.

### Key Point: Many PCPs described learning about tools such as the FIQ to be the most important aspect of an educational activity and how they would subsequently change their practice.

**Source:** PCG. Fibromyalgia in Primary Care: What You Need to Know Now! Practical Applications for Patient Care. Teleconference/Webinar Series. Baseline Pretest Survey Report. 2010.

### Key Point: Provide PCPs with tools to create a systematic assessment of patients with FM, which provides a basis for individualized treatment selection.

**Root Cause:**

- K
- C
- P

### Formulate a treatment plan for individual patients with FM using available options based on their predominant symptoms.

### Key Point: Evaluate the efficacy of management on patients' symptoms and QOL using tools such as the FIQ.

<p>| Competence |
| Performance |</p>
<table>
<thead>
<tr>
<th>Patient Outcomes</th>
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<tr>
<td>Outcomes Report. 2010. <strong>Key Point:</strong> Only 2.6% of patients were “extremely” satisfied with their treatment’s ability to relieve their FM symptoms, and 9.5% were “very” satisfied. In contrast 16.8% were “not at all” satisfied, and 31.8% were “not very” satisfied. Symptoms that at least 50% of respondents reported were “not at all well managed” or “not well managed” were chronic widespread pain, fatigue, problems with physical function, difficulty concentrating, poor memory, joint pain, and stiffness. <strong>Source:</strong> PCG. <em>Understanding Fibromyalgia &amp; Improving Care, 2010 Patient Survey.</em></td>
</tr>
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**LEGAL:**

(1) **SOURCE**—Include journal references, name of survey, or other identifiers of the source from which you determined “key point” information.

(2) **ROOT CAUSE**—After stating the “resulting gap” above, indicate what you have determined to be the root cause or the reason for the gap by inserting one or more of the following codes: Lack of Knowledge (K), Lack of Competence (C), and/or Failure to Perform in Practice (P).
Appendix 1

Public Health Sources


Available at: http://www.niams.nih.gov/Health_Info/Fibromyalgia/default.asp

The above report from the National Institute of Arthritis and Musculoskeletal and Skin Diseases and the National Institutes of Health documents the use of public health sources as a method of needs assessment.

This report identifies:

- **Burden:** the problem associated with the burden of FM, which is a common disorder affecting an estimated 5 million US adults, and the multiplicity of symptoms that can occur.
- **Diagnosis:** patients with FM typically see many doctors before receiving the diagnosis. However, FM can be diagnosed based on established criteria, which should be within the domain of the PCP. Therefore, it is important that PCPs can recognize this disorder early in order to reduce unnecessary healthcare utilization.
- **Management:** Despite the chronicity and complexity of FM, pharmacologic and nonpharmacologic interventions do have clinical benefit, addressing not only the central problem of pain, but also the array of symptom domains that may be present. In addition to the variety of medications approved for other purposes that are used to treat FM, progress in the understanding of FM has led to more therapeutic options (since June 2007, the FDA has approved 3 drugs to treat FM).

Based in part on this Public Health report that demonstrates the burden of FM, the difficulty that patients often experience in getting a diagnosis, and the fact that effective treatments are available, this program should cover how PCPs can diagnose FM, assess symptom domains for a patient, and individualize treatment for a patient.
Appendix 2

Literature Review


needs assessment


Appendix 3

Understanding Fibromyalgia & Improving Care, 2010 Patient Survey

An email was sent out to the 85,000 members of the National Fibromyalgia Association (NFA) on Thursday, August 26, 2010, directing them to complete an anonymous online survey: Understanding Fibromyalgia & Improving Care 2010.

Dear {member name},

Please take a moment to complete this new survey. The answers to this questionnaire will make a difference in the development of a continuing medical education program for healthcare professionals. It is a wonderful opportunity to influence the perception of doctors towards the many problems faced by people with fibromyalgia. The NFA is actively involved in helping to increase fibromyalgia physician education so that patients will benefit by access to better treatment options.

Thank you for taking time to participate in this valuable survey.

Sincerely,

Rae Marie Gleason,
Executive Director

By Thursday, September 9, 2010 (a 2-week interval), a total of 10,017 responses had been received. 95.5% of respondents were female, 4.3% were male, and 0.1% declined to answer. The majority of respondents were born between 1950 and 1959, but there was a wide distribution:

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<tbody>
<tr>
<td></td>
<td>0.2% (17)</td>
<td>2.7% (258)</td>
<td>17.5% (1,684)</td>
<td>36.3% (3,494)</td>
<td>26.7% (2,568)</td>
<td>12.0% (1,154)</td>
<td>3.8% (365)</td>
<td>0.6% (54)</td>
<td>0.4% (41)</td>
</tr>
</tbody>
</table>

www.surveymonkey.com/s/fibropatient
In general, a) how severe and b) how disruptive to your quality of life are the symptoms that you experience from your fibromyalgia?

a) Rate the severity of the symptoms

- Chronic widespread pain
- Problems sleeping
- Fatigue
- Problems with physical function
- Headaches
- Heightened sensitivity to touch
- Difficulty concentrating
- Poor memory
- Numbness &/or tingling sensations
- Feelings of anxiety
- Feelings of depression
- Joint pain
- Stiffness
- Leg cramps
- Abdominal discomfort
- Sensitivity to loud noises, bright lights, odors, & cold

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
b) Rate how disruptive the symptoms are to your overall quality of life

- Chronic widespread pain
- Problems sleeping
- Fatigue
- Problems with physical function
- Headaches
- Heightened sensitivity to touch
- Difficulty concentrating
- Poor memory
- Numbness &/or tingling sensations
- Feelings of anxiety
- Feelings of depression
- Joint pain
- Stiffness
- Leg cramps
- Abdominal discomfort
- Sensitivity to loud noises, bright lights, odors, & cold

Legend:
- Do not experience
- Not at all disruptive
- Not very disruptive
- Fairly disruptive
- Very disruptive
- Extremely disruptive
In a typical week, how often do you experience chronic widespread pain?

- I do not experience chronic widespread pain: 1%
- Less than once per week: 2.9%
- Once per week: 3.3%
- 2 to 3 times per week: 12.2%
- 4 to 5 times per week: 13.6%
- Every day: 67.1%
Have your fibromyalgia symptoms limited you in the following activities over the past month? If so, how much?
Fibromyalgia in Primary Care: Incorporating Patient Insights into Patient Care

Needs Assessment
How many work days do you estimate that you have missed over the past 12 months because of your fibromyalgia?

- None—you have not missed any days: 10.7%
- 1 to 9 days: 17.7%
- 10 to 20 days: 9.1%
- 21 to 40 days: 5.3%
- More than 40 days: 5.8%
- You have not been employed in the past 12 months: 51.4%

How long did it take you to see your primary care physician about your fibromyalgia symptoms after you first experienced your symptoms?
If you waited for a month or longer before seeing your primary care physician about your symptoms, what was the reason? (Check all that apply)
Who first diagnosed your fibromyalgia?

- General practitioner/family practitioner: 28.3%
- Internist/Internal medicine: 9%
- OBGYN: 0.5%
- Rheumatologist: 44.6%
- Neurologist: 4.2%
- Psychiatrist: 0.5%
- Pain specialist: 3.6%
- Orthopedist: 1.7%
- Physiatrist: 0.6%
- Anesthesiologist: 0%
- Physical therapist/occupational therapist: 0.4%
- Other: 6%
Overall, how easy or how difficult was your experience in receiving a fibromyalgia diagnosis?

- Very easy: 11.8%
- Somewhat easy: 12.8%
- Neither easy nor difficult: 18.9%
- Somewhat difficult: 24.4%
- Very difficult: 32.1%

From the time that you first saw a physician about your symptoms and up until now, what types of healthcare professional did you see about your symptoms of fibromyalgia? (Check all that apply) What kind of clinician is CURRENTLY TREATING your fibromyalgia?

- General practitioner/family practitioner: 80.1%
- Internist/internal medicine: 42%
- OBGYN: 16.9%
- Rheumatologist: 42%
- Neurologist: 33.4%
- Psychiatrist: 30.9%
- Pain specialist: 36.6%
- Orthopedist: 21.7%
- Physical therapist: 47.4%
- Anesthesiologist: 16.3%
- Other: 16.3%
What treatments are you currently using to treat your fibromyalgia? (Check all that apply)

- Pain reliever(s) you can buy over-the-counter, without a prescription: 43.5%
- Pain reliever(s) prescribed by your physician: 66.8%
- Other medication(s) prescribed by your physician: 62.2%
- Sleep aids prescribed by your physician: 49.8%
- Vitamin or other supplement: 57.2%
- Homeopathic or herbal agent: 17.2%
- Counseling with a mental health professional: 32.2%
- Relaxation techniques: 7.1%
- Biofeedback: 2.9%
- Acupuncture: 44.7%
- Lifestyle changes: 27.8%
- Dietary treatment/nutrition: 46.3%
- Exercise: 12.4%
- Physical therapy: 14.3%

How many medications are you currently taking for your fibromyalgia?

- 0 medications: 8.5%
- 1 medication: 14.1%
- 2 medications: 21.5%
- 3 medications: 19.9%
- 4 medications: 13.3%
- 5 or more medications: 22.6%
How satisfied are you with your current overall treatment's ability to relieve your fibromyalgia symptoms?

Of the fibromyalgia symptoms that you have experienced, which, if any, do you feel are well/not well managed by your current treatment?
Fibromyalgia in Primary Care: Incorporating Patient Insights into Patient Care

Needs Assessment
Based on your personal experience with fibromyalgia, please indicate how much you agree or disagree with each of the following statements.

- Fibromyalgia patients need physicians to help them explain their condition to family, friends, coworkers, and employers
  - Strongly agree: 51.1%
  - Somewhat agree: 34.3%
  - Neither agree nor disagree: 15.5%
  - Somewhat disagree: 4.3%
  - Strongly disagree: 5.1%

- Fibromyalgia patients are given little or no information following diagnosis
  - Strongly agree: 34.7%
  - Somewhat agree: 34.3%
  - Neither agree nor disagree: 15.5%
  - Somewhat disagree: 9.3%
  - Strongly disagree: 4.3%

- Physicians need to help fibromyalgia patients communicate the symptoms they are experiencing
  - Strongly agree: 56%
  - Somewhat agree: 26.8%
  - Neither agree nor disagree: 15.5%
  - Somewhat disagree: 6.3%
  - Strongly disagree: 2.6%

- Physicians think that fibromyalgia patients exaggerate their symptoms
  - Strongly agree: 36.6%
  - Somewhat agree: 33.4%
  - Neither agree nor disagree: 16.6%
  - Somewhat disagree: 6.3%
  - Strongly disagree: 2.6%

- Fibromyalgia patients have encountered at least 1 physician who questioned the legitimacy of the fibromyalgia diagnosis
  - Strongly agree: 63%
  - Somewhat agree: 16.4%
  - Neither agree nor disagree: 9.6%
  - Somewhat disagree: 7.2%
  - Strongly disagree: 3.2%

- Fibromyalgia patients have had at least 1 experience where a physician did not take them seriously
  - Strongly agree: 70.2%
  - Somewhat agree: 14.3%
  - Neither agree nor disagree: 6.2%
  - Somewhat disagree: 2.3%
  - Strongly disagree: 2.3%

- Physicians are compassionate with their fibromyalgia patients
  - Strongly agree: 31.9%
  - Somewhat agree: 24.5%
  - Neither agree nor disagree: 15.1%
  - Somewhat disagree: 7.3%
  - Strongly disagree: 6.9%

- Physicians are well trained to diagnose and treat fibromyalgia
  - Strongly agree: 42.2%
  - Somewhat agree: 32.5%
  - Neither agree nor disagree: 13.3%
  - Somewhat disagree: 8.9%
  - Strongly disagree: 3%
Appendix 4

Baseline Pretest Survey, Activity Evaluation, Behavior Change, & Outcomes

Fibromyalgia in Primary Care: What You Need to Know Now! Practical Applications for Patient Care CME Teleconference/Webinar Series for Primary Care Physicians

An online pretest survey was completed by 214 registrants, during January-March 2010, for the Fibromyalgia in Primary Care: What You Need to Know Now! Practical Applications for Patient Care CME Teleconference/Webinar Series for primary care physicians (PCPs). This survey provided information about the PCPs’ current knowledge and practices relating to FM diagnosis and treatment.

A postactivity survey was completed by 153 PCPs during February-March 2010, 11 of whom also completed a 2.5-month outcomes survey during June-July 2010. As well as assessing change in knowledge, intention to change practices, and actual change, these surveys provided qualitative comments from participants which will be grouped into themes for use in this needs assessment. Their comments illustrate both their perceived needs and preferences for educational content and delivery method.

Overall evaluation data revealed that the percentage of attendees who rated aspects of the activity as “excellent” or “very good” was ≥90% overall, as well as for course organization, course content, usefulness, and quality of presentations.

A total of 64% of PCPs strongly agreed and another 31% somewhat agreed that this activity improved their ability to manage patients; and 66% of PCPs strongly agreed and another 29% somewhat agreed that this activity improved their ability to communicate with patients.

When asked about the most effective aspect(s) of this activity, the 148 responses were largely grouped into 4 domains.

<table>
<thead>
<tr>
<th>Domain</th>
<th>Sub-domain</th>
<th>Examples of comments</th>
<th># similar comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diagnosis</td>
<td>Criteria</td>
<td>The de-emphasis on strict criteria for this disorder and becoming more inclusive in making the dx.</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Historical review to present assessment and diagnostic criteria</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Review of current diagnostic criteria</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Excellent synopsis of criteria for diagnosis of FMS - I did not realize the criteria had changed from the 11/18 points.</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The diagnostic algorithms are a useful tool for my practice.</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>To learn FM is a real problem as a many year nonbeliever!</td>
<td>-</td>
</tr>
<tr>
<td>Needs Assessment</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>------------------</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fibromyalgia in Primary Care: Incorporating Patient Insights into Patient Care</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Presenting symptoms | Better understanding the relationship of FM and depression, anxiety. | 2 |
| | The presenting Sxs which would peak our radar to consider a diagnosis of Fibromyalgia. | 2 |
| | Made me think of patients in practice who are suffering from chronic pain might be better served looking at FM as a diagnosis. | - |
| | Being able to make the diagnosis especially when pts have multiple problems | 2 |

| Overall | Treatment options and reasoning for all types of treatment. | 15 |
| | Presentation of new thinking on pathophysiology of fibromyalgia. Understanding the nature of the pain syndrome allows one to understand the treatment better. | - |
| | Review of therapeutic modalities, and the new options available today | 2 |
| | Practical and balanced approach to patients with fibromyalgia | - |
| | Recognize the need for establishing regular follow up visits to help these patients. | - |
| | Enjoyed the information on both pharmacological and non-pharmacological. | - |
| | Reviewing treatment options and the evidence supporting them (from strong to not effective) | 2 |
| | Reinforcement of basics: ie: develop a written goal-oriented treatment plan in order to follow progress toward outcomes - simple but hard to do and f/u with consistently. | - |
| | Practical information that can be used in daily practice | - |

| Management | FIQ | 5 |
| | Comprehensive tool to diagnose, treat and manage | - |
| | Formulation of treatment plan | 3 |
| | The treatment algorithms and how to use them with patients. | 5 |
| | ACT-UP and psychosocial screening was useful. | - |
| | The emphasis on multi-faceted approach to treatment | 4 |
| | Review of combining treatment modalities | - |
| | The treatment plan involved strategies that were flexible and practical to deal with the particular patient’s chief complaints or primary concerns. | 2 |
| | Review of various medications/ FDA approval status, and evidence for efficacy | 8 |
| | Effective use of treatments/meds | 4 |
| | Information on meds specifically for fibromyalgia | - |
| | Drug recommendations and initial treatment plans | 2 |
| | How to implement non-pharmacological treatment, especially the aspects of education and the patient management of the disease | 3 |
| | Efficacy of nonpharmacotherapy--chronic disease you have to have more than one thing to offer the patient | 2 |
| | Knowing how to recommend exercise to these pts since it is such a key component of treatment and yet most resisted by pts | 2 |

| Cases | Case based learning makes things easier to remember | - |
| | Patient case presentation/clinical case study | 6 |
| | Case presentation - life in the real world/clinical mgmt challenges | - |
| | The case presentation as it helped me to see how I could apply the information presented practically. | 2 |
| | Demonstrating how clinical presentation of FM to the patient along with management is very important to the success long term. | - |
| | Case presentation, global nature of disease, patient centered issues | - |
| | Case study example - put all of the presented information in useful context | - |

| Q&A | The expert panelists that were available to answer questions and give information | 4 |
| | Q&A/Ask the experts | 6 |
| | Discussion between moderator & presenter - options, differences in experience & opinion | 2 |
| | Listening to educators of medicine; appreciation of what is really important; functional life of these individuals | - |
Respondents also provided the following responses for the least effective aspect(s) of this activity and topics that remain unclear:

<table>
<thead>
<tr>
<th>Least effective</th>
<th># similar comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not enough time for questions</td>
<td>11</td>
</tr>
<tr>
<td>Only 1 hr (too short)</td>
<td>5</td>
</tr>
<tr>
<td>Not going into more detail with all of the pharmacologic agents available</td>
<td>10</td>
</tr>
<tr>
<td>More cases; need more time/info to develop understanding of applicability of various pharmacologic options to each case</td>
<td>5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Topics remaining unclear</th>
<th># similar comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>How to differentiate between a flare up and considering current treatment as failed and starting alternative</td>
<td>2</td>
</tr>
<tr>
<td>Dosages of pharmacological medications. Titration of treatment option. How to deal with side effects of drugs</td>
<td>4</td>
</tr>
<tr>
<td>Further explanations on the aspects and treatment of this disease would be helpful</td>
<td>-</td>
</tr>
<tr>
<td>I am still unsure of what constitutes the minimum requirement for meeting the diagnosis of FM</td>
<td>2</td>
</tr>
<tr>
<td>How to motivate patients who have been struggling with this disease for years and have deep seated convictions about their disability</td>
<td>2</td>
</tr>
<tr>
<td>One-on-one with a FMA pt is always a challenge with no magic answers</td>
<td>-</td>
</tr>
<tr>
<td>How sleep is best managed in FM</td>
<td>-</td>
</tr>
<tr>
<td>How to wean pts already on opioids</td>
<td>2</td>
</tr>
<tr>
<td>When this becomes a true long term disability with permanent partial or permanent total disability.</td>
<td>-</td>
</tr>
</tbody>
</table>

More than 50% of respondents to the baseline pretest survey diagnosed less than 10% of their current fibromyalgia patients, but following this activity:\textsuperscript{15,16}

- 76% of PCPs said that they would implement a change in how they identify and evaluate the symptom domains for a FM patient
- 49% of PCPs said that they would change their practices of referring patients with FM or treating them in their own practice.
  - The number of PCPs who do not make the diagnosis of FM decreased from 24.6% to 11.2%.\textsuperscript{15,16}
  - Many more PCPs indicated in the comments that they would now try 1 or 2 medications before referring patients who do not respond.

<table>
<thead>
<tr>
<th>Domain</th>
<th>Examples of how participants will change their practice</th>
<th># similar comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Support</td>
<td>Be more attentive/understanding/supportive to fibromyalgia patients with more follow-up</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>Address the quality of life issues and other comorbidities</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>More comfortable in explaining to the patient about whole disease process and treatment options</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Work harder with the patients to achieve improvement in their quality of life, as I believe this is more possible now than before.</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Educating the patients</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Provide more written information to patients about Fibromyalgia</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Better understand patients’ frustrations</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Try to address the patient’s unspoken beliefs and fears about the illness</td>
<td>-</td>
</tr>
<tr>
<td>Assess</td>
<td>Now more aware of FM symptoms and will be able to investigate and identify them in my pts.</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Implement the Fibromyalgia Impact Questionnaire in our practice.</td>
<td>27</td>
</tr>
<tr>
<td></td>
<td>Use the ACT-UP tool</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>Increased emphasis on functional aspects</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Order fewer tests</td>
<td>2</td>
</tr>
</tbody>
</table>
### Needs Assessment

**Diagnose/Refer**

<table>
<thead>
<tr>
<th>Suggestion</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use questionnaires more in the assessment process</td>
<td>7</td>
</tr>
<tr>
<td>Improving diagnostic process and trying initial treatment prior to referral</td>
<td>32</td>
</tr>
<tr>
<td>Understand fibromyalgia better, so as to make diagnosis quicker</td>
<td>5</td>
</tr>
<tr>
<td>More open minded to the diagnostic possibility if the ACR criteria not specifically met</td>
<td>6</td>
</tr>
<tr>
<td>Pay less attention to tender points and more attention to symptoms</td>
<td>9</td>
</tr>
<tr>
<td>Use new knowledge to diagnose FM</td>
<td>14</td>
</tr>
<tr>
<td>Consider fibromyalgia in differentials</td>
<td>2</td>
</tr>
</tbody>
</table>

**Manage**

<table>
<thead>
<tr>
<th>Suggestion</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Early pharmacology with FDA approved drugs</td>
<td>16</td>
</tr>
<tr>
<td>Use less opioids</td>
<td>9</td>
</tr>
<tr>
<td>Use more evidence-based treatments</td>
<td>3</td>
</tr>
<tr>
<td>Be less hesitant to switch from one Rx to another once Tx failure established</td>
<td>2</td>
</tr>
<tr>
<td>Communicate better about side effects of drugs</td>
<td>4</td>
</tr>
<tr>
<td>Tailor treatment regimen for individual patients (including combinations of drugs)</td>
<td>7</td>
</tr>
<tr>
<td>Limit patients with a litany of complaints to address the major complaint and bring them back to address less pressing issues</td>
<td>14</td>
</tr>
<tr>
<td>Utilize new knowledge to diagnose FM</td>
<td>14</td>
</tr>
<tr>
<td>Consider fibromyalgia in differentials</td>
<td>2</td>
</tr>
<tr>
<td>More multi-disciplinary</td>
<td>4</td>
</tr>
<tr>
<td>Become more educated about the qualifications/abilities of the local physicians</td>
<td>17</td>
</tr>
<tr>
<td>Stress importance of exercise and how to get started on program</td>
<td>2</td>
</tr>
<tr>
<td>Assess activity levels</td>
<td>2</td>
</tr>
<tr>
<td>Learn more about cbt</td>
<td>4</td>
</tr>
</tbody>
</table>

Which of the following symptom domains do you evaluate for a FM patient? (select all that apply)

<table>
<thead>
<tr>
<th>Domain</th>
<th>Never</th>
<th>Sometimes</th>
<th>Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical function</td>
<td>9</td>
<td>55</td>
<td>134</td>
</tr>
<tr>
<td>Other psychologic problems</td>
<td>14</td>
<td>91</td>
<td>92</td>
</tr>
<tr>
<td>Depression</td>
<td>11</td>
<td>63</td>
<td>129</td>
</tr>
<tr>
<td>Sleep disturbance</td>
<td>9</td>
<td>60</td>
<td>132</td>
</tr>
<tr>
<td>Health-related quality of life</td>
<td>15</td>
<td>60</td>
<td>120</td>
</tr>
<tr>
<td>Fatigue</td>
<td>10</td>
<td>41</td>
<td>151</td>
</tr>
<tr>
<td>Pain</td>
<td>8</td>
<td>25</td>
<td>168</td>
</tr>
<tr>
<td>Stiffness</td>
<td>16</td>
<td>90</td>
<td>90</td>
</tr>
<tr>
<td>Dyscognition</td>
<td>5</td>
<td>57</td>
<td>95</td>
</tr>
</tbody>
</table>

**Pretest and Posttest**

<table>
<thead>
<tr>
<th>Domain</th>
<th>Never</th>
<th>Sometimes</th>
<th>Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical function</td>
<td>9</td>
<td>17</td>
<td>111</td>
</tr>
<tr>
<td>Other psychologic problems</td>
<td>4</td>
<td>13</td>
<td>89</td>
</tr>
<tr>
<td>Depression</td>
<td>3</td>
<td>10</td>
<td>116</td>
</tr>
<tr>
<td>Sleep disturbance</td>
<td>2</td>
<td>10</td>
<td>120</td>
</tr>
<tr>
<td>Health-related quality of life</td>
<td>3</td>
<td>19</td>
<td>110</td>
</tr>
<tr>
<td>Fatigue</td>
<td>3</td>
<td>12</td>
<td>117</td>
</tr>
<tr>
<td>Pain</td>
<td>6</td>
<td>17</td>
<td>123</td>
</tr>
<tr>
<td>Stiffness</td>
<td>1</td>
<td>38</td>
<td>91</td>
</tr>
<tr>
<td>Dyscognition</td>
<td>5</td>
<td>50</td>
<td>75</td>
</tr>
</tbody>
</table>

### Page 36 of 41
Which of the following drugs are approved by the US Food and Drug Administration for the treatment of FM, approved for other purposes but have evidence for efficacy in FM, or have no evidence for efficacy in FM?\textsuperscript{15,16}

<table>
<thead>
<tr>
<th>Drug</th>
<th>Pretest</th>
<th>Posttest</th>
<th>2.5-mo outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thyroid hormone</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Paroxetine</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diazepam</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Citalopram</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Melatonin</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fluoxetine</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Amitriptyline</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ibuprofen</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Milnacipran</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Duloxetine</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Guaiifenesin</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pregabalin</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **FDA approved**
- **Evidence for efficacy**
- **No evidence for efficacy**
- **Don't know**
Clinicians may be reluctant to diagnose FM if they believe that effective treatments are unavailable. Prior to the activity, the percentage of PCPs who were aware that drugs approved by the FDA for FM were available was low, but this awareness increased substantially immediately following the program, and remained high 2.5 months later.\textsuperscript{15,16}

<table>
<thead>
<tr>
<th></th>
<th>Pretest</th>
<th>Posttest</th>
<th>2.5 month outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Duloxetine</td>
<td>38%</td>
<td>83%</td>
<td>70%</td>
</tr>
<tr>
<td>Milnacipran</td>
<td>25%</td>
<td>85%</td>
<td>70%</td>
</tr>
<tr>
<td>Pregabalin</td>
<td>54%</td>
<td>90%</td>
<td>90%</td>
</tr>
</tbody>
</table>
Appendix 5

Physician Survey

Email Survey to Target Audience

Distributed by email, April 15 to 17, 2009, to participants of past CME programs related to pain management. The 5-question survey was emailed to 209 family physicians, PCPs, general practitioners, internal medicine practitioners, adult nurse practitioners, and family nurse practitioners—4 were returned undeliverable. Recipients were directed to complete the survey at www.surveymonkey.com/s.aspx?sm=InuUkaPq_2fUMmeT2TB32ZHQ_3d_3d. A total of 33 responses were received as of May 7, 2009—a response rate of 16.1% (33/205).

Educational Content—Respondents selected the following areas to be included in the content:

The respondents were more interested in their own ability to understand the pathophysiology, presenting symptoms, pharmacologic management, and how to maximize exercise prescriptions than they were in a collaborative approach, referral resources, and dealing with disability issues. This is consistent with recommendations that PCPs are the most appropriate specialty to assume the management of FM patients.
Reference List


Ref Type: Report


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University of Texas, School of Nursing, Family Nurse Practitioner Program. Management of fibromyalgia syndrome in adults. 2009. Austin, TX, University of Texas, School of Nursing.


