CDC Data: Isocyanates are No Longer a Leading Cause of Work-Related Asthma (WRA)

*Isocyanates no longer rank among "top twenty" agents causing work-related asthma in USA**

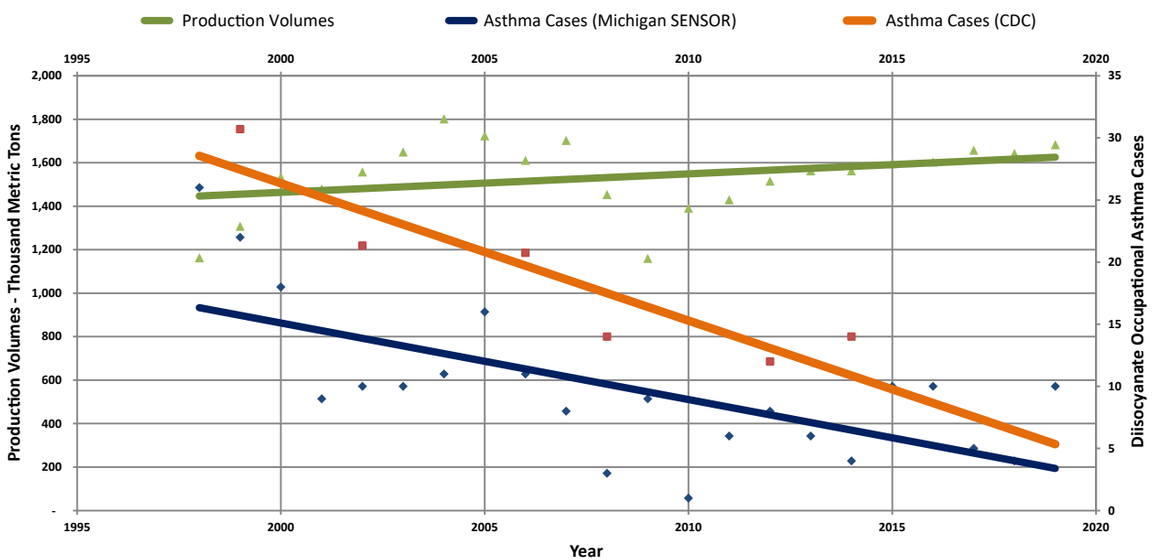
Period	Number of Years	Rank Among WRA Categories	Percent of WRA Cases
1993-1999	6	#6	8.4%
1993-2002	9	#7	6.4%
1993-2006	13	#8	5.4%
1992-2008	16	#9	4.7%
2009-2012	3	#19	1%
2012-2015	3	#35	<1%

***** Source CDC-NIOSH Work-Related Lung Disease Surveillance System (eWoRLD): http://www2a.cdc.gov/drds/worldreportdata/default.asp

DECREASE IN DIISOCYANATE-RELATED OCCUPATIONAL ASTHMA AIDED BY ENHANCED INDUSTRY STEWARDSHIP

DIISOCYANATES are a family of chemical building blocks used to make polyurethanes for furniture, appliances, apparel and more. Before they are mixed with other chemicals and transformed into finished goods, they are in a reactive state and have a potential to contribute to workplace asthma. However, diisocyanate manufacturers, in partnership with downstream users, have implemented a variety of product stewardship activities that have contributed to a reduction in diisocyanate-related asthma cases, even as production rates have increased.

TRENDS IN DIISOCYANATES PRODUCTION VOLUMES VS. DIISOCYANATE OCCUPATIONAL ASTHMA CASES, 1998-2019



Above is a graph showing the combined production volumes for TDI, MDI, HDI, H12 MDI, IPDI, TMXDI, TMDI and PI. Data are in thousand metric tons. Production estimates include data from IHS Markit and ICIS. The CDC Work-Related Lung Disease Surveillance System (eWorld) and the Michigan State University Sentinel Event Notification System for Occupational Asthma Risks (SENSOR) were used for the diisocyanate occupational asthma cases.

PRODUCT STEWARDSHIP ACTIVITIES THAT HAVE CONTRIBUTED TO LOWERED OCCUPATIONAL ASTHMA RATES

EDUCATION
Employee education and training programs

WORK PRACTICES
Enhanced personal protective equipment and/or engineering controls

INNOVATION
Technology shift from monomers to polymers

MEDICAL SURVEILLANCE
Pre-placement and periodic evaluations

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