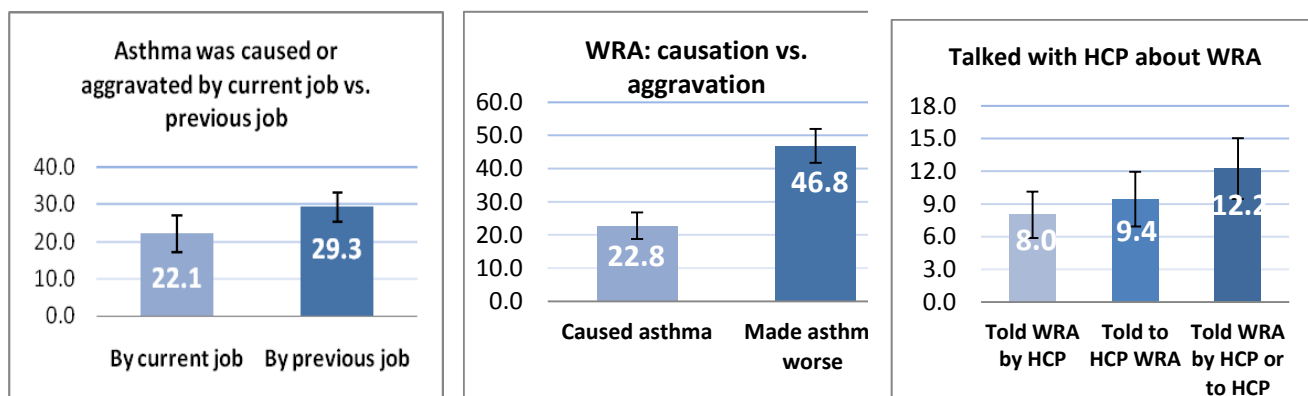


Work-Related Asthma (WRA) in Iowa: 2006 - 2008 BRFSS¹ Adult Asthma Call-Back Survey²

Based on responses received from Iowans from 2006-2008, approximately 233,000 adults aged 18 and older reported having asthma at some time in their life, with 162,000 reporting they currently had asthma:

- 22% reported their asthma was caused by or made worse by a **current job** while 29% reported their asthma was caused by or made worse by a **prior job**;
- 23% of adults reported their asthma was **caused** by work, while 47% reported their asthma that was **made worse** by work;
- 8 % reported they were told by a healthcare provider (HCP) that their asthma was work-related while 9.4% said they told a HCP their asthma was work-related (self assessment); overall, 12% had talked to a healthcare provider about their asthma being work-related.
- 52% of the survey respondents (three year average) answered 'Yes' to one or more of the seven work-related asthma questions included in the call-back survey.



During 2006-2008, a total of 894 adults (aged 18 and older) with asthma in Iowa responded to the BRFSS Call-back survey, an average of 300 per year. Because of the expected small sample size, a complex survey design was used to get unbiased (or nearly unbiased) estimates for the asthma population. All percentages were weighted based on the probability that an individual would be selected to participate in the survey by age, gender and race.

Of the approximately 233,000 adults who had ever had asthma in Iowa, an annual average of 162,000 reported currently having asthma. For the first time, the call-back survey provided detailed information on their recent asthma history and symptoms. For adults who currently had asthma, the survey found that those with WRA routinely reported more problems than those whose asthma was non-work related.

¹ Behavioral Risk Factor Surveillance System

² In 2006, Iowa participated CDC's newly designed annual Asthma Call-back Survey administered as part of BRFSS. Adults (aged 18 and older) who are identified in the BRFSS as having lifetime asthma are invited to participate in a detailed asthma survey. The questions included asthma symptoms, medications, activity limitation, environmental exposures and work-related asthma. Work related status of asthma was measured by self-report whether asthma was work related.

Work-Related Asthma vs. Non-WRA among Iowa Adults with Current Asthma, 2006-2008

	WRA (%)	95% CI	Non-WRA (%)	95% CI
Had Asthma symptoms, past 30 days	79.3*	73.4 - 85.1	49.7	42.0-57.5
Sleep disturbed from asthma, past 30 days	31.7*	24.2 - 39.1	16.1	11.1 - 21.1
Had asthma attack, past 12 months	52.3	44.1 - 60.6	39.5	32.3 - 46.8
Unable to work or carry out usual activities due to asthma, past 12 months	73.0*	66.5 - 79.5	53.7	45.9 - 61.5
Had visited doctor or other HCP for urgent treatment of worsening asthma symptoms, past 12 months	17.8	12.7 - 22.9	15.2	10.4 - 20.0

Note: *The difference between the WRA % and the non-WRA % is statistically significant.

- 79% of WRA adults reported that they had asthma symptoms in the past 30 days vs. 50% of non-WRA adults;
- 32% of WRA adults reported their asthma made it difficult to stay asleep vs. 16% of non-WRA adults (2 times higher);
- 73% of WRA adults reported they were limited in their usual activities due to asthma vs. 54% of non-WRA adults;
- WRA adults had a higher percentage of asthma attacks and were more likely to seek HCP treatment than the non-WRA adults, but the percentages were not statistically different.
- 22% of adults in Iowa with current asthma reported that they had to change jobs because of their work-related Asthma.

Discussion

22% of Iowa adults (estimated 39,000 Iowans) reported that their current jobs caused/aggravated their asthmas -- about 1 out of 5 adults with current asthma.

Those who currently have WRA were younger (average age 40.6, median age 50) than the non-WRA adults with current asthma (average age 48.4, median age 57), and there were more males in the WRA group (54%) than in the non-WRA group with current asthma (35%).

The survey did not collect information about the respondents' occupations, work duties, or industries of employment. This limits the ability to use the data for additional analysis to explain the differences found. It also limits the ability to use the findings to help design effective public health occupational safety prevention and intervention programs.

The response rate on health insurance did not show a significant difference between WRAs and non-WRAs: both groups reported that 93% were covered by insurance and 7% did not have insurance.

It is significant that there is a wide gap between the percentage of those who had significant impacts within the past year (73% WRA, 54% non-WRA) and those with current asthma who had accessed medical care for urgent treatment of worsening asthma symptoms in the past year (18% WRA, 15% non-WRA). Since 93% of both groups are covered by insurance, access to health care due to cost does not appear to be the cause of the discrepancy, but more research is needed to evaluate this finding further.