

When the hospital makes you sick

by Catherine McIver

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The chemicals used in hospitals cause symptoms in people with Multiple Chemical Sensitivity (MCS). However, the indoor air quality in hospitals can be improved to make hospitals more accessible and healthier environments for everyone. This article describes some of the problems people with MCS experience when in hospitals, either as patient or visitor, and outlines what can be done to make hospitals more accessible for people with MCS.

Although hospitals are intended to improve people's health, they can be very unhealthy places to work in or even visit. Nurses have one of the highest rates of occupational asthma (Kogevinas et al. 2007). One reason for this is the high use of toxic chemicals such as pesticides, disinfectants, cleaning products and synthetic fragrances. These volatile organic compounds (VOCs) contribute to poor indoor air quality and are a risk to patients who are vulnerable because of their compromised respiratory, neurological or immunological systems or their chemical sensitivities (Health Care without Harm 2007).

In the New South Wales Adult Health Survey 2002, 2.9% of respondents reported having been diagnosed with chemical sensitivity and 24.6% of respondents reported sensitivity to chemical odours. This is a sizeable group of people that most Australian hospitals fail or refuse to accommodate appropriately.

Some people with chemical sensitivity experience no more than mild asthma or unpleasant headaches when exposed to common chemicals such as pesticides or perfumes. Others suffer more painful and disabling symptoms and need to avoid problem chemicals to prevent these symptoms. So they rearrange and restrict their lives to minimise exposure to chemicals. Unfortunately hospitals cannot always be avoided.

The AESSRA survey

In March 2004, the Allergy and Environmental Sensitivity Support and Research Association Inc. (AESSRA) sent a questionnaire to its 263 members in order to collect information for a submission to the Social Development Committee of

the Parliament of South Australia Inquiry into Multiple Chemical Sensitivity (Social Development Committee of the Parliament of South Australia 2005). Additional copies were sent to members known to have more than one person with chemical sensitivities in the family and to people who joined AESSRA between March and June 2004.

There was a high response rate with 151 questionnaires being returned. Of these respondents, 125 respondents fitted the 1999 Consensus Statement criteria for Multiple Chemical Sensitivity (MCS). These criteria are:

1. The symptoms are reproducible with (repeated chemical) exposure.
2. The condition is chronic.
3. Low levels of exposure (lower than previously or commonly tolerated) result in manifestations of the syndrome.
4. The symptoms improve or resolve when the incitants are removed.
5. Responses occur to multiple chemically unrelated substances.
6. Symptoms involve multiple organ systems.

Source: Multiple Chemical Sensitivity 1999

Seventeen respondents were sensitive to one or more chemicals but did not fit all the criteria for MCS. Two formerly had MCS but no longer had any chemical sensitivities. Seven did not complete the relevant section of the questionnaire adequately enough to determine whether they had MCS or not.

There were large differences among the 125 with MCS—in degree of sensitivity, severity of symptoms and level of disability. For example, someone with severe MCS would need to take significant steps to reduce chemical exposure, such as wearing an activated carbon mask, to

prevent symptoms when exposed to low levels of common chemicals in situations such as:

- travelling by car, bus or train (because of chemicals from the vehicle's upholstery, exhaust fumes and fragrances worn by other passengers);
- socialising with other people (fragrances, cigarette smoke, sunscreen, insect repellent and other chemicals worn by people or contaminating their clothing);
- visiting public buildings (pesticide residues, paints, formaldehyde and other chemicals from furniture, and chemicals on people); or
- reading of newspapers (solvents in the ink).

Some respondents had such severe sensitivities to chemicals that no action could adequately protect them, and the activities most people take for granted had to be foregone. With the varying degrees of sensitivity reported, respondents could have been divided into groups with extreme, severe, moderate and mild MCS, but the numbers were too small to make this useful. In total, 62 people had severe or extreme MCS and are referred to as the severe MCS group.

The respondents with MCS ranged in age from 18 months to 88 years and 47 (37.9%) were 60 or over. The people with severe MCS ranged in age from 3 to 84 years and 23 (37.1%) of the people with severe MCS were 60 or over. Of the total MCS group 82.3% were female and 90.3% of the severe MCS group were female. Studies of MCS commonly find higher rates among women but in this case it was also skewed because women seem to be more likely to join AESSRA than men.

Of people with MCS, 106 were of working age and 38 (35.8%) received the Disability Support Pension and two (1.9%) received Sickness Benefit. Among the severe MCS group, 44 were of working age and 25 (56.8%) received the Disability Support Pension. (Note that some would have been ineligible for the Disability Support Pension because of their partner's income.)

Hospital experiences

The questionnaire included a few items about hospitals. Since developing MCS, 57 (46%) of the respondents, including 29 (47%) with severe MCS, had been a patient in a hospital (other than an Environmental Control Unit set up for people with chemical sensitivities). The responses to these questions (see Table 1) indicated that exposure to chemicals in hospitals caused problems for many with MCS and in some case reactions to chemicals prolonged the hospital stay. Also informing staff of food allergies or sensitivities was no guarantee that these foods would not be served.

Visiting other people in hospital

Like everyone else, people with MCS can have sick relatives or friends in hospital. Unlike everyone else, people with MCS are often unable to access hospitals because of their medical condition. It is extremely distressing not to be able to visit a sick child or dying parent and 44.4% of respondents with MCS reported that they had been unable to visit a close friend or relative in hospital because of their chemical sensitivities. Among those with severe MCS, 66.1% had been unable to visit a close friend or relative in hospital because of their chemical sensitivities.

What can be done?

While the percentage of respondents who were adversely affected by chemicals in the hospital was high, it is important to note that some were not affected. A letter from the MCS patient's doctor and sympathetic staff can greatly improve the hospital environment. Also, people with MCS are often very resourceful and do what they can to make the hospital stay more manageable. For example, a young woman with MCS was able to find a hospital with an older (about to be replaced) maternity wing for the birth of her baby. Her room had a window that could be left open, her husband installed a shower filter to remove chlorine and she took all her own bedding. An elderly woman with a broken wrist reported that she had quite a good stay in hospital as the aftershave-wearing nurses agreed to stay away and let her husband do all the nursing.

Steps patients with MCS and their carers sometimes take include:

- removing scented products or air fresheners from their room;
- cleaning surfaces with their own cleaning products or sodium bicarbonate to remove residues of previous cleaning products and fragrances;
- taking an air filter;
- taking their own ceramic oxygen mask to use instead of the plastic ones;
- wrapping the mattresses in foil blankets;
- taking an activated carbon mask or respirator; and
- arranging for relatives and friends to bring them food they can eat and water they can drink without symptoms.

Doctors, nurses and other hospital staff can help by:

- scheduling procedures to minimise chemical exposures (usually first in

the day);

- considering the patient's sensitivities when choosing anaesthetics and medications;
- not wearing perfume, aftershave or other scented products;
- providing a private room so the patient with MCS is not exposed to fragrances from another patient and their visitors;
- ensuring that the room is not near current or recent renovation work or painting;
- postponing pesticide applications and major cleaning operations until after the patient with MCS has left; and
- providing food the patient with MCS can tolerate or helping the patient with their own food supply.

In 2002, AESSRA produced a 12-page booklet, Hospital Guidelines for Patients with Multiple Chemical Sensitivity, listing ways to make a hospital stay less of a health hazard for people with MCS. This booklet is available from AESSRA's website <<http://mc2.vicnet.net.au/home/aessra/web/booklets.html>>

Emergency admission

Hospital environments are difficult enough for people with MCS when there is time to explain their needs, negotiate and prepare. Many people with MCS are especially frightened of having to go to hospital in an emergency. However, there are ways hospitals can reduce a patient's exposure to chemicals at short notice, such as:

- taking the patient with MCS straight to an isolation ward or other area where they will not be exposed to other patients' fragrances, or residues of washing powders, moth balls or other chemicals on clothing in the waiting room;

Table 1. Responses to hospital-related questions

	Total MCS	Severe MCS
I have been made ill by cleaning chemicals, pesticides or fragrances worn by staff.	33 (57.9%)	24 (82.8%)
I have had to spend longer in hospital than planned because of reactions to chemicals.	12 (21%)	11 (37.9%)
I have been served food in hospital that I had informed staff I was allergic or sensitive to.	23 (40.4%)	13 (44.8%)

- taking portable equipment to the patient instead of taking the patient through the hospital; and
- finding staff not wearing fragrance to treat the patient.

Hospital protocols and guidelines

A number of US hospitals have developed protocols and guidelines for caring for patients with MCS. The IEQ Indoor Environmental Quality Final Report (2006) was a project of the National Institute of Building Sciences (2006) with funding support from the Architectural and Transportation Barriers Compliance Board. This report includes as appendices multiple chemical

sensitivity policy and protocol of the Southwest General Health Center (SWGHC), Middleburg Heights, Ohio.

In Australia, the Royal Brisbane Hospital produced a draft MCS protocol in 2002, after a complaint to the Human Rights and Equal Opportunity Commission. Following the Social Development Committee of the Parliament of South Australia Inquiry into Multiple Chemical Sensitivity, the development of hospital protocols for South Australian hospitals is underway. Hospital protocols can be a valuable way of ensuring staff cooperation and optimizing care of patients with MCS, but there is often enormous

resistance to their adoption.

When MCS was first described in the medical literature by US allergist Theron Randolph in the early 1950s, it was met with enormous opposition. Back then pesticides and other toxic chemicals were believed to bring only benefits, measuring equipment was not sensitive enough to measure the low levels of chemicals his patients reacted to, and there was very little research into the effects of toxic chemicals on human health. Now, more than 50 years later, there is increasing evidence that a wide variety of chemicals—from pesticides to perfumes—contaminate the air, water, food supply and our bodies, and these chemicals can have a range of adverse effects on our health.

There is evidence to support a number of possible physiological mechanisms for increased sensitivity to chemicals. Unfortunately, many members of the medical profession still have a 1950s opinion of MCS and are unfamiliar with the research. This is not simply due to the conservatism of the medical profession. Industries whose products are implicated in causing MCS or triggering symptoms have fairly successfully discredited people with MCS, the doctors who treat them and researchers studying MCS, using tactics similar to those used by the tobacco industry to cover up the harm caused by cigarette smoking (McCampbell 2001).

Even if they were to be widely adopted, MCS protocols are not a complete solution. They do not address the needs of staff members and visitors with MCS or other conditions exacerbated by poor indoor air quality. However, at least one US hospital has implemented its MCS protocol so a patient could be visited by a daughter with MCS (Smith 2001). A protocol's effectiveness is limited by the extent of the indoor air quality problem in hospitals. For example, patients with MCS do better in hospital if pesticides are not sprayed while they are there, but if a pesticide was sprayed weeks or months earlier there will still be pesticide residue that will cause symptoms.

Hospital fragrance-free policies: Two examples from Ontario, Canada

Hotel Dieu Hospital

As of 1 November 2005, Hotel Dieu is officially a scent-free work environment, which means that all staff, students, patients and visitors will be asked to refrain from using any scented products in the hospital.

The now-formal policy (Hotel Dieu has for several years requested that people leave their scented personal care products at home) is designed to create a safe and healthy environment, especially for those who suffer serious reactions when exposed to chemical fragrances.

The new policy will be clearly indicated on HDH appointment slips, patient education brochures and other print materials. Patients who do come into the hospital wearing scented products will be informed of the policy and asked to wash and/or change their clothing. Visitors will have the option of using a washcloth or leaving the hospital.

Retrieved from www.hoteldieu.com/scentfree.html

Ross Memorial Hospital

In support of our commitment to health promotion and safe environment, the Ross Memorial Hospital shall strive to provide an indoor air environment that meets accepted standards. Scented products can contain chemicals which may cause serious problems for people with asthma, allergies, migraines and environmental illnesses.

The Ross Memorial Hospital will maintain a smoke- and fragrance-free policy, and wherever possible, eliminate the use of other hospital products where scent or other properties are known to cause health problems for patients, staff, physicians, volunteers and visitors.

Employees, medical staff, volunteers, and students are asked to avoid the use of perfume, aftershave, scented hairspray and other scented personal products while at work. All hospital employees and medical staff are asked to support this policy, and encourage others to refrain from using such scented products while at the hospital.

The hospital will communicate with local florists to encourage them to advise customers against ordering highly scented flowers (such as hyacinths, Easter lilies, and eucalyptus) for hospital inpatients.

Approved by: Medical Advisory Committee, June 2000

Retrieved from www.rmh.org/content/view/41/92/

Towards less toxic hospitals

Health Care Without Harm, which has 443 member organisations in 52 countries (none in Australia so far), has a number of publications discussing and suggesting safer alternatives to toxic cleaning products, disinfectants, Polyvinyl chloride (PVC) and Diethylhexyl Phthalate (DEHP), pesticides, fragrances, flame retardants, building materials and mercury in hospitals. The organisation's publication, *Risks to Asthma Posed by Indoor Health Care Environments: A Guide to Identifying and Reducing Problematic Exposures* (Clapp et al. 2006) is especially relevant.

Fragrance-free policies

Fragrances are often among the most troublesome chemicals in hospitals and they are also the least necessary. Fragrances are not only a problem for people with MCS; they can also exacerbate asthma and other lung conditions, rhinitis and headaches including migraines. There is increasing research into the health effects of fragrance; for example, Elberling et al. (2007). In the USA and Canada an increasing number of hospitals are adopting fragrance-free policies (see Box).

Conclusion

Making hospitals accessible for people with MCS will mean healthier environments for all staff, patients and visitors. In particular, Australian hospital staff need to realise that when they wear perfume, aftershave or other

scented products to work, it is highly likely they will cause some of the patients they encounter to suffer pain and worsening symptoms. Australian hospitals need to become aware of the impact the chemicals they use have on indoor air quality and the health and wellbeing of people who enter these buildings. Let us hope that the recent increased interest in environmental issues results in more hospitals developing and implementing policies to reduce chemical exposure to patients, visitors and staff.

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Staff member becomes patient in 60 seconds



Many HDH staff members, patients and volunteers have serious reactions when exposed to certain chemicals.

Our hospital is now a scent-free environment.

Please refrain from wearing any scented personal products and from bringing high-fragrance flowers into our facility.

For more information on the HDH scent-free policy, call Occupational Health & Safety at ext. 2264

<http://www.hoteldieu.com/scentfree.html>