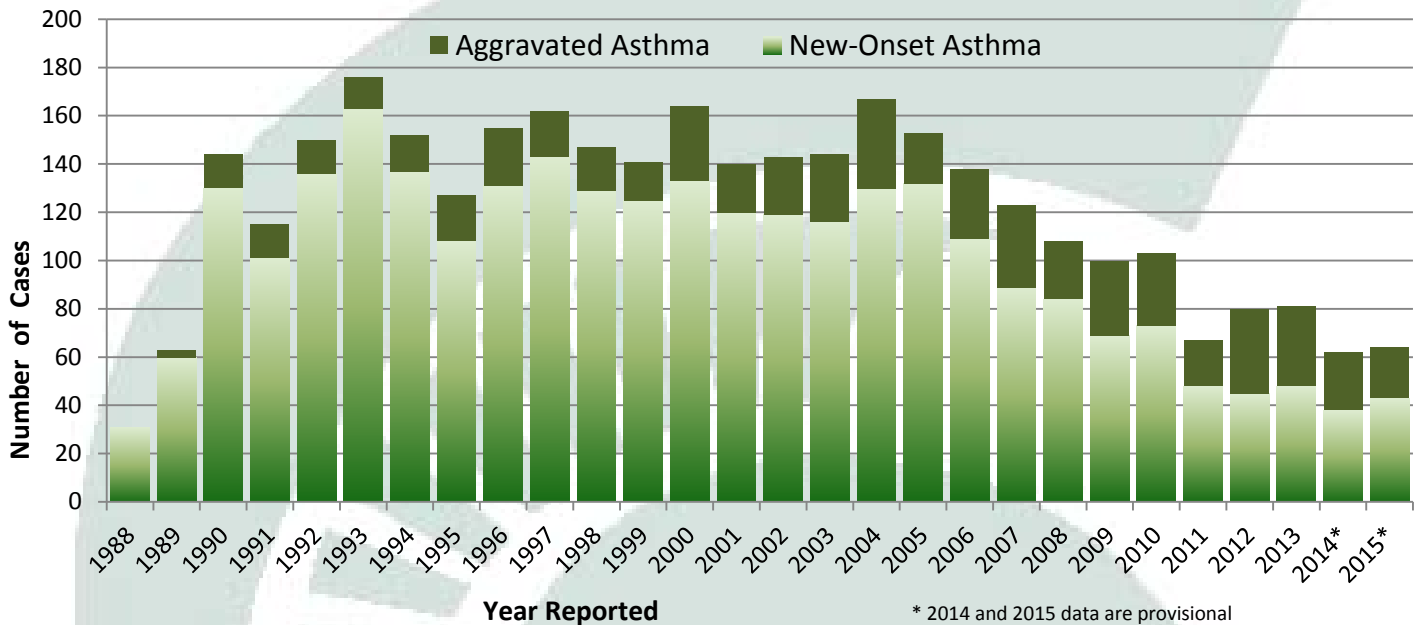


Tracking Work-Related Asthma (WRA) in Michigan

Additional Information Available at: www.oem.msu.edu

Summary Statistics

Confirmed WRA Cases by Year & Type



The Association of Occupational & Environmental Clinics (AOEC) provides an on-line asthma-causing agent look-up tool to identify agents associated with asthma, including work-related asthma. The link to the AOEC website is: <http://www.aoecdata.org/ExpCodeLookup.aspx> Thousands more substances have not been evaluated for their asthma-causing potential. There are two subgroups of WRA, new onset asthma and preexisting asthma that is exacerbated by an exposure at work. The average incidence of WRA among African Americans is 1.4 times greater than among Caucasians (2.75 and 1.92 cases per 100,000, respectively). The most commonly reported exposures in Michigan are diisocyanates and cleaning agents. These exposures reflect the manufacturing and service industry base in our state.

Top 10 Exposure Agents in MI

Exposure Agent	% WRA Cases
Diisocyanates	12.3
Cleaning Agents	11.8
Metal Working Fluids	9.7
Unknown Mfg.	7.5
Unknown Office	6.0
Smoke/Fume	5.0
Welding Fume	4.4
Solvents	3.4
Paint Fume	2.5
Epoxy	2.2



Federal OSHA has a number of resources on Protecting Temporary Workers at:

https://www.osha.gov/temp_workers/index.html

Background

In 1988 Michigan instituted a tracking program for work-related asthma (WRA) with financial assistance from the National Institute for Occupational Safety and Health. This is a joint project of the Michigan Occupational Safety and Health Administration (MIOSHA) and the Michigan State University (MSU) Department of Medicine. The reporting of a sentinel case may lead to the identification of employees from the same facility who are at risk of developing asthma. The goal of the project is to prevent WRA through the identification of these sentinel patients.

Annual Average Rate of WRA: Manufacturing Industries

2002 NAICS	Industry	# Cases	Ann Avg Rate	# Ees
311	Food Mfg	58	7.9	31,900
323	Printing & Related Support Activities	18	3.9	20,200
325	Chemical Mfg	97	12.5	33,800
326	Plastics & Rubber Products Mfg	99	9.8	43,700
327	Nonmetallic Mineral Product Mfg	17	4.2	17,600
331	Primary Metal Mfg	65	10.0	28,300
332	Fabricated Metal Product Mfg	99	5.1	84,500
333	Machinery Mfg	138	7.5	79,700
334	Computer & Electronic Product Mfg	12	2.5	21,100
336	Transportation Equipment Mfg	1,089	15.9	296,900
337	Furniture & Related Product Mfg	13	1.8	31,000
	All Other Mfg	118	7.1	72,700



Program Highlights

- A recent Michigan Department of Community Health survey found that 52.5% of Michigan adults who were employed and currently have asthma reported that a health care provider told them or they told the health care provider that their asthma was caused or made worse by exposures at work.
- MIOSHA enforcement inspections at the workplaces of the WRA patients reveal that, on average, 1 out of every 6 fellow workers has asthma or respiratory symptoms compatible with asthma.
- Air sampling for allergens during MIOSHA inspections reveals only 3.6% of the facilities have exposures above the MIOSHA enforceable permissible exposure limit. This suggests that employees can become sensitized to workplace allergens at levels within permissible limits.
- Cessation of exposure is the most important aspect of treatment once an employee has become sensitized to a substance at work; patients removed from exposure the soonest have the best prognosis.

WRA Narratives

- A man developed RADS (reactive airways dysfunction syndrome) in his 50s while **working on a particular construction job as a drywall finisher**. The job he was doing when he experienced wheezing and chest tightness involved using sanding chemicals. He was given a paper mask for the job, but reported that other workers were given chemical-protective masks. He had worked as a drywall finisher for about 30 years before this incident. He was unable to return to work and was put on disability. He had previously smoked a pack of cigarettes a day from his late teens till his early 30s.
- A female in her 60s experienced an exacerbation of her pre-existing mild exercise-induced asthma while working as **a nurse at a hospital**. She was exposed to fumes from roof asphalt resurfacing activities that filtered through the ventilation to her work area. She immediately experienced wheezing, cough, shortness of breath and chest tightness and was prescribed increased asthma medication. Since the incident, she works in a different area of the hospital, her asthma has improved and she requires less asthma medication. She was a lifelong non-smoker.