

SENSOR Occupational Lung Disease Bulletin

A project of the Massachusetts Department of Public Health's Occupational Health Surveillance Program, the Massachusetts Thoracic Society, and the Massachusetts Allergy Society

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Dear Health Care Professional,

An important element of public health surveillance is to provide feedback to reporters. As promised, we are devoting the first Bulletin of the year (and century) to the presentation of summary data on cases of work-related asthma reported to Massachusetts SENSOR. The information presented in this issue is an overview of data collected through interviews with 335 cases between 1993 and 1998. A more extensive analysis is underway. To date, since 1992 when mandatory reporting requirements went into effect, 730 cases have been reported to Massachusetts SENSOR. Although this number is believed to be only a small fraction of the total number of work-related asthma cases in the Commonwealth, the data we are collecting provide a picture of the types of industries and occupations where workers are at risk for work-related asthma in Massachusetts.

During the past year, we have noticed a decline in the number of reports we receive each month. Please help us to understand why by completing the enclosed questionnaire. Thank you for your continued cooperation in reporting cases to SENSOR.

Sincerely,
Catharine Tumpowsky, MPH
Occupational Lung Disease Surveillance Project

Work-Related Asthma Cases Massachusetts SENSOR 1993- 1998

Between January 1993 and December 1998, SENSOR received 600 case reports of work-related asthma (WRA). These reports include cases of new-onset occupational asthma, cases of work-aggravated asthma, and cases of RADS. Upon review, 33 cases did not meet the case definition for work-related asthma and were excluded from follow-up activities. Of the remaining 567 cases, interviews were completed with 350 cases (62%). During the interview, 10 cases were determined not to be work-related asthma and 5 cases were excluded because they involved people who were employed outside of Massachusetts. Summary data pertaining to the remaining 335 interviewed cases are described below.

Table I: Ten most frequently reported occupational allergens associated with cases of WRA, Massachusetts SENSOR, 1993-1998, n=335*.

AGENT	No.	%
Poor Indoor Air Quality **	65	19.4%
Cleaning Agents	45	13.4%
Latex	33	9.9%
Mold	32	9.6%
Dust	32	7.8%
Chemicals, NOS	26	6.3%
All Metals	21	5.7%
Smoke, NOS	19	5.4%
Formaldehyde	18	4.5%
Solvents, NOS	15	4.5%

NOS = Not otherwise specified

*Up to 3 agents were reported for each case.

** Includes cases who report "bad air", "indoor air pollution", "poor ventilation", or "sick building syndrome". More specific agents associated with poor indoor air quality, including dust and mold, are coded separately.

The most commonly reported occupational asthma causing agent is poor indoor air quality. Nurses, teachers, and office workers are the occupations most likely to report problems with poor indoor air quality. Of the 45 cases involving reports of exposure to cleaning agents, nearly half (22), were employed as health care workers. Only 3 of the cases were employed in cleaning occupations. The substantial number of reports of latex-induced, occupational asthma comes primarily from health care workers in hospitals and dental offices. Despite better awareness of latex allergies, this exposure remains a significant concern given the extent of the health care industry in Massachusetts.

REPORT OCTOBER-DECEMBER CASES NOW

By January 31st, report all occupational lung disease cases seen for the first time between October and December 1999. If you have NOT seen any cases, it is not necessary to return the report form.

Table II: Industries employing workers with cases of work-related asthma, Massachusetts SENSOR,

continued on other side

1993-1998, n=335.

INDUSTRY	No.	%
Services	176	52.5%
<i>Hospital</i>	86	25.7%
<i>School</i>	31	9.3%
<i>Other health care</i>	13	3.9%
<i>Dentist</i>	7	2.1%
<i>College</i>	7	2.1%
<i>Autobody</i>	5	1.5%
Manufacturing	81	24.2%
<i>Industrial machinery</i>	11	3.2%
<i>Chemicals</i>	10	3.0%
<i>Measuring devices</i>	8	2.4%
<i>Fabricated metals</i>	8	2.4%
<i>Electronics</i>	8	2.4%
<i>Rubber</i>	5	1.5%
<i>Paper</i>	5	1.5%
<i>Food</i>	5	1.5%
Public Administration	34	10.2%
<i>Regulation of transportation</i>	12	3.6%
<i>Courts</i>	6	1.8%
<i>Fire departments</i>	6	1.8%
Trade (wholesale/retail)	17	5.1%
Construction	13	3.9%
Transportation	8	2.4%
Agriculture	3	1.0%
Finance	1	<1%

More than one third of all cases in this study period were employed in the health care sector. Almost one-half of the cases with "hospital" reported as the industry were exposed to either latex (24) or indoor air pollution (17). An additional 14 cases reported exposure to cleaning products. Of the 31 cases working in schools, 13 cases were exposed to indoor air pollution and 8 cases reported exposure to molds. Four of the eleven cases employed by manufacturers of industrial machinery, reported exposure to isocyanates. Of the public administration cases, 12 cases involved workers at one location (Registry of Motor Vehicles) who were exposed to manmade mineral fibers.

Age, Gender, and Race of Cases

The cases range in age from 21 to 83 years with a median age of 42 years. Sixty-three percent of the cases are female. Cases are somewhat older and more likely female than the working population of Massachusetts at large. Most of the cases are white (282, 84%). The remaining cases reported being black (6%), mixed or other races (6%), or Asian (2%). Seven percent (24 cases) reported being of Hispanic origin whereas only 3% of the employed population in Massachusetts is of Hispanic origin.

Table III: Occupations reported for workers with cases of work-related asthma, Massachusetts SENSOR, 1993-1998, n=335.

OCCUPATION	No.	%
Managerial and Professional	114	34.0%
<i>Nurses</i>	56	16.7%
<i>Teachers</i>	28	8.4%
<i>Managers</i>	8	2.4%
<i>Engineers/scientists</i>	7	2.1%
Technical, Sales, Administrative	75	22.4%
<i>Administration/office workers</i>	47	14.0%
<i>Health technicians</i>	10	3.0%
<i>Dental hygienists</i>	4	1.2%
<i>Licensed practical nurses</i>	4	1.2%
<i>Sales</i>	4	1.2%
Operators/Laborers	59	17.6%
<i>Painters</i>	8	2.4%
<i>Welders</i>	7	2.1%
<i>Assemblers</i>	5	1.5%
Service	40	11.9%
<i>Health aides</i>	11	3.3%
<i>Cleaning occupations</i>	12	3.6%
<i>Fire fighting</i>	5	1.5%
<i>Hairdressers</i>	4	1.2%
Precision Production Craft and Repair	40	11.9%
<i>Construction workers</i>	6	1.8%
<i>Bakers</i>	5	1.5%
Farming, Forestry, Fishing	4	1.2%
Unknown	1	<1%
Military	0	0%

Eighty-nine cases (27%) are employed as health care workers. "Registered Nurse" is the most frequently reported occupation. The most frequently reported exposures for nurses are: latex (20 cases), poor indoor air quality (15 cases), cleaning products (8 cases). Administrative workers were subjected to a variety of exposures including primarily, poor indoor air quality (11 cases), man-made mineral fibers (10 cases all from one location), mold (5 cases), and smoke (5 cases). Of the 12 cases employed as cleaners, 5 reported unspecified cleaning agents and 3 cases reported floor stripper as the source of exposure.

Number of Work-Related Asthma Cases Reported to Massachusetts SENSOR, March 1992- September 1999

July 1999	August 1999	September 1999	Total to Date (3/92-9/99)
3	5	4	723