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PHYSICIANS' PERCEPTIONS AND PRACTICES REGARDING PATIENT REPORTS OF
CHEMICAL SENSITIVITY

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ABSTRACT

Ninety physicians (67% male and 72% Caucasian) licensed and practicing in Virginia completed a questionnaire that examined their perceptions and practices regarding patients who report sensitivity to chemicals. Questions addressed their knowledge of the condition, views regarding etiology of the sensitivities and overlap with established illnesses, and practices regarding evaluation, treatment, and referral. Results are discussed in terms of the need for greater understanding of and medical care for this emerging health condition.

PHYSICIANS' PERCEPTIONS AND PRACTICES REGARDING PATIENT REPORTS OF CHEMICAL SENSITIVITY

Multiple Chemical Sensitivity (MCS), also referred to as Environmental Illness and Chemical Injury (Gibson, Cheavens, & Warren, 1996), is an emerging health condition that is poorly understood yet affects between 12.6% (Caress & Steinemann, 2003) and 33% of the U.S. population, with 4% experiencing the symptoms daily (Meggs, Dunn, Bloch, Goodman, & Davidoff, 1996). Individuals with MCS report experiencing disabling symptoms as a result of low-level exposures to chemicals in ambient air generally tolerated by a majority of the population. The need for chemical avoidance limits their access to environments where such exposures might occur, such as libraries, medical offices, grocery stores, community meetings, and places of worship. The diagnosis of Multiple Chemical Sensitivity is currently surrounded by medical controversy and uncertainty regarding its label, causes, and indicated treatments. Unlike chronic fatigue, which now receives some recognition and study from the medical profession, MCS remains an emerging condition and patients report mixed experiences when requesting medical help. Because physicians are often unfamiliar with and/or do not believe in MCS, and because their offices may contain chemical barriers, individuals often receive inadequate medical attention. Patients report experiencing considerable iatrogenic harm due to unmet medical needs, delays in correct diagnosis, or treatment for the wrong condition (Engel, Adler, Gibson & Rice, 1996). In Gibson, Elms, and Ruding's (2003) study, patients experimented with between 24 and 37 different treatments, thus spending considerable time and money on interventions that may or may not be helpful. To date, only one researcher has studied physicians' views regarding MCS (Rest, 1992). The purpose of this study was to examine practicing physicians' current views relating to this emerging condition.

METHOD

A mail survey containing 35 open and closed-ended questions designed to examine health providers' experiences, attitudes, and practices regarding patients reporting chemical sensitivities was mailed to a random sample of 1000 physicians licensed and practicing in the state of Virginia. Questions included information about the participants' medical specialty, practice setting and other demographics, any training or education received regarding chemical sensitivity, amount of experience with patients reporting sensitivities, degree of and satisfaction with knowledge regarding MCS, personal beliefs about the causes and appropriate treatments for the condition, treatment protocols, and referral practices.

RESULTS

Demographics and Training

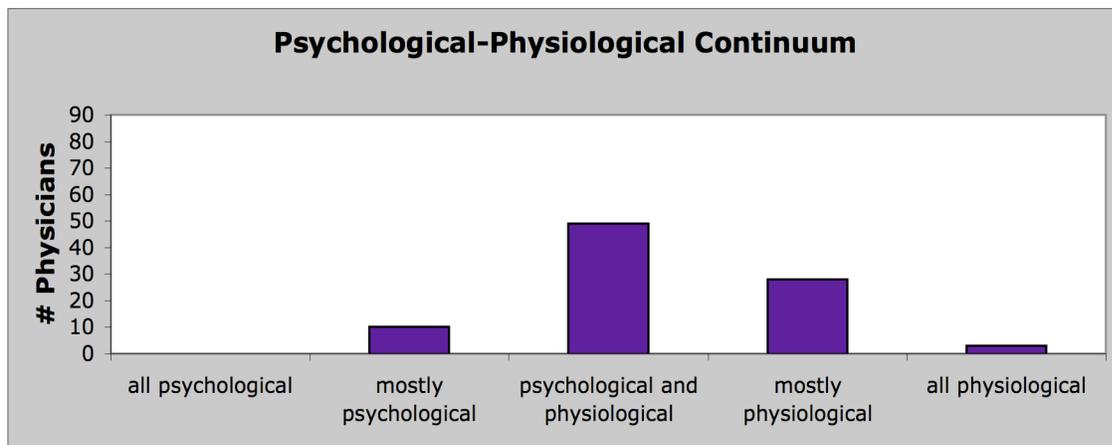
Participants included 90 physicians licensed and practicing in Virginia with a mean of 15.5 years in practice. Overall, 26 specialties were included; most commonly represented were family practice and internal medicine. Other specialties included gynecology, emergency medicine/urgent care, anesthesiology, diagnostic radiology, ophthalmology, dermatology,

general surgery, podiatry, otolaryngology, occupational/environmental medicine, cardiology, pediatrics, orthopedics, physical medicine and rehabilitation, rheumatology, medical acupuncture, geriatrics, oral and maxiofacial surgery, neonatology, pulmonary medicine, urology, pathology, nephrology, and oncology. Physicians reported having seen a median of 3 patients with chemical sensitivity in the past year and 10 over the course of their career. When asked how familiar they were with MCS, 9% responded 'very unfamiliar,' 36% 'somewhat unfamiliar,' 48% 'somewhat familiar,' and 8% 'very familiar.' Physicians reported gaining knowledge about MCS from a variety of sources, including other health providers (51%), journal articles (47%), formal education/medical school (30%), the media (16%), mentors/experts (13%), professional conferences (9%), and books (4%). Respondents rated their level of satisfaction with their current knowledge of MCS as 'not at all satisfied' (35%), 'somewhat satisfied' (59%), or 'very satisfied' (7%).

Physicians Perceptions

When asked whether they believed chemical sensitivity to be a medical or psychological condition, over half saw it as a combination, and there was a slight skew towards physiological etiology as seen in Figure 1 below. No respondents endorsed a purely psychological etiology. However, physicians' beliefs varied regarding the causes of MCS. When asked to select which commonly theorized causes played a role in the development of MCS, almost all respondents selected all the options given. 'Multiple low level chemical exposures over time' was selected most often, endorsed by 90% of physicians. 'One large chemical exposure' and 'genetics' were each endorsed by approximately three quarters of respondents, as were 'psychological factors,' 'stress,' and 'elevated risk perception.'

Figure 1



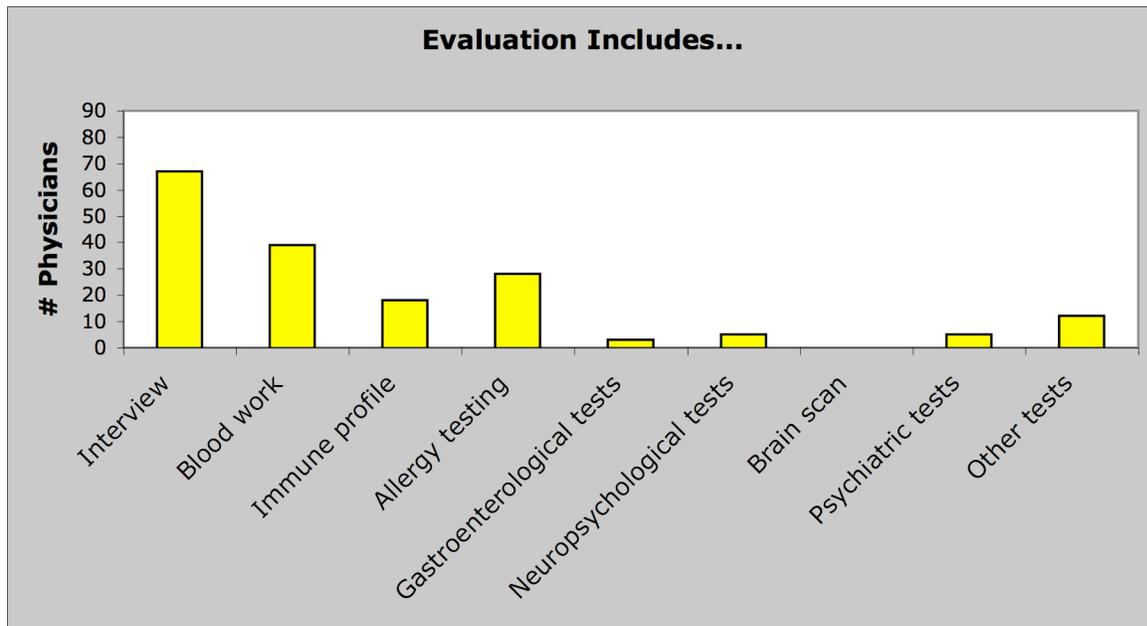
In those who have already developed MCS, physicians often saw gender (51%), geographic location (41%), educational level (40%), and socioeconomic status (41%) as 'influencing the development of' the condition. Fewer respondents considered age (31%) and race (21%) to be influencing factors.

Physicians also listed dozens of conditions which they believed overlap with MCS. The most commonly listed were asthma (91%), Reactive Airway Dysfunction Syndrome (79%), Sick Building Syndrome (71%), Chronic Fatigue Syndrome (62%), and Fibromyalgia (60%). In an open-ended section, physicians listed dozens of other conditions, including allergy, rash/dermatitis, rhinitis, headaches/migraines, Lyme disease, irritable bowel syndrome, lupus, autism and autoimmune disorders. Psychological factors were also noted, including depression, generalized anxiety, posttraumatic stress disorder and hopelessness.

Physicians' Practices

The majority (87%) of physicians reported only rarely or sometimes considering chemicals as the cause of a patient's illness, and only 6% reported having a defined treatment protocol for this population. The only evaluation procedure used by more than half of respondents was the patient interview. See Figure 2 for other evaluation techniques used.

Figure 2



After determining a patient is suffering from sensitivity to chemicals, some physicians reported making some accommodations for the patient within their office. Forty two percent reported refraining from using fragrances or problematic personal care products when visiting with the sensitive patient, and 21% reported lessening the use of chemical cleaners within the office space. Only 15% alerted patients to chemical changes in the office environment. Few reported meeting in a safer location for the patient (12%) or making home visits (2%).

Specific interventions recommended by physicians included chemical avoidance (82%), alterations in the home environment (64%), diet restrictions (49%), or air purifiers in the home (46%). Twenty percent commonly refer patients for psychiatric evaluation or counseling. See Figure 3 for other interventions suggested. Physicians may treat patients

themselves, but may also make referrals to outside specialists. Most commonly, referrals were to allergists, ENT specialists, and pulmonary specialists. See Figure 4 for referrals.

People with MCS may lose employment due to sensitivities and often apply for Social Security Disability Income (SSDI). Interestingly, 49% of respondents indicated that they were unlikely to accept a patient applying for worker's compensation or SSDI. Similarly, 62% were unlikely to accept a patient involved in accommodation-related job litigation.

Figure 3

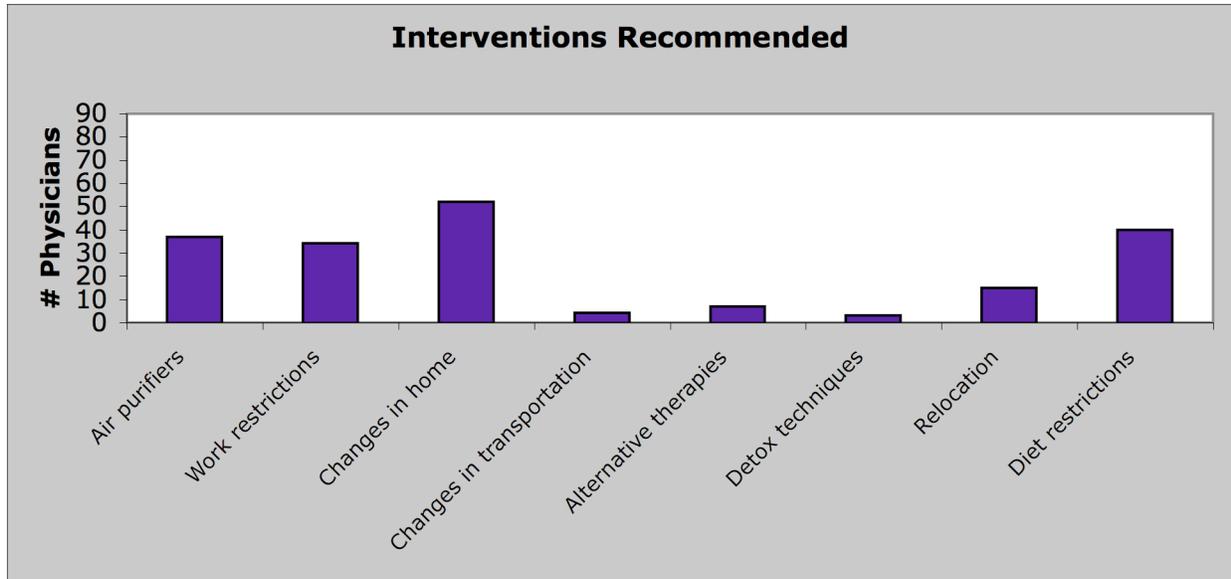
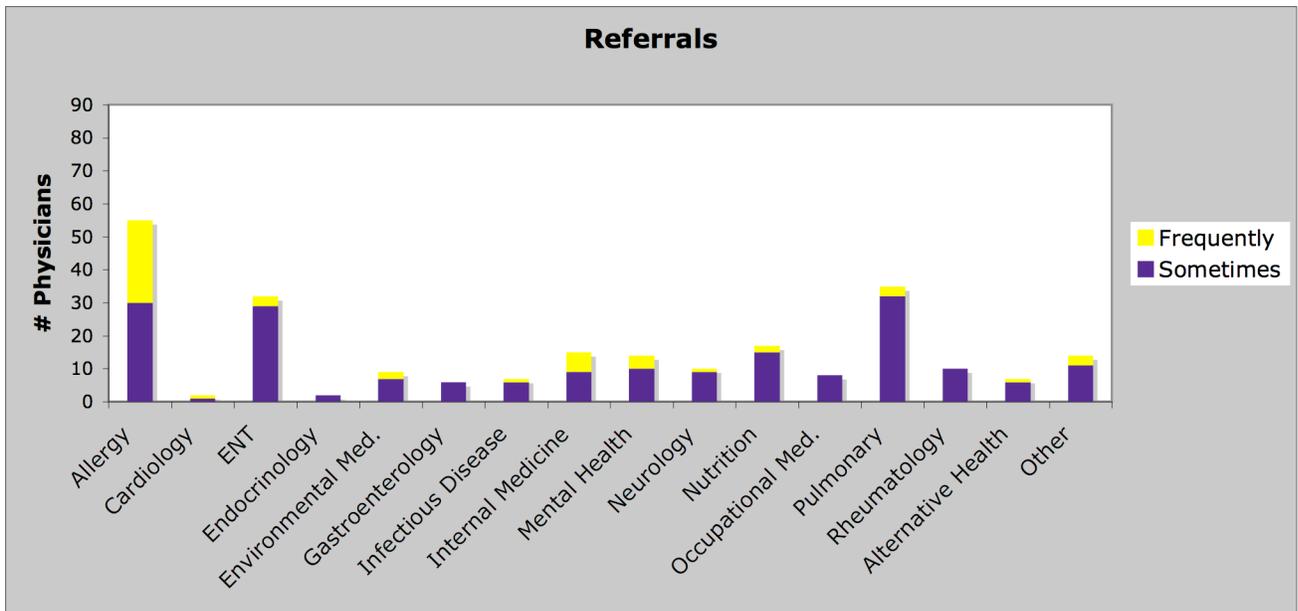


Figure 4



CONCLUSIONS

Though 97% of respondents in this study have had patients reporting chemical sensitivities, only 6% had a treatment protocol for this condition. With prevalence of MCS at approximately 13% of the U.S. population (Caress & Steinemann, 2003) and patients reporting accessing a mean of eight physicians each over the course of their illness (Gibson et al., 1996), it is clear that there is a need for informed medical help for people with chemical sensitivities. Unfortunately, only 30% of physicians in this sample had received any training regarding MCS in medical school. Only 13% reported frequently considering chemicals when diagnosing health problems in new patients. Missed cases of MCS are likely to result in incorrect treatment and possible iatrogenic harm.

Referrals were made to a large number of specialists, highlighting the need for education about MCS across medical specialties. Research into the development of effective treatment protocols is necessary in order for patients with MCS to receive well thought out care. Given the controversy regarding MCS etiology, it is uncertain what type of training physicians in this study received. However, it is important that health practitioners in training attend to the growing body of research on physiological mechanisms for MCS and not simply dismiss the condition as psychogenic.

In addition, given that a high percentage of people with MCS attribute the onset of their illness to chemical exposure, there is a need for greater understanding of the toxic effects of chemicals in ambient air.

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