

# Physician-Patient Communication Regarding Asthma and Work: Progress Towards Healthy People 2020

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## Background

- In 2018, 7.7% (19.2 million) of US adults currently have asthma
- Work-related asthma (WRA) is asthma that is caused or made worse by exposures at work; 16% of incident asthma among adults is attributable to occupational exposure.
- Physician-patient communication is an essential element of care.
- In 2010, an estimated 13.5% of employed adults with current asthma communicated with a health professional about the role of work in the causation or exacerbation of their asthma.
- Electronic health record initiatives provide an opportunity to improve the diagnosis and treatment of work-related conditions.

### Objectives

- To assess progress toward the Healthy People 2020 goal seeking to increase the proportion of persons with current asthma who discussed with their health care provider whether their asthma was potentially work related.

## Methods

- The 2018 National Health Interview Survey (NHIS)
- Selected survey participants aged ≥18 years who were employed at any time in the 12 months prior to the interview
- Identified respondents with a health-professional diagnosis of current asthma who reported being told by a health professional that their asthma was probably work-related or reported ever discussing asthma work-relatedness
- Data weighted to account for complex sampling design and non-response; Prevalence and proportions with corresponding 95% confidence intervals (CIs) estimated
- SAS® software version 9.3 (SAS Institute Inc., Cary, NC)

## Results

- ~8.1% (95% CI, 6.4%-9.9%) of employed adults with current asthma (11.8 million) have been told that their asthma is work-related and among those not so informed, ~4.2% (2.8%-5.5%) ever discussed asthma work-relatedness
- When data combined, ~12.0% (9.9%-14.1%) of employed adults communicated about asthma and work.

## Results

**Table. Employed adults with current asthma who communicate about asthma and work, by selected characteristics, NHIS, 2018**

Characteristic	Estimated population		Communication about asthma and work					
	%	(95% CI)	Prevalence, % (95% CI)		Unadjusted POR (95% CI)		Adjusted POR (95% CI)	
Age, years								
18–29	29.0	(25.3–32.6)	6.9	(3.7–10.0)	1		1	
30–44	27.3	(24.1–30.5)	12.6	(8.5–16.6)	1.95	(1.06–3.60)	<b>2.21</b>	<b>(1.15–3.92)</b>
45–64	36.7	(33.3–40.1)	15.6	(11.6–19.6)	2.51	(1.40–4.50)	<b>2.84</b>	<b>(1.58–5.13)</b>
≥65	7.0	(5.4–8.5)	11.8	(5.2–18.4)	1.82	(0.81–4.08)	1.96	(0.86–4.51)
Sex								
Male	38.3	(34.5–42.2)	15.7	(11.8–19.6)	1.77	(1.17–2.60)	<b>1.74</b>	<b>(1.16–2.60)</b>
Female	61.7	(57.8–65.5)	9.6	(7.3–12.0)	1		1	
Race								
White	77.6	(74.2–81.1)	12.3	(10.8–16.3)	1		1	
Black/African American	13.5	(10.6–16.4)	11.8	(9.6–20.6)	0.96	(0.49–1.87)	1.08	(0.56–2.06)
Multiple race	8.9	(6.6–11.1)	10.0 <sup>e</sup>	(3.9–16.8)	0.79	(0.36–1.73)	0.80	(0.37–1.73)
Ethnicity								
Hispanic	9.9	(7.6–12.2)	12.2	(5.3–19.2)	1.03	(0.53–2.01)	1.06	(0.52–2.16)
Non-Hispanic	90.1	(87.6–92.4)	11.9	(9.8–14.1)	1		1	
Education								
Less than high school	7.1	(5.2–8.9)	14.8	(6.5–23.1)	1		1	
High school diploma	18.9	(15.6–22.2)	10.3	(5.6–15.1)	0.66	(0.29–1.52)	0.68	(0.28–1.66)
More than high school	74	(70.6–77.4)	12.2	(9.7–14.6)	0.80	(0.39–1.61)	0.90	(0.42–1.95)
Insurance								
Not covered	8.6	(6.5–10.6)	19.7	(10.3–29.1)	1		1	
Covered	91.4	(89.4–93.5)	11.3	(9.2–13.4)	0.52	(0.28–0.98)	0.48	(0.25–0.93)
Asthma attack*								
Yes	40.2	(36.4–43.9)	18.1	(14.1–22.1)	2.59	(1.71–3.92)	<b>2.88</b>	<b>(1.88–4.41)</b>
No	59.8	(56.1–63.6)	7.9	(5.6–10.1)	1		1	
Emergency room visit/urgent care*								
Yes	8.3	(6.4–10.2)	29.2	(18.6–39.7)	3.57	(2.06–6.17)	<b>4.05</b>	<b>(2.19–7.49)</b>
No	91.7	(89.8–93.6)	10.4	(8.4–12.4)	1		1	

\* During the past 12 months

POR adjusted for age, gender, race, Hispanic origin, educational level, insurance coverage, and family income

## Summary & Discussion

- The proportion of employed adults with current asthma who communicated with a health professional about asthma work-relatedness did not change substantially over time and was 12.0%.
- An asthma attack in the past 12 mo. is associated with a 3 fold and an ED or urgent care visit for asthma in the past 12 mo. is associated with a four-fold increase in the communication about asthma and work suggesting increased communication among those with severe asthma.
- Patient-physician communication benefits:
  - Increases patient involvement and treatment compliance,
  - Increases patient satisfaction,
  - Improves quality of care and health outcomes,
  - Decreases the frequency of malpractice claims,
  - Patients are more likely to share pertinent health information.

## Limitations

- Communication about asthma and work based on self-report.
- No information on related factors available (e.g., use of educational materials, time constraints placed on the healthcare provider).
- Some unemployed adults may have been diagnosed with asthma or may have left their job because of their asthma symptoms and may no longer be in the workforce thus leading to underestimation of communication.
- Cross-sectional study: cannot assess temporal relationships.

## Recommendations

- Results indicate suboptimal communication about asthma and work
- Clinical decision support provided through electronic health records could enhance discussions of work-relatedness with adult patients with recent onset or worsening of asthma.

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