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NOTE

New Diagnoses and the ADA: A Case Study of Fibromyalgia and Multiple Chemical Sensitivity

Ruby Afram*

INTRODUCTION

From its inception in 1990, the Americans with Disabilities Act (ADA) has been a groundbreaking piece of civil rights legislation: a highly flexible, individually responsive law that intended to bring "some 43,000,000" disabled Americans into society's mainstream.¹ To ensure the envisioned access and opportunity, the ADA sought to replicate for people with disabilities the type of protections that the Civil Rights Act of 1964 provided to women and minorities.² It barred discrimination on the basis of disability in employment³ and required that all public entities⁴ and public accommodations provided by private entities⁵ be accessible to the disabled population. The law was controversial, however, because it differed in an important way from traditional civil rights legislation.⁶ The civil rights movement had articulated a fundamental imperative: "[D]iscrimination according to characteristics irrelevant to job

¹ J.D. candidate, Yale Law School.
² JOSEPH P. SHAPIRO, NO PITY: PEOPLE WITH DISABILITIES FORGING A NEW CIVIL RIGHTS MOVEMENT 105 (1993).
⁴ Id. § 12132.
⁵ Id. § 12182. For definitions of covered entities, see id. § 12181 (2000).
⁶ SHAPIRO, supra note 2, at 115.
performance and the denial of access to public accommodations and public services was . . . against the law." When that imperative played out in the course of everyday life it resulted in businesses opening their doors and their organizations to a wider swath of society. Generally, however, it did not require them to change the way they did business, just whom they included—in economic terms, a relatively inexpensive adjustment. In comparison, the ADA was invasive legislation; it imposed affirmative duties on companies to adjust the way they did business in order to accommodate the special needs of their employees and clients. Even though the law limited the burden on employers by requiring that they make modifications for employees and clients only when the adjustments were easy to achieve and of reasonable expense, the ADA imposed new costs on all entities required to comply with its mandates.

8. SHAPIRO, supra note 2, at 115.
9. Id. Title I of the ADA covers employment: “The term ‘employer’ means a person engaged in an industry affecting commerce who has 15 or more employees for each working day in each of 20 or more calendar weeks in the current or preceding calendar year, and any agent of such person . . . .” 42 U.S.C. § 12111(5)(A) (2000). Title II of the ADA covers public services provided by a public entity: “(1) Public entity. The term ‘public entity’ means—(A) any State or local government; (B) any department, agency, special purpose district, or other instrumentality of a State or States or local government; and (C) the National Railroad Passenger Corporation, and any commuter authority . . . .” 42 U.S.C. § 12131(1) (2000).
Title III of the ADA covers public accommodations provided by private entities:
(7) Public accommodation. The following private entities are considered public accommodations for purposes of this title [42 USCS §§ 12181 et seq.], if the operations of such entities affect commerce—
(A) an inn, hotel, motel, or other place of lodging . . . ;
(B) a restaurant, bar, or other establishment serving food or drink;
(C) a motion picture house, theater, concert hall, stadium, or other place of exhibition or entertainment;
(D) an auditorium, convention center, lecture hall, or other place of public gathering;
(E) a bakery, grocery store, clothing store, hardware store, shopping center, or other sales or rental establishment;
(F) a laundromat, dry-cleaner, bank, barber shop, beauty shop, travel service, shoe repair service, funeral parlor, gas station, office of an accountant or lawyer, pharmacy, insurance office, professional office of a health care provider, hospital, or other service establishment;
(G) a terminal, depot, or other station used for specified public transportation;
(H) a museum, library, gallery, or other place of public display or collection;
(I) a park, zoo, amusement park, or other place of recreation;
The affirmative duties that differentiate the ADA from other civil rights legislation have, in the years since its passage, made it the target of a backlash. Different groups have sought to cabin the ADA’s impact, and one major limitation has come from the courts. In two important ADA cases, *Sutton v. United Airlines* and *Toyota v. Williams*, the United States Supreme Court latched onto the figure “43,000,000” as a way to justify a restrictive interpretation of the law’s provisions, making the figure an effective ceiling on the number of disabled Americans protected by the law. The history of the ADA, however, makes it clear that “43,000,000” was never intended to be a ceiling; it was intended to convey the enormity of the problem that the ADA addressed. Congress clearly foresaw that the

(j) a nursery, elementary, secondary, undergraduate, or postgraduate private school, or other place of education;

(K) a day care center, senior citizen center, homeless shelter, food bank, adoption agency, or other social service center establishment; and

(L) a gymnasium, health spa, bowling alley, golf course, or other place of exercise or recreation.


11. *Sutton v. United Airlines*, Inc., 527 U.S. 471 (1999) (stating that Congress did not intend to provide coverage in the ADA for persons whose conditions could be alleviated by corrective measures such that their impairment did not substantially limit a major life activity). Justice O’Connor’s majority opinion limited ADA suits to those whose corrected condition still “substantially limited a major life activity.” *Id.* at 482.

12. *Toyota Motor Mfg., Ky., Inc. v. Williams*, 534 U.S. 184, 198 (2002) (holding “that to be substantially limited in performing manual tasks [under the ADA], an individual must have an impairment that prevents or severely restricts the individual from doing activities that are of central importance to most people’s daily lives” and that “[t]he impairment’s impact must also be permanent or long-term”). Justice O’Connor, again writing for the majority, stated: “If Congress intended everyone with a physical impairment that precluded the performance of some isolated, unimportant, or particularly difficult manual task to qualify as disabled, the number of disabled Americans would surely have been much higher.” *Id.* at 197.

13. See Steny H. Hoyer, *Not Exactly What We Intended, Justice O’Connor*, WASH. POST,
Aging of the Baby Boomers would result in an increased number of Americans being protected by the law in the years following its passage. A desire to make the law highly flexible and inclusive informed the Act's legislative history. Congress chose expansive language and a broad definition of disability. Professor Kevin Smith has written, “Given the wide variety of physical and mental conditions which can adversely affect an individual's ability to perform a major life activity... Congress neither defined what constitutes a physical or mental impairment nor listed the universe of possible impairments.”

This built-in flexibility initially allowed two possible avenues of growth for the ADA, distinct from the growth in the elderly population. The first was a flexible and generous interpretation of the law's provisions that might have provided protection under the ADA to more than the forty-three million Americans estimated by Congress. The Supreme Court clearly rejected this possibility in both Toyota and Sutton, binding itself instead to an inflexible and restrictive understanding of the law. The

January 20, 2002, at B1 (discussing the ADA after Toyota). Congressman Hoyer wrote:

When we wrote the ADA, we estimated that 43 million people would be covered. That seemed like a lot and we thought that showed we intended the law to be broad rather than narrow. Until the ADA passed, the average guy thought of a disability as something that meant you couldn’t walk or see or hear. Our broader estimate helped build support for the legislation.

Now, however, O'Connor has cited that figure to say that carpal tunnel and other conditions might push the national total of people protected under the ADA far beyond 43 million and that Congress did not intend that. “If Congress intended everyone with a physical impairment that precluded the performance of some isolated, unimportant, or particularly difficult manual task to qualify as disabled, the number of disabled Americans would surely have been much higher,” she wrote. But the number we used wasn’t designed to limit the effect of our legislation, but to show its breadth.

Id.

14. The Congressional “findings and purposes” noted that “some 43,000,000 Americans have one or more physical or mental disabilities, and this number is increasing as the population as a whole is growing older.” 42 U.S.C. § 12101 (2000).

15. See Feldblum, supra note 10, at 125-34 (discussing the legislative history of the adoption of the definition of disability in the ADA).


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second possibility—the development and recognition of new illnesses and new diagnoses covered by the ADA—existed outside of the framework of the law; because the ADA did not include an exhaustive list of qualified conditions, it also did not attempt to identify a process by which new disabilities might be recognized under the law.

Given the structure of the law, recognition of new conditions need not be problematic for the ADA. The law offers highly-individualized protection, and citizens seeking that protection do not have to prove that they have a particular condition. Instead, in order for a plaintiff to sue, courts have required that she first show that she is a person with a disability, as defined by the ADA. The status of a plaintiff claiming a current disability depends on three key factors: She must (1) have an impairment that (2) “substantially limits” her in (3) a “major life activity.” Agencies responsible for enforcing various titles of the ADA have issued regulations attempting to clarify the meaning of these phrases. Like the language of the statute, the regulations are broadly inclusive of the conditions covered. The Equal Employment Opportunity Commission is responsible for issuing the regulations interpreting Title I, and it uses sweeping language to define a physical or mental impairment as “any physiological disorder, or condition, cosmetic disfigurement, or anatomical loss . . . or . . . any mental or psychological disorder.” The Department of Justice regulations for Titles II and III of the ADA closely

17. This differs from the two disability benefits programs run by the Social Security Administration—the Supplemental Security Income Program (SSI) and the Federal Old-Age, Survivors, and Disability Insurance Program (OASDI)—for which there is a list of covered conditions, as well as an alternate process for demonstrating that a condition that is not listed is similar in nature to those on the list. 20 C.F.R. § 404, subpt. P, app. 1 (2003). The basic requirement for either program is that in order to receive benefits, the claimant must be legally disabled under a five-step claim and benefit determination process. Aimee E. Bierman, Note, The Medico-Legal Enigma of Fibromyalgia: Social-Security Disability Determinations and Subjective Complaints of Pain, 44 WAYNE L. REV. 259, 267-69 (1998).

18. The regulation states:

(h) Physical or mental impairment means:
(1) Any physiological disorder, or condition, cosmetic disfigurement, or anatomical loss affecting one or more of the following body systems: neurological, musculoskeletal, special sense organs, respiratory (including speech organs), cardiovascular, reproductive, digestive, genito-urinary, hemic and lymphatic, skin, and endocrine; or
(2) Any mental or psychological disorder, such as mental retardation, organic brain syndrome, emotional or mental illness, and specific learning disabilities.

29 C.F.R. § 1630.2(h) (2003).
track this language. Presumably, a person with a new condition that met these requirements, though it was not known or recognized at the time of the ADA’s passage, would be entitled to protection under the law.

Obtaining coverage under the ADA, however, has proven no mean feat, even for plaintiffs with traditionally recognized conditions. Phrases that seem straightforward have generated a large body of complex case law. Definitional challenges involving the requirements or meaning of each key phrase are often put forth by defendants and adopted by the courts. These challenges have restricted access to the ADA’s protections,

19. The regulation states:

(1) (i) The phrase physical or mental impairment means—
(A) Any physiological disorder or condition, cosmetic disfigurement, or anatomical loss affecting one or more of the following body systems: Neurological, musculoskeletal, special sense organs, respiratory (including speech organs), cardiovascular, reproductive, digestive, genitourinary, hemic and lymphatic, skin, and endocrine;
(B) Any mental or psychological disorder such as mental retardation, organic brain syndrome, emotional or mental illness, and specific learning disabilities.
(ii) The phrase physical or mental impairment includes, but is not limited to, such contagious and noncontiguous diseases and conditions as orthopedic, visual, speech and hearing impairments, cerebral palsy, epilepsy, muscular dystrophy, multiple sclerosis, cancer, heart disease, diabetes, mental retardation, emotional illness, specific learning disabilities, HIV disease (whether symptomatic or asymptomatic), tuberculosis, drug addiction, and alcoholism.
(iii) The phrase physical or mental impairment does not include homosexuality or bisexuality.


21. See Toyota Motor Mfg., Ky., Inc. v. Williams, 534 U.S. 184 (2002) (holding “that to be substantially limited in performing manual tasks [under the ADA], an individual must have an impairment that prevents or severely restricts the individual from doing activities that are of central importance to most people’s daily lives” and that “[t]he impairment’s impact must also be permanent or long-term”); Albertson’s, Inc. v. Kirkingburg, 527 U.S. 555, 565 (1999) (noting that “mitigating measures must be taken into account in judging whether an individual possesses a disability”); Sutton v. United Air Lines, Inc., 527 U.S. 471 (1999) (holding that a “disability” under the ADA has to be determined with regard to the corrective measures that are available); Bragdon v. Abbott, 524 U.S. 624 (1998) (holding that HIV is a disability under the ADA). The language “qualified individual with a disability” was first interpreted by the Supreme Court in a case arising under section 504 of the Rehabilitation Act of 1973. Southeastern Cmty. Coll. v. Davis, 442 U.S. 397 (1979). The language relating “qualified individual” to “essential functions” of the job in the Title I
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creating high barriers to success for plaintiffs. Suits by plaintiffs with new conditions have been especially tricky; defendants have attempted to enhance the pattern of definitional restriction by attacking ADA claims made by plaintiffs with recently discovered illnesses. Plaintiffs bringing claims under novel or fresh diagnoses have been greeted by charges from defendants that their claims are based on invalid or unrecognized medical conditions.

As the number of people with known conditions has grown in the years since the passage of the ADA so, too, has the number of recognized disabling conditions. No formal barrier keeps the law from expanding to cover new disabling conditions as they are discovered. The important question, then, is how new diagnoses have actually been treated in ADA litigation in the years since the law's passage. Focusing on ADA Title I litigation, this Note studies the treatment of two "new" diagnoses that have actually been challenged by defendants in ADA lawsuits: fibromyalgia and multiple chemical sensitivity (MCS).

Both diagnoses were initially highly controversial, but have gained wider acceptance within the medical community in the thirteen years since the passage of the ADA. Nonetheless, neither is without its skeptics. There are parallels between the two illnesses: both lack a known etiology; both occur much more frequently in women than in men; and, unlike most "established" conditions, neither has a generally accepted, "objective" medical test that allow for its diagnosis. Yet ADA suits centered on the two diagnoses have met somewhat different fates in the federal courts. Neither has received a

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22. See Feldblum, supra note 10, at 139. Feldblum reports that:

[T]he editors of the National Disability Law Reporter ... found that, in 110 ADA cases in 1995 and 1996, the question had been raised as to whether the plaintiff met the statutory definition of disability under the ADA. ... [I]n only six of those cases had the judges definitively found the plaintiffs met the statutory definition.

Id. at 139.

23. See, e.g., Jane E. Brody, The Road to Wellness, Paved With 1,900 Pages, N.Y. TIMES, June 3, 2003, at F7 (discussing the addition of new conditions in the newest edition of Merck Manual and stating "[t]he new version adds 35 chapters and 400 pages. ... Under 'Diseases of Unknown Cause,' conditions like chronic fatigue syndrome and multiple chemical sensitivity syndrome are described dispassionately along with honest assessments of treatments that have or have not worked"); Six Years Later ..., WASH. POST, May 20, 2003, at F02 (discussing changes to the Merck Manual of Medical Information, including the inclusion of new conditions like "Gulf War syndrome, multiple chemical sensitivity, chronic fatigue syndrome, [and] sick building syndrome").

MCS is also known as "multiple chemical sensitivities."
warm welcome, but while courts have generally accepted a diagnosis of fibromyalgia, MCS has had been subjected to significant exclusion—most importantly through the use of the Daubert standard for expert testimony and evidence, established by the Supreme Court in Daubert v. Merrell Dow Pharmaceuticals, Inc. Because ADA litigation is often so fact-specific, every piece of information about an employee’s condition may be vital to the outcome of the case. Defendants have exploited this by using Daubert, originally established in the field of mass tort litigation, to effectively exclude expert testimony about MCS. Without such testimony, some plaintiffs lack evidence crucial to proving components of their discrimination claim. As a result, new conditions such as MCS are left out in the cold.

In attempting to understand why the two illnesses have met with different receptions, and what it means for the inclusion of new diagnoses under the ADA, Part I of this Note provides an overview and history of fibromyalgia; Part II does the same for multiple chemical sensitivity. Parts I and II are designed to give a sense of the complex debates that have surrounded the emergence of the two diagnoses and to provide a basic medical framework for the Note’s later legal analysis. Part III surveys the case law that has developed around the two illnesses, analyzing significant trends and comparing results under the two illnesses with general statistics.

25. Daubert v. Merrell Dow Pharms., Inc., 509 U.S. 579 (1993). In fact, a significant body of literature has developed concerning the ADA and MCS. Several other commentators have previously observed, as I do in this Note, that the use of the Daubert standard to exclude expert testimony makes it exceedingly difficult for individuals suffering from MCS to bring successful ADA claims. See, e.g., Peter David Blanck & Heidi M. Berven, Evidence of Disability After Daubert, 5 PSYCH. PUB. POL. & L. 16 (1999) (“The few federal courts that have applied the Daubert formulation to expert testimony relating to MCS have found clinical ecology evidence inadmissible . . . .”); Andrew K. Kelley, Sensitivity Training: Multiple Chemical Sensitivity and the ADA, 25 B.C. ENVT. AFF. L. REV. 485, 496 (1998) (noting that “courts have refused to allow expert testimony regarding MCS because it lacks scientific reliability, thereby failing to meet the standards for expert opinion testimony established by the Supreme Court in Daubert v. Merrell Dow Pharmaceuticals, Inc.” and that “MCS sufferers who have brought [ADA] claims have had very limited success”); Amy B. Spagnole, The MCS Controversy: Admissibility of Expert Testimony Regarding Multiple Chemical Sensitivity Syndrome Under the Daubert Regime, 4 SUFFOLK J. TRIAL & APP. ADV. 219, 234 (1999) (“In applying the Daubert standard to MCS litigation, every federal court, which has ruled on the issue of admissibility of expert testimony regarding MCS, has found the proffered testimony inadmissible.”). This Note differs from these earlier studies by comparing the relative successes of MCS and fibromyalgia sufferers under the ADA and by offering a new resolution to this problem. See infra Part IV.
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on lawsuits brought under Title I of the ADA. Part IV attempts to explain why the two illnesses have fared differently in the courts, focusing on the role of the Daubert standard and its possible implications for the fate of new diagnoses in ADA litigation. Part V argues that using Daubert to bar plaintiffs’ claims is entirely inappropriate in the civil rights context and that it frustrates the ADA’s inclusive intent. However, because of current trends in the law, it may be necessary for the courts to reconcile the seemingly contradictory directives of the Daubert exclusion and its progeny case law with the ADA’s inclusiveness. Drawing on current case law, this Note then suggests a resolution that will allow the ADA to expand and encompass citizens whose conditions were unknown or widely unaccepted at the time of the law’s passage.

I. FIBROMYALGIA—AN OVERVIEW

Fibromyalgia is a common musculoskeletal syndrome characterized by generalized pain, irregular sleep patterns, fatigue, and a wide range of secondary symptoms. A diagnosis of fibromyalgia requires pain in at least eleven of eighteen specific sites on the body. Pain caused by the condition can be severe or limited; it may be continual or occur in flares, with periods of remission. The condition affects between three and six million Americans, and occurs most commonly in women between the ages of twenty and fifty. Women are ten times more likely than men to be diagnosed with fibromyalgia. There is no single treatment that works well for all patients, or even for a large majority, and the cause of the illness remains unknown. Questions about fibromyalgia’s existence as a clinical entity have dominated its history and continue to appear in modern


Fibromyalgia is not a new condition. There are anecdotes of similar illnesses that date back to the seventeenth century. For generations, however, physicians thought that the disabling illness was, quite literally, all in the patient's head. For most of its known history, those who studied the condition believed its genesis to be psychosomatic. The terms fibrositis and fibromyositis became popular when it was believed that inflammation in the connective tissues between muscles and bone was responsible for the pain the condition caused. The term “fibromyalgia” did not exist until 1976.

Early efforts to understand the illness focused on identifying and describing any standard symptoms or indicators of the disease. The onset of fibromyalgia brought with it few physiological changes that could be detected with standard medical tests. The illness’s high level of correlation with depression reinforced physicians’ assumptions that they were dealing with a psychosomatic illness. Later studies showed that “the majority of people with fibromyalgia do not experience abnormal levels of depression or anxiety.”

The idea that fibromyalgia existed entirely within the patient’s head, however, continued to haunt the medical community, the popular press, and those unfortunate enough to suffer from the debilitating illness. In the early 1980s, research on fibromyalgia was still limited; by the late-1980s, however, it had experienced significant growth. In 1988, a small study released by a group of Pennsylvania physicians showed that patients with fibromyalgia demonstrated abnormal muscle metabolism function dissimilar to that of a control group. According to Dr. Robert Gatter, Chief of Rheumatology at Abington Memorial Hospital, it was “the first

30. See infra notes 40-62 and accompanying text.
33. See Mirinda J. Kossoff, “I Hurt All Over” (Chronic Pain Condition Fibromyalgia), PSYCH. TODAY, May 1999, at 42, 42.
34. See Clauw, Musculoskeletal supra note 31, at 843.
37. Id. at 54.
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semblance of something measurable that’s abnormal in these patients." Other contemporary studies linked fibromyalgia to “[a]bnormal levels of neurotransmitters” and mild alterations in the operation of the immune system.39

Despite these initial findings, and estimates that twenty percent of all rheumatology referrals were for fibromyalgia, the diagnosis still met with a high level of skepticism.40 Patients applying for disability benefits were often rejected because, despite debilitating muscle tenderness, they lacked any sort of objective evidence of their condition.41 In an attempt to remedy this problem and to standardize diagnoses of fibromyalgia, in 1989 the Multi-Center Fibromyalgia Criteria Study released the first version of the modern diagnostic criteria for fibromyalgia, requiring “[t]enderness in at least 11 of 18 specified sites on the body, accompanied by widespread pain.”42 Such symptoms differentiated the condition from other regional

38. Bankhead, supra note 32, at 34. Bankhead writes, “Using phosphorus magnetic resonance spectroscopy, Pennsylvania physicians found that nine fibromyalgia patients had one or more metabolic abnormalities, which were not seen in 22 controls, according to a report at the American Rheumatism Association meeting.” Id. Bankhead also notes that the previous year Don Goldenberg and associates at Boston University released a similar study in the Journal of the American Medical Association in which they looked at biopsies of trapezius muscles in control and affected patients. Id.

39. James, supra note 36, at 54.

40. Bankhead, supra note 32, at 34 (quoting Dr. Tom Bohr of Stanford Medical Center as stating “It’s not simply contemporary medical prejudices that keep many physicians from using the diagnosis of fibromyalgia. There simply never has been good evidence for it as a syndrome distinct from affective disorders.”).

41. Id.

42. Higgins, supra note 28, at 10. Higgins further wrote:

Investigators at 16 university and private-practice arthritis or pain clinics evaluated a total of 293 patients with fibromyalgia and 265 control patients matched for age and sex. The control patients had common regional pain disorders that could be easily confused with fibromyalgia – possible inflammatory arthritis, mild osteoarthritis, shoulder pain syndromes, and neck and back pain syndromes.

After experts diagnosed patients’ conditions by their usual standards, specially trained investigators who had no knowledge of the diagnoses interviewed the patients. Their evaluations included more than 300 variables. They also performed tender point examinations at 30 sites and dolorimetry at nine sites.

... The most useful measures turned out to be a minimum of 11 out of a possible 18 tender points, as well as skeletal pain in at least three regions: left-and right-sided plus upper or lower quadrant. About 70% of the controls and 98% of the fibromyalgia patients had widespread pain.
pain disorders with which its symptoms often overlapped; patients with conditions other than fibromyalgia had significantly fewer tender points and experienced much lower levels of pain when those points were palpated. Using this system, doctors were able to differentiate patients suffering from fibromyalgia from patients afflicted by other pain-related conditions, like arthritis, at a rate of almost ninety percent.

The presence of discrete, sensitive areas (pressure points) on the body—often unknown to a patient until palpated by their doctor—was not a new finding. It was already considered to be the best way to diagnose fibromyalgia. The Multi-Center Fibromyalgia Criteria Study, however, was the first time investigators had agreed on the exact number and location of tender points and the accompanying symptoms; every North American physician who had contributed significantly to fibromyalgia research received an invitation to participate. Previously, physicians used different ratios to diagnose fibromyalgia, varying from four out of forty tender points up to twelve of fourteen points. The study results, presented that same year to the American College of Rheumatology ("ACR"), supported the use of the eighteen-point-system for diagnosing fibromyalgia. The ACR's acceptance of the system gave new legitimacy to what had been viewed previously as a "waste basket" diagnosis—one that was offered when every other possibility had been discarded. Vigorous debate about the condition continued.

One major concern of the medical community was—and continues to be—lack of objective physical evidence of the condition.

Higgins, supra note 28, at 11.

43. Id. at 10.

44. Peter Jaret, 18 Points of Pain: Closing in on Barely Noticeable Tender Spots May Illuminate the Mystery of Fibromyalgia, HEALTH, July/Aug. 1990, at 62, 64.


46. For recognition of the fact that some may consider fibromyalgia to be a "waste-basket' diagnosis," see Paul Davidson, Fibromyalgia: A Painful and Treatable Illness, at http://www.sfms.org/sfm/sfm202b.htm.

47. Jaret, supra note 44, at 62, 64.

48. Daniel Clauw, an expert on the illness, notes that it is not clear why fibromyalgia has been singled out for this treatment:

Unfortunately, not all health care professionals . . . want to diagnose and manage fibromyalgia. However approximately 40 percent of patients seen in the primary care setting have symptoms with no identifiable cause, and most practitioners are comfortable making and managing other symptom-based diagnoses such as migraine and tension headache, irritable bowel syndrome and dysmenorrhea.

Mary Dunkin has noted, "Unlike inflammatory forms of arthritis, which can be verified through blood tests, and degenerative arthritis, which can be confirmed by X-rays, fibromyalgia produces no obvious [or consistent biological indicator] signs." Patients have been linked to a variety of abnormalities. To date, fibromyalgia is an illness of no known etiology; in other words, it has no determinable cause. There are theories, but nothing certain. The current definition of fibromyalgia groups patients by the symptoms they manifest; a diagnosis in this form does not preclude the possibility that different patients with the same symptoms are actually suffering from distinct conditions. Patients diagnosed with fibromyalgia have responded to a wide range of treatments, and within the studies of the individual treatments, patients have had a wide range of responses; everything from antidepressants to acupuncture has provided various degrees of relief. This may in part explain why, though fibromyalgia has become a widely recognized, studied, and diagnosed condition over the past decade, the search for its cause and its cure(s) continues to frustrate the medical community.

The uncertainty about fibromyalgia in the medical community has carried over into the coverage of the illness in the popular press. The early coverage of the condition gave it labels like "the mystery disease." The stories often reported on the skepticism of the medical community. One article referred to it as "the Rodney Dangerfield of diseases," noting that despite the high number of people it affected, fibromyalgia typically "gets
no respect." As more information about fibromyalgia became widely available, the press shifted its emphasis from the mysterious nature of the disease to the realities of living with it, but the stories still emphasized how hard the illness was to diagnose and treat. One article pointed out that the severity of the illness could cause sufferers to make substantial life changes, including “quitting work, changing jobs or working part time.” Articles detailed the chronic and severe pain the condition can cause, and how severely it can limit day-to-day activity, focusing on the stories of individual women to illustrate the point. As the condition gained acceptance as a medical diagnosis with widespread impact, coverage about it included articles conveying everyday methods of coping with fibromyalgia to the general public. Reports extended from television and print coverage to Internet sites, with fibromyalgia support groups forming all across the country. As with work in the medical community, however, even the more recent popular coverage about fibromyalgia reflects some level of continuing skepticism about the condition—especially about its cause.

II. MULTIPLE CHEMICAL SENSITIVITY—AN OVERVIEW

Multiple chemical sensitivity is another condition that has received increased exposure in the medical community and popular press during the years since the passage of the ADA. Like fibromyalgia, it is a

55. Rob Bogin, Puzzling Illness a Pain to Diagnose, ROCKY MOUNTAIN NEWS, Dec. 17, 1995, at 72A.
62. See, e.g., Jane E. Brody, Real Illness, Real Answers, N.Y. TIMES, Aug. 1, 2000, at F8. (noting “is it a real disease? is the most frequently asked question about fibromyalgia”).
63. One article from 1993 notes, “Unless you’ve been on a desert island, you have
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"syndrome of symptoms," and its cause is unknown. Women comprise eighty-five to ninety percent of MCS patients; symptoms most commonly develop between the ages of thirty and fifty. No standard test explains what triggers the symptoms of MCS, but symptoms commonly begin following "a single heavy exposure to a substance, with recurrences triggered by lower levels of the same substance or seemingly innocent or related substances, such as odors or fragrances." Frequently cited triggers of the condition are "pesticides, solvents, paints and lacquers, and formaldehyde, but can include virtually anything from anaesthetics to exhaust fumes." One thing on which the medical community agrees is that "MCS is not a standard allergic reaction, as it does not involve immunoglobulin and the release of histamine and other chemicals associated with allergies.”


66. Kurt, supra note 64, at 101; see also Tim Chapman, Suffering From a Sensitive Issue, 15 CHEMISTRY & INDUSTRY 592, 592 (1998) (quoting a 1995 European Commission report describing MCS as "sensitivity which begins as specific hypersensitivity to a single agent, or class of substances, but which may evolve into non-specific hyper-responsiveness" and noting that "[s]ymptoms do not disappear when the agent is removed, and sensitivities may also spread to other substances"). This differed from an American report released a few years later. See infra text accompanying note 95.

67. Chapman, supra note 66, at 592.

68. Id. In his relatively early article on the topic, Howard Sandler argued that the theory of MCS goes against one of the tenants of immunology, that if a substance acts as an allergen, a specific antigen-antibody ('lock and key') relationship develops. The body will only recognize the precise antigen or one with the same chemical 'key' within its structure.” Sandler, supra note 63, at 53.

69. Kurt, supra note 64, at 101 (“At the turn of the century, a similar syndrome was called neurasthenia, exemplified by Marcel Proust, who was so intolerant of perfumes and other odors that he lived and wrote as a recluse in his cork-lined Paris apartment.”).
entitled *Human Ecology and Susceptibility to the Chemical Environment,* articulating his theory that “individuals could be adversely affected by extremely low-level chemical exposures in their environment.” At first greeted with extreme skepticism, Randolph’s theory later developed a following that included Dallas thoracic surgeon William Rea. In the mid-1970s Rea set up a clinic to treat patients with MCS. Two common theories provided the groundwork for studies in MCS. The first was that the symptoms of MCS arise from an initial “overwhelming assault on the immune system” by multiple chemical stimuli, causing “crossover reactions” in response to other chemicals. The second was that the condition is caused by a high-level exposure to a single chemical, so that afterwards, even at very low levels of exposure, the patient’s reaction to environmental factors is significant. After sensitization, even minor exposures to a substance can produce symptoms, and patients may become sensitive to low doses of substances other than the initiating chemical. Magill and Suruda have noted that, “[p]atients with MCS syndrome can have severe symptoms that interfere with daily life and work.” Symptoms for MCS, though widely varied, typically manifest themselves in three ways: in the central nervous system, in “respiratory and mucosal irritation,” or in gastrointestinal pain.

From the 1960s through the 1980s, MCS specialists used the title “clinical ecologists” to describe themselves; in the mid-1980s the title became “environmental medicine specialists.” This change in name did not alter the fact there was no agreed-upon method for diagnosing MCS. Indeed, “The lack of widely accepted, standardized, clinical and

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71. Sandler, *supra* note 63, at 53.


73. *Id.*

74. Sandler, *supra* note 63, at 53.

75. *See id.* at 53.


77. *Id.*


79. Gail E. McKeown-Eyssen et al., *Multiple Chemical Sensitivity: Discriminant Validity of Case Definitions,* 56 ARCHIVES ENVTL. HEALTH 406, 406 (2001) (“The variety of symptoms reported, the lack of consistency in physical findings or laboratory test results—together with the variability of substances that reportedly provoke symptoms—make it difficult for investigators to formulate a case definition of MCS.”).
epidemiologic criteria for [MCS] syndrome has led to confusion about the identification of the condition and slowed pertinent research.\textsuperscript{80} As with fibromyalgia, the syndrome suffered a credibility defect because it had been linked to various psychological conditions, including anxiety disorders and agoraphobia,\textsuperscript{91} leading some to dismiss it as “a haven for quacks and neurotics.”\textsuperscript{82} This perception was exacerbated by the fact that in an attempt to avoid symptoms, “[p]atients often significantly alter their behavior in an attempt to avoid presumed precipitants of symptoms. They may have withdrawn from activities, friends and family in an attempt to eliminate chemical exposures.”\textsuperscript{83} In 1989, eighty-nine top clinicians and researchers of MCS, despite having diverse views of the condition, developed consensus criteria for the definition of MCS. The five criteria “de[fin]ed MCS as [1] a chronic condition [2] with symptoms that recur reproducibly [3] in response to low levels of exposure [4] to multiple unrelated chemicals and [5] improve or resolve when incitants are removed.”\textsuperscript{84}

\begin{itemize}
\item \textsuperscript{80} D.J. Kutsogiannis & Ann L. Davidoff, \textit{A Multiple Center Study of Multiple Chemical Sensitivity Syndrome}, ARCHIVES ENVTL. HEALTH, May 2001, at 196.
\item \textsuperscript{81} Thomas Kurt has noted, “Case series studies performed by investigators evaluating MCS patients have consistently shown neuropsychiatric problems that have included depression, somatization disorders, anxiety/panic disorder often with agoraphobia, history of recent major changes in life events, history of physical or sexual abuse and history or [sic] addictive disorders.” Kurt, \textit{supra} note 64, at 102.
\item \textsuperscript{82} Chapman, \textit{supra} note 66, at 592. \textit{But see Magill & Suruda, supra} note 65, at 721 (“[I]t is unclear if a causal relationship or merely an association exists between MCS and psychiatric problems.”).
\item \textsuperscript{83} \textit{Id.} at 723. Magill and Suruda report:
\begin{itemize}
\item In one study of 35 patients with occupationally related MCS . . . 97 percent of the patients had stopped activities outside the home, 91 percent had limited their travel, 89 percent had limited their contact with friends and 77 percent had left a job. Many changed home routines: 97 percent had stopped using cleaning compounds . . . 94 percent stopped using fragrances, 91 percent changed their diet and 86 percent changed the type of clothing they wore.
\end{itemize}
\item \textsuperscript{84} \textit{Multiple Chemical Sensitivity: A 1999 Consensus}, 54 ARCHIVES ENVTL. HEALTH 147, 147
\end{itemize}
Another problem arose from the actual research done by clinical ecologists. Patients are tested for MCS by undergoing exposure to a variety of substances; patients then report any symptoms to their physician. These tests were condemned by organizations like the American Medical Association because they were “rarely blind” and were “wholly... subjective.” In one of the few double-blind studies, when twenty MCS patients were subjected to doses of either clean air or chemicals, none of the patients could accurately determine if they had been exposed to the chemicals.

Study of the condition got a major boost around the same time from an unexpected source—the returning Gulf War veterans. Before Desert Storm the vast majority of patients with MCS were women, and the condition was often linked to hysteria, but by 1993, several thousand Gulf War veterans—generally previously-healthy males—reported mysterious ailments that may be linked to exposure to biological and chemical warfare agents, as well as petrochemicals from Kuwaiti oil fires. Many believed they had MCS. In 1994, in a radical position change, the American Medical Association acknowledged that MCS was not solely a psychological disorder, but maintained that further research was required before MCS could be defined as a clinical entity; several federal agencies, including the U.S. Department of Environmental Protection and the U.S. Consumer Product Safety Administration, concurred. The U.S. Department of Veterans Affairs (VA), hoping to avoid a debacle similar to the one over the use of Agent Orange in Vietnam, agreed to study the illness. Congress appropriated five million dollars over ten years for studies by the National Academy of Sciences. Still, a comprehensive approach was lacking, and by 1998, the studies were still not complete. One study that involved more
than 20,000 servicemen—split between those who served in the war and those who did not—indicated that 14.5 percent of Gulf War veterans reported signs of severe MCS, while only 4.5 percent of those who did not serve abroad had symptoms consistent with MCS.\footnote{Williams, supra note 88.}

Despite the sluggishness of the military’s response, MCS began to have an impact in other areas. Though it had no clear clinical definition, many believed that MCS was emerging as a major medical problem, and some doctors began to accept that patients were experiencing real physical symptoms, even if there was no clear diagnosis for their problem.\footnote{Williams, supra note 88.}

Between fifteen and thirty percent of the U.S. population may suffer from MCS; five percent may have the particularly severe reactions that make MCS disabling.\footnote{Williams, supra note 88.}

Several federal agencies, including the U.S. Department of Social Security\footnote{Valerie Ulene, A Sensitive Question, L.A. TIMES, May 5, 2003, at 4.} and the U.S. Department of Housing and Urban Development (HUD), identify MCS as a disabling medical condition.\footnote{Williams, supra note 88.}

In 1999, a decade after the first consensus criteria were released, a group of clinicians released a sixth criterion: that the symptoms occur in multiple organ systems. The six criteria were commonly included in MCS studies, but the consensus report emphasized that standardized use in clinical settings was “still lacking, long overdue, and greatly needed.”\footnote{Chapman, supra note 66, at 592.}

Research by state and federal agencies has shown that while MCS is a commonly diagnosed chronic disorder in civilians, it is more common still among American Gulf War Veterans.\footnote{Chapman, supra note 66, at 592.}

Nonetheless, the condition remains highly controversial, in part because of the lack of standardization that

\footnote{Valerie Ulene, A Sensitive Question, L.A. TIMES, May 5, 2003, at 4.}
infects diagnoses. Currently, there are at least four major suggested etiologies for MCS: physical, stress, misdiagnosis, and illness belief.

Much about MCS remains unknown and undefined, and unlike fibromyalgia, the development of MCS as a diagnosis has met with resistance from industry, as well as the medical community. Manufacturers of everything from fragrances to chemical pesticides have billions of dollars at stake; some doctors suggest that industry public relations efforts are the only reason MCS research has moved so slowly and remained so controversial. If this is the case, the anti-MCS movement has certainly

98. Id.

99. Three basic mechanisms fall under the physical etiology: allergy, direct toxic effects, and neurobiologic sensitization. The allergy theory holds that chemical exposures “cause the development of allergies to low levels of many chemicals, not just the initiating one;” the toxicological effects theory proposes that low dose exposure instead acts as poison; the neurobiologic sensitization theory states that an “affected person develops increasing neurologic sensitivity to adverse effects of chemicals.” Each of these theories has problems: careful studies comparing patients with MCS and control patients have found no difference in immunological testing; objective evidence is lacking for the second proposal; and the third pattern has been documented only in animals, not in humans, and not at the low doses reported to cause MCS. Magill and Suruda, supra note 65, at 721.

100. A stress etiology has been suggested as an alternative theory of causation because “about one-half the patients with MCS in various studies meet the criteria for depressive or anxiety disorders.” Many have diagnosed sleep disorders, or meet the criteria for them. However, as with fibromyalgia, there are difficulties in developing studies that can effectively separate actual causation from mere incidence. Patients with MCS have higher rates of sleep-disorders, depression and anxiety than the general public, but it is unclear whether the conditions cause MCS, are caused by it, are simply associated with it, or whether perhaps both MCS and the psychiatric conditions result from a common underlying neurobiological mechanism. The complexity of these interactions is one reason that the third suggested etiology, misdiagnosis, is often put forward in discussion of MCS. As under fibromyalgia, there is the suggestion that MCS sufferers may all be suffering from the same condition that is not MCS—for example, MCS overlaps heavily with chronic fatigue syndrome—or they may be suffering from several different conditions that present similar symptoms. Id. at 721.

101. The final etiology, illness belief, is a variant of the “it’s all in your head” school of thought. This theory holds that regardless of the syndrome’s physiological, toxic, or psychiatric origins, there is a culture of belief that attaches to MCS and defines its mechanisms and manifestations in a patient’s mind. This belief is a result of a patient’s interaction with the array of support groups, clinicians, hotlines, lawyers, journalists, media, and websites that discuss and support MCS. Id. at 721.

102. Ann McCampbell, Multiple Chemical Sensitivities Under Siege, TOWNSEND LETTER FOR DOCTORS & PATIENTS, Jan. 1, 2001, at 20. McCampbell is the head of the MCS Task Force of New Mexico. She blasts the chemical industry, providing in-depth explanations of the ways
been effective: Even in the most recent material, highly contentious debate about the condition continues. 103

III. FIBROMYALGIA, MCS, AND THE ADA

The results for fibromyalgia and MCS in the ADA litigation are tied to the fate of ADA litigation as a whole. Ruth Colker’s 1999 comprehensive study of ADA employment litigation refutes the popular perception that the ADA has been a “windfall for plaintiffs.” 104 Colker’s study found that the results for plaintiffs in ADA cases are far worse than in other, similar areas of civil rights law: “[O]nly prisoner rights cases fare as poorly.” 105 Defendants prevailed in over ninety-three percent of ADA employment discrimination cases; on appeals by plaintiffs, courts decided eighty-four percent of the cases in the defendant’s favor. 106 Colker found that almost forty percent of ADA cases were decided through summary judgment; 107 she argues that courts are too willing in ADA cases to take cases from the jury and that they set too high a standard of evidence for defeating defendants’ motions for summary judgment.

The results in fibromyalgia and MCS litigation not only support Colker’s findings, but paint an even bleaker picture for ADA plaintiffs. The following findings are based on a complete search of ADA litigation on Westlaw and on the Eighth Circuit website for all cases involving the ADA and either “MCS,” “fibromyalgia,” “fibrositis,” or “fibromyositis,” with the hope of creating as complete a picture as possible of how courts have...
handled the two emerging diagnoses. Colker notes that several sources of bias exist in her study, and those same methodological problems exist here. Particularly troubling is the high rate of unavailable opinions at both the trial court and appellate levels. Looking solely at published opinions may skew the data if published opinions overstate plaintiff success rates. In traditional employment litigation, for example, data indicate that plaintiffs are four times more successful in published opinions, as compared to unpublished ones. If a court grants summary judgment, it is more likely to provide a written opinion than if it grants a motion to dismiss or enters a directed verdict; thus, as Colker notes, a focus on published opinions may downplay advantages enjoyed by defendants at the summary dismissal stage while “overstating the prevalence of summary judgment decisions for defendants.” The “problem of unpublished opinions” extends to the appellate level as well. To weed out cases in which the nature of fibromyalgia or MCS, interacting with the ADA, did not play a decisive role in the court’s decision, cases in which MCS or fibromyalgia were one among many illnesses/conditions listed (with no substantive discussion of any of the illnesses), and cases that were decided on procedural grounds unrelated to the stated ADA claim were excluded. That left forty fibromyalgia cases and eighteen MCS cases. The earliest cases for both conditions came in 1995. Because thirty-seven of the thirty-nine fibromyalgia cases and seventeen of the eighteen MCS cases were employment cases, the analysis below focuses on Title I employment

109. The following “terms and conditions” searches were used: “fibromyalgia and ADA”; “fibrositis and ADA”; “fibromyositis and ADA”; “(MCS or “multiple chemic! sensitivity!”) and ADA.”

110. Colker, supra note 104, at 104.

111. Id.

112. Colker writes:

Since 1972, the Judicial Conference of the United States has taken the position that United States Courts of Appeals should publish opinions only where a decision has obvious precedential value . . . [E]ach court of appeals has been allowed to create its own rules on publication, so the circuits lack a uniform policy on publishing opinions.

Id. The opinions of the Third, Fifth, and Eleventh Circuits are not available through any electronic source. Westlaw selectively publishes the opinions of the Sixth, Ninth, Tenth and D.C. Circuits; the Sixth and Tenth sometimes send their opinions to Lexis as well. The Eighth Circuit runs its own Internet site, and the Second has a searchable database for all unpublished opinions. Id. at 104 & n.30. Colker states that only about forty-two percent of all appellate affirmances are available to the public. Colker, supra note 104, at 105.

Among the fibromyalgia cases, motions for summary judgment by the defendant on ADA claims were granted or affirmed in thirty-three of the thirty-seven cases (almost ninety percent); a motion to dismiss for failure to state a claim was granted in another case. In only four cases did plaintiffs survive motions to dismiss or motions for summary judgment, and in none of those cases is there a later record of the plaintiff prevailing at trial. It is possible that the cases were settled favorably for the plaintiff out of court, or are still in litigation, but based on published opinions, fibromyalgia suits under the ADA appear to be an almost total failure. While these results are similar to those for other disabilities claimed under the ADA, analysis does suggest a greater focus on the nature of the disease (i.e., fibromyalgia) in those cases. Questions about the severity of the illness arise in the opinions, as do questions about the occasionally intermittent nature of its symptoms. Interestingly, even in the early cases, no court rejects evidence about fibromyalgia as an illness, and several explicitly accept fibromyalgia as a diagnosis, or state that it qualifies as an impairment under the ADA

114. Almost all of the cases were Title I suits against private employers, though two of the MCS cases and one of the fibromyalgia cases were Title II suits brought against public entities.


—even though a number of courts recognize the inherently subjective nature of a fibromyalgia diagnosis.\footnote{118. McPhaul v. Bd. of Comm'rs of Madison County, 226 F.3d 558 (7th Cir. 2000) ("Fibromyalgia is a disease that is similar to chronic fatigue syndrome; its cause is unknown, there is no cure, and the symptoms are entirely subjective and usually involve chronic pain and fatigue."); Wolz v. Deaton-Kennedy Co., No. 98-C6610, 2001 U.S. Dist. LEXIS 8462, *21-*22 (N.D. Ill. 2001) ("The condition is based entirely on the patient's subjective complaints.") (emphasis added).}

\section*{B. The MCS Cases}

Among the MCS cases, motions for summary judgment by the defendant were granted or affirmed in fourteen of seventeen cases (just over eighty percent). In only one case did a judge rule that the plaintiff with MCS had enough evidence of a disability to survive a motion for summary judgment.\footnote{119. Davis v. Utah State Tax Comm'n, 96 F. Supp. 2d 1271 (D. Utah 2000). Interestingly, this is a case in which a diagnosing physician stated in an affidavit that he did not diagnose the plaintiff with MCS because he did not believe MCS existed.} These results are not startlingly different from those for fibromyalgia, but the cases themselves generate a much richer textual discussion of the nature of MCS than do the fibromyalgia cases. The reason for this difference is exemplified by the two cases on MCS that do not deal with requests for summary judgment, but rather for motions \textit{in limine}: Frank v. State of New York\footnote{120. 972 F. Supp. 130 (N.D.N.Y. 1997).} and Treadwell v. Dow-United Technologies.\footnote{121. 970 F. Supp. 974 (M.D. Ala. 1997).}

\section*{C. Daubert and Emerging Diagnoses}

The two motions were requests to exclude testimony by the plaintiffs' MCS experts under the \textit{Daubert} expert witness standard. The \textit{Daubert} standard developed in the mass toxic torts context and arose out of a case involving charges that the drug Benedictin caused birth defects.\footnote{122. Daubert v. Merrell Dow Pharms., Inc., 509 U.S. 579 (1993).} The case raised the issue of the correct standard of reliability for the admission of expert scientific testimony. The district court had granted summary judgment to the defendant on the ground that while there was extensive research to support the defendant's claim that Benedictin did not cause birth defects, the expert testimony offered by the plaintiffs on the drug's
harmful effects did not meet the required standard of “general acceptance” in the scientific community.\textsuperscript{123} The Ninth Circuit Court of Appeals affirmed, citing \textit{Frye v. United States},\textsuperscript{124} which stated that if a scientific expert testified to a conclusion, “the thing from which the deduction is made must be sufficiently established to have gained general acceptance in the particular field in which it belongs.”\textsuperscript{125} On appeal to the United States Supreme Court, the plaintiffs argued that Frye’s “general acceptance” test was superseded by the adoption of the Federal Rules of Evidence and asserted that their experts’ opinions should not have been excluded as unreliable.\textsuperscript{126} The Supreme Court agreed that the Rules had superseded \textit{Frye}, especially Rule 702, governing expert testimony. At the time, Rule 702 stated: “If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise.”\textsuperscript{127} The Court held that “the austere standard” of “general acceptance” under \textit{Frye} was incompatible with the more permissive language of Rule 702.\textsuperscript{128} That did not mean, however, that the Court was willing to open up trials to any and all expert testimony. The Court stated that under the Rules the trial judge was responsible for ensuring “that any and all scientific testimony or evidence admitted is not only relevant, but reliable.”\textsuperscript{129} Scientific evidence and testimony admitted did not have to be “known to a certainty,” but did have to be supported by “good grounds”\textsuperscript{130} based on the scientific method accepted in the appropriate field: “Rule 702’s ‘helpfulness’ standard requires a valid scientific connection to the pertinent inquiry as a precondition of admissibility.”\textsuperscript{131} The Court recognized that at times there would be tension between scientific research, which was open to perpetual revision, and the demands of a trial, which required speed and finality in determinations.\textsuperscript{132}

The Court was particularly concerned about the impact of allowing scientific experts to testify to still amorphous theories, because of their

\textsuperscript{123} 727 F. Supp. 570, 572 (S.D. Cal. 1989).
\textsuperscript{124} 54 App. D.C. 46 (1923).
\textsuperscript{125} \textit{Id.} at 47.
\textsuperscript{126} \textit{Daubert,} 509 U.S. at 587.
\textsuperscript{127} \textit{FED. R. EVID. 702, quoted in Daubert,} 509 U.S. at 588.
\textsuperscript{128} \textit{Daubert,} 509 U.S. at 589.
\textsuperscript{129} \textit{Id.} at 589.
\textsuperscript{130} \textit{Id.} at 590.
\textsuperscript{131} \textit{Id.} at 591-92.
\textsuperscript{132} \textit{Id.} at 590.
unique ability to offer opinions from the stand based on secondary sources of knowledge, and because of the weight their opinions often carry:

Unlike an ordinary witness... an expert is permitted wide latitude to offer opinions, including those that are not based on firsthand knowledge or observation.... Presumably, this relaxation of the usual requirements of firsthand knowledge—a rule which represents "a 'most pervasive manifestation' of the common law insistence upon 'the most reliable sources of information....'"—is premised on an assumption that the expert's opinion will have a reliable basis in the knowledge and experience of his discipline.133

According to the Court, the correct response to the tension between science, reliability, and resolution was guided flexibility for the trial judge. The Court offered some general observations about factors that would bear on the inquiry into whether an expert's testimony should be admitted. The observations developed into a non-dispositive four-prong test for expert witness reliability: whether theory or technique presented by the expert (1) can be and has been tested; (2) has been subjected to peer review and publication; (3) has a known or potential rate of error; and (4) has attained general acceptance in the pertinent scientific community.134

In 1999, in Kumho Tire Co. v. Carmichael,135 the Court extended its ruling in Daubert to the admission of testimony of all expert witnesses, not just scientific experts. The Kumho Tire case involved the admission of the testimony of an expert on tire failure analysis. In extending its Daubert doctrine outside the realm of "hard science," the Court noted that Rule

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133. Id. at 592 (citations omitted). There is a strong divergence between English and American law on the comparative treatment of expert and lay testimony. English courts will typically allow lay witnesses to present not only facts, but also opinions, based on their personal knowledge. American courts have been much stricter, and the expert/lay split has developed from early American courts:

[American courts] operated toward a broader presumption that an "opinion is not evidence." This was a principle of convenience and efficiency. Since the jury was to assess credibility and draw rational inferences from the evidence, allowing a witness to say what inferences she drew from the evidence served no purpose. By contrast, if a witness had some "special skill" that would help the jury understand evidence that otherwise would be beyond its competency to interpret, opinion testimony would be allowed. Eighteenth and nineteenth century American courts did not establish bright lines on the issue of opinion testimony by the experts.


134. Id. at 593-94.

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702 made no relevant distinction between "scientific" knowledge and "technical" or "other specialized" knowledge, and that it would be "difficult, if not impossible," for judges to administer a rule that required them to differentiate between "scientific" and "technical" knowledge. It also noted that, "[t]here is no clear line that divides the one from the others," and no evident break between the application of scientific principles and skill-based or experience-based observations. The Court emphasized, however, that the Daubert inquiry was to be a "flexible one . . . not . . . a definitive checklist or test." Too much depended on the unique circumstances of the particular case for the Court to issue an across-the-board rule for what was and was not admissible, and the type of scientific evidence used in the Daubert case would clearly not be available in every field and area in which expert testimony might be helpful to the fact-finders in a case.

In the wake of Daubert, however, the flexible, open-ended inquiry the Supreme Court envisioned became an effective exclusionary tool in the hands of district court judges: Judges were more likely to scrutinize expert testimony before trial, and less likely to admit the testimony, in 1998 than in 1991. Daubert and Kumho were expanded to encompass ever-broader categories of expert evidence, including clinical medical evidence.

In an article on the subject, Jean Eggen argues that courts have incorrectly applied Daubert to clinical medical evidence, which differs profoundly from the kind of scientific studies presented in Daubert. Eggen states that while clinical medical evidence is "fundamentally
scientific, as it is grounded in the discipline of medical science," it is more in the nature of eyewitness testimony. She describes the process by which physicians make a diagnosis in a clinical setting:

Several different thought processes contribute to the ultimate diagnostic decision in an individual case. First, the physician conducts a comparative analysis of the patient's illness in relation to known patterns of disease. Second, the physician applies certain diagnostic criteria to the patient to determine the probability that the diagnosis is one particular illness out of several. . . . Third, the physician undertakes a cause-and-effect analysis to determine if the appearance and progress of the disease in the patient is or has been consistent with generally known physiological or pathological information regarding the disease.

Based on knowledge of the disease that the physician has developed through past experience and study, he will assess the patient's symptoms, come to a conclusion about causation and diagnosis, and testify to those conclusions at trial.

The court's recognition of the validity of this process of diagnosis is especially important in cases in which a new illness or diagnosis is at the heart of the case. Eggen points out that while a physician may rely upon epidemiological or toxicological studies when available, relevant studies on a new condition may not exist, and time exigencies may press for a diagnosis. In such a situation, the physician's training and prior experience with patients who have similar symptoms, not their review of current research, may be central to making a diagnosis. If courts require "the physician [to] demonstrate reliance upon valid 'hard scientific studies'" before they will admit clinical-based evidence at trial, they create an "inadmissible per se standard that has the effect of excluding most clinical testimony of causation." This exact problem has arisen in the Fifth Circuit. In Moore v. Ashland Chemical Inc., the Fifth Circuit affirmed a district court's decision that stated, in essence, that the technique of differential diagnosis is not sufficiently reliable to form the basis of testimony by a treating physician without reliance on traditional Daubert

143. Id. at 390-91
144. Id. at 392.
145. Id.
146. Id. at 393.
147. Id. at 393-94.
148. Id. at 373.
149. Id. at 374.
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hard science. The district court focused on the reliability and relevancy of the studies underlying a physician’s decision—or lack thereof—rather than the reliability of the physician’s diagnostic process. Eggen points out that, “[I]n contrast, other courts have applied a different standard to clinical medical testimony.” She notes that the Fourth Circuit has held that “properly conducted clinical diagnosis is a reliable basis for such testimony.” The split in the circuits underscores the continuing debate about the correct level of scrutiny courts should apply to expert testimony about emerging diagnoses and is central to understanding the outcome of the MCS cases under the ADA.

D. MCS and Daubert

In both Frank v. State of New York and Treadwell v. Dow-United Technologies, trial court judges granted the defendants’ motions in limine to exclude expert testimony about MCS. In Frank, after discussing various definitions of MCS put forth by the American College of Occupational and Environmental Medicine and the Federal Judicial Center’s Reference Manual on Scientific Evidence, the trial court judge ruled that testimony about MCS was inadmissible as a matter of law under Daubert. In Treadwell, the trial court had already denied the defendant’s motion for summary judgment on an ADA claim before considering the motion to exclude testimony by the plaintiff’s expert. Defendants argued that the expert, a doctor, would testify about four separate points that the defense felt should be excluded under Daubert: 1) that the plaintiff suffered from a condition known as multiple chemical sensitivity, 2) that MCS was recognized as a legitimate medical condition, 3) that the witness had the necessary expertise to make the diagnosis, and 4) that the plaintiff had contracted the condition as a direct and proximate cause of her exposure to a particular chemical while employed by the defendant. The trial court judge, in applying Daubert, used a two-prong analysis: first, did the expert’s testimony fall within the realm of “subjective belief or unsupported speculation,” and second, would the testimony assist the trier of fact in

150. 151 F.3d 269 (5th Cir. 1998) (en banc).
151. Eggen, supra note 141, at 402.
152. Id. (discussing Westberry v. Gislaved Gummi AB, 178 F.3d 257, 262-63 (4th Cir. 1999)).
understanding the evidence or determining a fact in issue? The court adopted the position that "the science of MCS's etiology has not progressed from the plausible, that is, the hypothetical, to knowledge capable of assisting a fact-finder, judge or jury." The court thus excluded the expert testimony on the diagnosis of MCS as well as any testimony related to clinical ecology. While the plaintiff in Treadwell was allowed to proceed with her case under the ADA (though with limited evidence) other plaintiffs have not been so fortunate. In other cases, without the testimony of expert witnesses on MCS, plaintiffs were unable to prove key components of their claims, leading to summary judgment for the defendant. No court that has directly considered a Daubert challenge to MCS evidence has allowed the expert evidence into the record. When a

157. Id. at 980.
158. Id. at 982.
159. Id.
160. See, e.g., Comber v. Prologue, Inc., No. CIV-JFM-99-2637, 2000 WL 1481300, at *4-*5 (D. Md. 2000) ("Were it admissible, evidence of this condition could strengthen [plaintiff's] claim to be substantially limited in the major life activity of breathing. . . . Following a host of federal courts, the Court finds that Comber's evidence on 'multiple chemical sensitivity syndrome' does not meet the Daubert standards of admissibility of scientific evidence for this case. . . . Prologue's Motion in Limine to Exclude Any and All Evidence Related to 'Multiple Chemical Sensitivity Syndrome' is granted. Comber's internist's evidence would not be admissible at trial and cannot help Comber's case to survive summary judgment."). In another case, Gabbard v. Linn-Benton Housing Authority, 219 F. Supp. 2d 1130 (D. Or. 2002), the court explicitly noted the difficulties plaintiffs have confronted in this area:

To the court's knowledge, no district court has ever found a diagnosis of multiple chemical sensitivity ("MCS") to be sufficiently reliable to pass muster under Daubert. . . . Plaintiff Gabbard's "case-by-case" approach, mentioned by some of these courts, is inapplicable here where the issue is whether or not evidence of MCS is admissible. Whether or not plaintiffs are "disabled" under the ADA or the Rehabilitation Act—which must be determined on a case-by-case basis—is not the focus of the inquiry; whether their treating physicians' diagnoses of MCS is admissible evidence is. As have all other courts which have considered the issue, the court finds that such evidence must be excluded. . . . Because it lacks reliability, evidence of multiple chemical sensitivity syndrome cannot be used in support of plaintiffs' cases. Further, a reasonable factfinder could not find that defendants' use of particular chemicals was the cause of plaintiffs' injuries. Defendant Linn-Benton Housing Authority's motion in limine to exclude evidence (# 22) and defendant Oregon Department of Transportation's motion for summary judgment (# 53) are therefore granted. Because the motions are dispositive of plaintiffs' cases, these cases are dismissed.

Id. at 1134-35, 1141 (internal citations omitted).
161. See Gabbard v. Linn-Benton Housing Auth., 219 F. Supp. 2d 1130, 1134 (D. Or.)
direct challenge has not been raised, some courts have been willing to accept MCS as an impairment for the purposes of the ADA.\textsuperscript{162}

In contrast, the issue of \textit{Daubert} exclusion has never arisen in a fibromyalgia ADA case. This absence is notable not only because of significant parallels in the gaps of knowledge about fibromyalgia and MCS, but also because \textit{Daubert} challenges have been used to exclude evidence about fibromyalgia in other areas of the law. A leading case is \textit{Black v. Food Lion, Inc.}, a 1999 slip-and-fall trauma case out of the Fifth Circuit.\textsuperscript{163} In \textit{Black}, the court of appeals ruled that a magistrate judge erred in admitting the plaintiff's diagnosing physician's testimony about the cause of the plaintiff's fibromyalgia. The court of appeals held that the evidence should have been excluded because the physician had used clinical evidence to reach her conclusion; the opinion particularly objected to the lack of testing, peer review, or known rate of errors for the physician's methodology.\textsuperscript{164} Other cases have reached similar conclusions.\textsuperscript{165}

IV. QUESTIONS AND CONSIDERATIONS

Despite significant similarities between MCS and fibromyalgia,\textsuperscript{166} and similarly dismal results under the ADA, the use of MCS under the ADA has generated a much more substantial legal dialogue than fibromyalgia, with far fewer cases. Courts are more likely to discuss and dissect the nature of MCS than they are of fibromyalgia, and ultimately, much more likely to reject its validity as a medical claim. Why?

\textsuperscript{163}171 F.3d 308 (5th Cir. 1999).
\textsuperscript{164}Id. at 313.
\textsuperscript{166}Both have no known etiology; both are diagnosed through a collection of subjective symptoms; neither can be diagnosed through objective medical evidence; both occur far more frequently in women than in men; and both have received greater recognition, as well as increased standardization in diagnostic techniques (though perhaps not at the same rate) over the past decade.
One possible explanation stems from the fact that there is a huge industry at stake in the battle over the legal recognition of MCS. Chemicals, of all kinds, play a key role in almost every aspect of modern American life. At the same time, a significant number of Americans now spend as much as ninety percent of their time in buildings with restricted ventilation, and are continuously re-exposed to various levels of all sorts of chemicals. A study suggests that as many as a third of all Americans may be particularly sensitive to certain chemical odors. The recognition of a plaintiff's development of MCS as a legitimate legal claim would place several large industries at risk of new legal liability. Ann McCampbell, a doctor who heads the Multiple Chemical Sensitivity Task Force of New Mexico, makes this argument with particular force, documenting tactics used by pharmaceutical and chemical industries in their war on MCS in and out of the courtroom and likening them to those used by the tobacco industry.

Ultimately, the explanation is probably less sinister. While fibromyalgia is still a somewhat controversial diagnosis within the established field of rheumatology, environmental medicine as an entire field is still struggling to establish its place in the medical community. The cases in which courts have excluded evidence about fibromyalgia have been tort cases in which causation was the key to determining liability, and there still exists a relative consensus in the medical community that there is no known cause for fibromyalgia. Similarly, the wholesale exclusion of evidence about MCS may reflect the legal community's attunement to medical science's ongoing, blanket uncertainty about MCS. What echoes throughout the MCS cases is the Supreme Court's reminder in *Kumho Tire Co. v. Carmichael*: "[T]he presence of *Daubert*'s general acceptance factor [does

168. *Id.* (citing Claudia S. Miller, *Chemical Sensitivity: Symptoms, Syndrome or Mechanism for Disease*, 111 TOXICOLOGY 69, 71 (1996)).
171. Interestingly, while the case law recognizes that there is no consensus about fibromyalgia's cause, it does not recognize that there is a consensus about how to diagnose it: Despite the American College of Rheumatology's method for diagnosing fibromyalgia, that standard is not mentioned in a single ADA case. Instead, the information about fibromyalgia comes from a wealth of sources, including the Merck Manual, Kocsis v. Multi-Care Mgmt., Inc., 97 F.3d 876 (6th Cir. 1996); on-line medical dictionaries, Carter v. Gen. Elec. Co., 2000 U.S. Dist. LEXIS 3875 (N.D. Ill. 2000); and magazine articles, Winn v. Runyon, No. 96-C3168, 1998 U.S. Dist. LEXIS 13771 (N.D. Ill. 1998). It has not, however, come from one of the definitive sources in the field.
not] help show that an expert’s testimony is reliable where the discipline itself lacks reliability . . . . 172

While this explanation relieves the exclusion of MCS of its menacing air, this exclusion remains deeply problematic, not only for MCS patients, but also for other patients with emerging diagnoses. If what the MCS case study exemplifies is that legal thought ultimately reflects medical acceptance, then the courts have effectively used Daubert to reinstitute the Frye standard of general acceptance. Alternatively, by tying Daubert testimony by a practicing physician to a requirement that the testimony be accompanied by “hard science,” the courts have established a new standard that is equally high. Either may ultimately deny patients with emerging diagnoses protection under the ADA in exactly the same way the plaintiff was denied relief in Comber v. Prologue, Inc.173

If patients cannot present expert testimony about their conditions, they may be unable to prove facts that are significant for ADA claims. Even if their condition is ultimately recognized, plaintiffs may be denied relief for years or even decades while research develops, through defendants’ effective use of the Daubert standard. MCS provides a clear example of this: There may be millions of Americans who suffer from the condition, but after at least a decade of intensive research since the Gulf War, an MCS plaintiff is as unlikely now to have the scientific or medical ammunition to survive a Daubert challenge as she were when the statute was first passed.

While the use of Daubert to exclude new diagnoses is troubling in cases involving liability based on diagnosis, it is particularly disturbing in cases that arise under laws like the ADA, in which diagnosis is not supposed to be central to a determination of liability. Unlike tort cases, liability under the ADA is not assigned based on how or why the plaintiff’s condition developed, and liability is not tied to which specific condition afflicts the plaintiff. Any plaintiff who suffers from any condition that substantially limits a major life activity can claim protection under the ADA, regardless of the name for her condition.174

Once a plaintiff has demonstrated substantial limitation, the analysis shifts away from ‘what’ the plaintiff ‘has’ that qualifies her as disabled to whether or not she has been treated appropriately in relation to her disability. The fact that ADA liability is not meant to center around the

173. See supra note 160 and accompanying text.
174. See 42 U.S.C. § 12102(2) (2000) (“The term ‘disability’ means, with respect to individual—a physical or mental impairment that substantially limits one or more of the major life activities of such individual.”).
named condition the plaintiff has, but rather around how the plaintiff is treated, is emphasized by the second and third ways in which a plaintiff can claim protection under the ADA. Beyond having an impairment that substantially limits a major life activity, plaintiffs may sue for ADA violations if they have a record of having such an impairment or are regarded as having such an impairment. In other words, under the ADA, if a plaintiff can prove that the defendant treated her inappropriately based on the defendant’s belief that the plaintiff had an impairment, it is not necessary for the plaintiff to actually have an impairment.

It is the ADA’s apparently inclusive intent—manifested in both its legislative history and its language—that makes the use of Daubert exclusion in ADA cases especially problematic. In tort cases where liability is assigned based on diagnosis and attendant causation, it makes sense for courts to be cautious about new diagnoses; under the ADA, it does not. Analogizing an uncertain new diagnosis to misdiagnosis helps clarify why the exclusion of new or uncertain diagnoses is problematic. Consider the example of a person suing under the ADA who has been misdiagnosed with one “established” illness and is then re-diagnosed with another established illness. In a case where a plaintiff has been diagnosed with established condition X, and has been given protection under the ADA, it would make no sense for the court to later revoke protection if the plaintiff actually turned out to have established condition Y. Presumably, the plaintiff still has all the same limitations; she has just been given the wrong name for her condition. This example underscores that the condition’s name, ultimately, should not matter in determining whether or not the plaintiff is protected under the ADA, because the plaintiff is equally limited whether she is told she has condition X or condition Y. Similarly, a plaintiff may have an emerging illness that doctors have difficulty diagnosing or naming, and yet the plaintiff may quite clearly be substantially limited in a major life activity, regardless of what name doctors eventually give her condition. The focus of litigation under the ADA should be on the phrase “substantially limited” and should look at a plaintiff’s experience with the condition, not on the accuracy with which doctors can name the condition.

One solution to this problem, consonant with the original intent of the ADA, is suggested by language in some cases. In Owen v. Computer Sciences Corp., a defendant attempted to argue that MCS did not constitute a

disability under the ADA.\textsuperscript{177} In support of the argument that MCS was not a legitimate medical condition upon which a plaintiff could base a claim, the defendant highlighted numerous cases in which expert testimony about MCS had been excluded due to lack of existing scientific evidence on the diagnosis. The court chided the defendant:

The determination of whether an individual has a disability is not necessarily based on the name or diagnosis of the person’s impairment, but rather on the effect of that impairment on the life of the individual. . . . The appropriate question before this Court is not whether [MCS] constitutes a per se disability under the ADA, as defendants argue, but whether Owen’s condition is so severe that it substantially impairs a major life condition.\textsuperscript{178}

The court reminded the defendant that—at least on this issue—the focus should not be on the technicalities of the ADA. Rather, the court would focus on the nature of the individual who claims protection under the statute’s auspices and on that individual’s story. This normative vision of the ADA, in combination with other features of the legal system, can guide courts out of the jaws of Daubert when cases involving new diagnoses arise.

In other cases, courts have indicated that the testimony of a plaintiff may be enough to establish the nature and severity of her condition for the purposes of the ADA.\textsuperscript{179} Federal Rule of Evidence 701 allows lay witness testimony. Under Rule 701,\textsuperscript{180} plaintiffs in ADA cases, because of their firsthand knowledge of their conditions, may offer opinions on matters normally “appropriate for expert testimony,”\textsuperscript{181} so that even if expert

\textsuperscript{177} Id. at *4.
\textsuperscript{178} Id. at *4-*5.
\textsuperscript{179} Wolz v. Deaton-Kennedy Co., No. 98-C6610, 2001 WL 699096, at *7 (N.D. Ill. 2001) (“[A]ll Wolz has is her testimony, but that is the very nature of fibromyalgia. The condition is based entirely on the patient’s subjective complaints. Wolz does not have much, but she has enough to survive a motion for summary judgment.”)
\textsuperscript{180} Federal Rule of Evidence 701 reads:

If the witness is not testifying as an expert, the witness’ testimony in the form of opinions or inferences is limited to those opinions or inferences which are (a) rationally based on the perception of the witness, and (b) helpful to a clear understanding of the witness’ testimony or the determination of a fact in issue, and (c) not based on scientific, technical, or other specialized knowledge within the scope of Rule 702.

testimony about a condition is excluded, a plaintiff can provide enough evidence of substantial limitation to shift adjudication forward to other components of the ADA. In *Holt v. Olmsted Township Board of Trustees*, the plaintiff was a woman who had been living with fibromyalgia for six years. The defendants filed a motion to strike a portion of her affidavit, in which she discussed her physical condition, as impermissible lay opinion. The court disagreed: “Plaintiff has personal knowledge of her condition and its symptoms. Testimony concerning her physical condition is also central to the factual issues in the instant matter [the ADA suit]. Therefore, those portions of the Affidavit in which Holt describes her physical condition... will not be stricken.”

The court believed that Holt was qualified to testify about the limitations on her life that resulted from her illness, and was willing to accept the testimony as adequate to fulfill statutory requirements.

Blending the opinions in *Owen* and *Holt* provides a general guide to enable courts to allow the ADA to expand to accommodate new conditions and diagnoses, perhaps even before they have a name. If courts use a normative vision of the ADA that focuses on individual experience, as the law itself does, courts can admit plaintiffs' testimony about the nature of their conditions—and do so consistent with the Federal Rules of Evidence, even when experts are not allowed to testify about roughly the same topic. The only court to specifically consider the lay/expert split in a case involving MCS did just this: it admitted the lay testimony while excluding expert testimony on the same subject. If other courts were to follow suit, it would allow even plaintiffs who cannot give their pain a name to give it the voice to which it is legally entitled.

**CONCLUSION**

Forty-three million is a large number, a number meant to impress onlookers with a sense of the enormity of the problem it represents. And yet, when it comes to the ADA, “43,000,000” has proven surprisingly restrictive. In a number of cases, the Supreme Court has used the number as a ceiling on the statute, rather than the floor that was intended; other courts have jealously policed the boundaries.

For illnesses discovered or developed after the passage of the ADA, the

182. *Id.*

183. *Coffey v. County of Hennepin*, 23 F. Supp. 2d 1081, 1091 (D. Minn. 1998) (“The Court excludes any expert testimony regarding Multiple Chemical Sensitivities. However, lay witness testimony regarding the same will be considered.”).
central question is whether they have been offered even the limited degree of protection the courts have extended to conditions that were well established in 1991. Several studies, including this one, suggest that they have not.184 ADA claims brought by plaintiffs with both illnesses are dismissed at a higher rate than ADA cases as a whole. The courts have also effectively used the Daubert doctrine to exclude evidence of MCS, a new and controversial diagnosis. The logic applied in those cases could easily be applied to other developing diagnoses. The unwillingness of courts to admit evidence seems much more closely aligned with the rejected Frye standard than with the more permissive standard envisioned by the Supreme Court in Daubert. Even under existing law, however, if courts remain focused on the individual nature of adjudication under the ADA, and let ADA plaintiffs tell their stories, there is no reason that pains without a name should have any less of a chance in court than established conditions. All Americans with disabilities, be those disabilities named or not, should be given the chance to prove that they are one of the millions of disabled Americans that the ADA was enacted to protect.

184. See studies cited supra note 25.