**Table E1.** Demographics and Asthma-Related Measures Among Adults with Active Asthma by Age: Behavioral Risk Factor Surveillance System Asthma Call-Back Survey, 2006–2010

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | | | **Age** | | | | | |  | |
| **Asthma-Related Measure** | **All**  (N = 49,792a)  Weighted % (95% CI) | | | **18–40 Years**  (n = 9,001a) | | | **41–64 Years**  (n = 26,715a) | **≥65 Years**  (n = 14,076a) | | | |
|  | Weighted % (95% CI) | | | Weighted % (95% CI) | Weighted % (95% CI) | | | |
| **Demographics** |  |  | |  |  | |  |  | | |  |
| Household income, annual |  |  | |  |  | |  |  | | |  |
| <$15,000 |  | 13.4 (12.7–14.1) | |  | 11.8 (10.4–13.2) | | 14.5 (13.7–15.4) | 14.5 (13.3–15.6) | | |  |
| $15,000–$24,999 |  | 14.8 (14.1–15.6) | |  | 13.5 (12.0–15.0) | | 13.6 (12.8–14.4) | 21.8 (20.5–23.1) | | |  |
| $25,000–$49,999 |  | 21.0 (20.2–21.8) | |  | 19.9 (18.3–21.5) | | 19.8 (18.8–20.8) | 27.0 (25.6–28.3) | | |  |
| $50,000–$74,999 |  | 13.2 (12.6–13.9) | |  | 13.3 (11.9–14.6) | | 14.0 (13.2–14.9) | 10.9 (9.9–11.9) | | |  |
| >$75,000 |  | 26.3 (25.4–27.2) | |  | 27.8 (25.9–29.6) | | 30.1 (29.0–31.2) | 11.8 (10.6–12.9) | | |  |
| Unknown |  | 11.3 (10.5–12.0) | |  | 13.8 (12.1–15.5) | | 7.9 (7.3–8.6) | 14.1 (13.1–15.2) | | |  |
| Race/ethnicity |  |  | |  |  | |  |  | | |  |
| White, non-Hispanic |  | 73.8 (72.9–74.8) | |  | 69.9 (67.8–71.9) | | 74.9 (73.8–76.0) | 81.0 (79.5–82.4) | | |  |
| Black, non-Hispanic |  | 9.3 (8.6–9.9) | |  | 10.2 (8.8–11.6) | | 9.2 (8.5–9.9) | 7.1 (6.2–8.0) | | |  |
| Other, non-Hispanic |  | 3.8 (3.3–4.3) | |  | 4.0 (3.0–4.9) | | 4.1 (3.5–4.8) | 2.5 (1.8–3.1) | | |  |
| Multiracial, non-Hispanic |  | 2.8 (2.4–3.1) | |  | 3.0 (2.3–3.8) | | 2.8 (2.4–3.2) | 1.8 (1.5–2.1) | | |  |
| Hispanic |  | 9.7 (9.0–10.5) | |  | 12.3 (10.8–13.9) | | 8.4 (7.6–9.2) | 6.6 (5.5–7.7) | | |  |
| Unknown |  | 0.6 (0.5–0.7) | |  | 0.6 (0.3–0.8) | | 0.5 (0.4–0.6) | 1.0 (0.8–1.3) | | |  |
| Sex |  |  | |  |  | |  |  | | |  |
| Male |  | 36.3 (35.2–37.4) | |  | 41.0 (38.8–43.2) | | 33.6 (32.4–34.9) | 31.9 (30.4–33.5) | | |  |
| Female |  | 63.7 (62.6–64.8) | |  | 59.0 (56.8–61.2) | | 66.4 (65.1–67.6) | 68.1 (66.5–69.6) | | |  |
| **Asthma-Related Measures** |  |  | |  |  | |  |  | | |  |
| Asthma controlb |  |  | |  |  | |  |  | | |  |
| Well controlled |  | 46.7 (45.6–47.7) | |  | 53.5 (51.3–55.6) | | 42.9 (41.7–44.1) | 39.4 (37.8–41.0) | | |  |
| Not well controlled |  | 27.4 (26.5–28.3) | |  | 28.6 (26.7–30.5) | | 26.6 (25.5–27.6) | 26.7 (25.3–28.1) | | |  |
| Very poorly controlled |  | 25.9 (25.1–26.8) | |  | 17.9 (16.4–19.5) | | 30.5 (29.4–31.7) | 33.9 (32.4–35.4) | | |  |
| Asthma medication usec |  |  | |  |  | |  |  | | |  |
| None |  | 30.9 (28.9–31.9) | |  | 37.5 (35.3–39.6) | | 27.4 (26.3–28.5) | 23.7 (22.3–25.1) | | |  |
| SABA only |  | 25.1 (24.2–26.0) | |  | 30.1 (28.2–32.0) | | 23.0 (22.0–24.0) | 18.0 (16.8–19.2) | | |  |
| ≥1 asthma controller medicationd |  | 43.0 (42.0–44.0) | |  | 31.6 (29.6–33.5) | | 48.5 (47.3–49.7) | 57.3 (55.7–58.9) | | |  |
| Oral corticosteroid onlye |  | 1.0 (0.8–1.2) | |  | 0.9 (0.5–1.2) | | 1.1 (0.8–1.4) | 0.9 (0.5–1.3) | | |  |
| Asthma severity|f |  |  | |  |  | |  |  | | |  |
| Intermittent |  | 53.5 (52.4–54.5) | |  | 60.7 (58.6–62.8) | | 49.4 (48.2–50.7) | 46.1 (44.5–47.8) | | |  |
| Persistent |  | 46.5 (45.4–47.6) | |  | 39.3 (37.2–41.4) | | 50.6 (49.3–51.8) | 53.9 (52.2–55.5) | | |  |
| Asthma-related ED/UCVg |  |  | |  |  | |  |  | | |  |
| None |  | 86.6 (85.9–87.3) | |  | 86.9 (85.5–88.3) | | 85.4 (84.5–86.3) | 89.4 (88.5–90.3) | | |  |
| ≥1 |  | 13.4 (12.7–14.1) | |  | 13.1 (11.7–14.5) | | 14.6 (13.7–15.5) | 10.6 (9.7–11.5) | | |  |
| Asthma-related hospitalizationsh |  |  | |  |  | |  |  | | |  |
| None |  | 96.3 (96.0–96.6) | |  | 98.1 (97.6–98.7) | | 95.3 (94.8–95.8) | 94.3 (93.6–95.0) | | |  |
| ≥1 |  | 3.7 (3.4–4.0) | |  | 1.6 (1.3–2.4) | | 4.7 (4.2–5.2) | 5.7 (5.0–6.4) | | |  |
| Work-related asthmai |  |  | |  |  | |  |  | | |  |
| No |  | 91.0 (90.4–91.5) | |  | 93.7 (92.7–94.7) | | 87.9 (87.1–88.7) | 92.5 (91.8–93.3) | | |  |
| Yes |  | 9.0 (8.5–9.6) | |  | 6.3 (5.3–7.3) | | 12.1 (11.3–12.9) | 7.5 (6.7–8.2) | | |  |
| Total weighted % (95% CI) |  | |  | | 40.5 (39.6–41.6) | 43.9 (42.9–44.9) | | | 15.6 (15.1–16.1) | | |

CI, confidence interval; ED/UCV, emergency department or urgent care center visits; SABA, short-acting β agonist.

a Total study population representative of 16,881,505 adults aged ≥18 years with active asthma in 40 U.S. states, the District of Columbia, and Puerto Rico. Specifically, the study population was representative of 6,834,268 adults aged 18–40 years, 7,418,139 adults aged 41–64 years, and 2,629,097 adults aged ≥65 years with active asthma.

b Based on day symptoms, night symptoms, and SABA use in the past three months. More information on defining asthma control using ACBS data is available in Zahran HS, et al, “Assessing asthma control and associated risk factors among persons with current asthma - findings from the child and adult Asthma Call-back Survey,” *J Asthma,* 2014.13

c In the past 3 months.

d Defined as inhaled corticosteroids, long-acting β agonists, leukotriene modifiers, methylxanthines, cromolyn, nedocromil, or immunomodulators.

e Without SABA or asthma controller medication.

f Asthma severity not classified for 250 observations because of incomplete information. Asthma severity was measured according to previously published methods consistent with the 2007 National Asthma Education and Prevention Program Guidelines for the Diagnosis and Management of Asthma. Briefly, older adults whose asthma was well controlled without asthma controller medication use in the past three months were categorized as having intermittent asthma. Persistent asthma included all older adults reported to use asthma controller medication (regardless of asthma control status) and those not reported to use asthma controller medication but classified with uncontrolled asthma. More information on defining asthma severity using ACBS data is available in Zahran HS, et al, “Assessing asthma severity among children and adults with current asthma,” *J Asthma,* 2014.13

g In the past 12 months.

h Ever told by a doctor or other health professional that respondent’s asthma was related to any job he or she ever had.

**Table E2.** Supplementary Definitions for the Methods Section

|  |  |
| --- | --- |
| **Terminology** | **Definition** |
| **Asthma control** |  |
| Well controlled | daytime asthma symptoms ≤2 times per weeka  *and* night-time asthma symptoms ≤2 times per montha  *and* SABA ≤2 times per weekb |
| Not well controlled | daytime asthma symptoms >2 times per week (including daily) but not “all the time”a  *or* night-time asthma symptoms 3–12 times per montha  *or* SABA >2 times per week but < 2 times per dayb |
| Very poorly controlled | daytime asthma symptoms “all the time”a  *or* night-time asthma symptoms ≥13 times per montha  *or* SABA ≥2 times per dayb |
| **Statistical analysis** |  |
| Weighting | Weighting of data is a statistical process that attempts to remove bias in a study sample. For more information, please see the BRFSS Data User Guide (https://www.cdc.gov/brfss/data\_documentation/pdf/userguidejune2013.pdf) and the 2006–2010 BRFSS Asthma Call-Back Survey History and Analysis Guidance (http://www.cdc.gov/brfss/acbs/history/ACBS\_06\_10.pdf). |

BRFSS, Behavioral Risk Factor Surveillance Survey; SABA, short-acting β agonist use (other than for preventing exercise-induced bronchospasm).

a In the past 30 days.

b In the past 3 months.

**Table E3.** Population Attributable Fractionsa for Risk Factors Significantly Associated with Urgent Asthma-Related Health Care Utilization Among Older Adults (Aged ≥65 Years) with Active Asthma: Behavioral Risk Factor Surveillance System Asthma Call-Back Survey, 2006–2010

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | **Population Attributable Fraction (95% CI)** | | | | | | | | | |
| **Variable** | | **Older Adults with**  **Asthma-Related Hospitalizations**b | | | | | **Older Adults with**  **Asthma-Related ED/UCV**b | | | | |
|  | |  | |  | | |  | | |  | |
| **Clinical comorbidities** | | |  |  |  |  | |  |  | |  |
| Chronic obstructive pulmonary diseasec |  | | 0.63 | (0.50–0.73) | |  | | 0.41 | (0.31–0.50) | | |
| Coronary artery diseased |  | | 0.18 | (0.10–0.27) | |  | | 0.12 | (0.06–0.19) | | |
| Depressione |  | | 0.10 | (0.02–0.19) | |  | | 0.10 | (0.04–0.17) | | |
| Diabetesf |  | | 0.09 | (0.01–0.18) | |  | | 0.06 | (0.01–0.12) | | |
| Obesityg |  | | OR | NSa | |  | | OR | NSa | | |
|  |  | |  |  |  |  | |  |  | |  |
| **Cost as a barrier to asthma-related health care** | | | |  |  |  | |  |  | |  | |
| Unable to see primary care doctor |  | | 0.08 | (0.03–0.14) | |  | | 0.04 | (0.01–0.07) | | |
| Unable to see specialist |  | | 0.08 | (0.03–0.15) | |  | | 0.04 | (0.02–0.08) | | |
| Unable to buy medication |  | | 0.14 | (0.08–0.21) | |  | | 0.07 | (0.04–0.12) | | |
|  |  | |  |  |  |  | |  |  | |  |
| **Home environment** |  | |  |  |  |  | |  |  | |  |
| Secondhand smokeh |  | | OR | NSa | |  | | OR | NSa | | |
| Pets in bedroom |  | | OR | NSa | |  | | OR | NSa | | |
| Cockroaches seeni |  | | 0.06 | (0.01–0.11) | |  | | OR | NSa | | |
| Mice or rats seeni |  | | OR | NSa | |  | | OR | NSa | | |
| Mold seen or smelledi |  | | 0.04 | (0.01–0.09) | |  | | 0.04 | (0.01–0.07) | | |

CI, confidence interval; ED/UCV, emergency department or urgent care center visits; OR NS, adjusted odds ratio not significant in the main analysis (Tables II and III).

a Population attributable fractions only displayed for factors found to be significantly associated with asthma-related hospitalizations, emergency department or urgent care center visits in the main analysis (Tables II and III).

b In the past 12 months.

c Ever told by a doctor or other health professional that he or she had chronic obstructive pulmonary disease (COPD), emphysema, or chronic bronchitis.

d Ever told by a doctor, nurse, or other health professional that he or she had a heart attack, myocardial infarction, angina, or coronary heart disease.

e Ever told by a doctor or other health professional that he or she was depressed.

f Ever told that he or she had diabetes (not including gestational diabetes, prediabetes, or borderline diabetes).

g Body mass index ≥30 kg/m2.

h In the past week.

i In the past 30 days.

**Table E4.** Relationships Between Urgent Asthma-Related Health Care Utilization and Clinical, Financial, or Environmental Factors Among Older Adults (Aged ≥65 Years) with Active Asthma, by Chronic Obstructive Pulmonary Disease Status: Behavioral Risk Factor Surveillance System Asthma Call-Back Survey, 2006–2010

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | **Adjusted Odds Ratios**a **(95% CI)** | | | | | | | | | |
|  | | **Asthma-Related Hospitalizations**b,c | | | | | **Asthma-Related ED/UCV**b,d | | | | |
| **Variable** | | **No COPD**  (n=7,725e) | | **+COPD**  (n=6,351e) | | | **No COPD**  (n=7,725e) | | | **+COPD**  (n=6,351e) | |
| **Clinical comorbidities** | | |  |  |  |  | |  |  | |  |
| Coronary artery diseasef | 1.17 | | (0.61–2.25) | 1.72 | (1.28–2.30) | 1.09 | | (0.70–1.68) | 1.49 | | (1.16–1.90) |
| Depressiong | 1.80 | | (0.81–3.98) | 1.22 | (0.90–1.65) | 1.40 | | (0.90–2.19) | 1.31 | | (1.03–1.67) |
| Diabetesh | 1.21 | | (0.56–2.64) | 1.35 | (0.97–1.87) | 1.22 | | (0.82–1.83) | 1.22 | | (0.94–1.57) |
| Obesityi | 1.32 | | (0.64–2.74) | 0.95 | (0.70–1.28) | 1.60 | | (1.09–2.35) | 0.97 | | (0.76–1.24) |
|  |  | |  |  |  |  | |  |  | |  |
| **Cost as a barrier to asthma-related health care** | | | |  |  |  | |  |  | |  | |
| Unable to see primary care doctor | 5.25 | | (1.80–15.37) | 2.46 | (1.41–4.29) | 1.88 | | (0.78–4.54) | 1.75 | | (1.15–2.66) |
| Unable to see specialist | 6.65 | | (2.00–22.17) | 2.93 | (1.53–5.64) | 1.52 | | (0.52–4.40) | 2.38 | | (1.44–3.93) |
| Unable to buy medication | 3.51 | | (1.55–7.91) | 2.44 | (1.64–3.63) | 1.63 | | (0.91–2.93) | 1.83 | | (1.34–2.49) |
|  |  | |  |  |  |  | |  |  | |  |
| **Home environment** |  | |  |  |  |  | |  |  | |  |
| Secondhand smokej | 1.86 | | (0.67–5.14) | 1.05 | (0.56–1.83) | 1.00 | | (0.51–1.97) | 1.01 | | (0.68–1.50) |
| Pets in bedroom | 0.40 | | (0.17–0.90) | 0.93 | (0.67–1.28) | 0.74 | | (0.48–1.12) | 0.97 | | (0.75–1.25) |
| Cockroaches seenk | 2.72 | | (0.98–7.57) | 1.38 | (0.92–2.07) | 1.50 | | (0.80–2.78) | 1.07 | | (0.76–1.50) |
| Mice or rats seenk | 0.54 | | (0.09–3.32) | 1.20 | (0.65–2.23) | 0.78 | | (0.32–1.87) | 1.34 | | (0.85–2.14) |
| Mold seen or smelledk | 2.74 | | (0.99–7.55) | 1.44 | (0.92–2.26) | 2.29 | | (1.33–3.94) | 1.32 | | (0.90–1.94) |

CI, confidence interval; COPD, chronic obstructive pulmonary disease; ED/UCV, emergency department or urgent care center visits.

a Adjusted for sex, race/ethnicity, annual householdincome, smoking history, and asthma severity.

b In the past 12 months.

c Reference is older adults with no asthma-related hospitalizations in the past 12 months.

d Reference is older adults with no asthma-related ED/UCV in the past 12 months.

e Unweighted. Total study population representative of 2,629,097 adults (1,439,897 without COPD and 1,189,200 with COPD) aged ≥65 years with active asthma in 40 U.S. states, the District of Columbia, and Puerto Rico.

f Ever told by a doctor, nurse, or other health professional that he or she had a heart attack, myocardial infarction, angina, or coronary heart disease.

g Ever told by a doctor or other health professional that he or she was depressed.

h Ever told that he or she had diabetes (not including gestational diabetes, prediabetes, or borderline diabetes).

i Body mass index ≥30 kg/m2.

j In the past week.

k In the past 30 days.

**Table E5.** Relationships Between Urgent Asthma-Related Health Care Utilization and Clinical, Financial, or Environmental Factors Among Older Adults (Aged ≥65 Years) with Active Asthma (Modified Definitiona): Behavioral Risk Factor Surveillance System Asthma Call-Back Survey, 2006–2010

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | | **Adjusted Odds Ratios**b **(95% CI)** | | | |
| **Variable** | | **Hospitalizations**c | | **ED/UCV**d | |
| **Clinical comorbidities** | | |  |  |  | |
| Chronic obstructive pulmonary diseasee | 4.62 | | (2.99–7.12) | 2.10 | (1.64–2.69) | |
| Coronary artery diseasef | 1.91 | | (1.44–2.54) | 1.47 | (1.18–1.85) | |
| Depressiong | 1.43 | | (1.05–1.95) | 1.40 | (1.11–1.76) | |
| Diabetesh | 1.37 | | (0.98–1.89) | 1.18 | (0.93–1.50) | |
| Obesityi | 0.90 | | (0.67–1.21) | 1.03 | (0.83–1.28) | |
|  |  | |  |  |  | |
| **Cost as a barrier to asthma-related health care** | | |  |  |  | |
| Unable to see primary care doctor | 3.31 | | (1.90–5.79) | 2.26 | (1.49–3.43) | |
| Unable to see specialist | 3.50 | | (1.78–6.86) | 2.64 | (1.59–4.37) | |
| Unable to buy medication | 2.30 | | (1.54–3.44) | 1.77 | (1.31–2.38) | |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Home environment** |  |  |  |  |
| Secondhand smokej | 1.29 | (0.75–2.20) | 1.07 | (0.74–1.55) |
| Pets in bedroom | 0.82 | (0.59–1.12) | 0.93 | (0.73–1.17) |
| Cockroaches seenk | 1.60 | (1.07–2.40) | 1.19 | (0.86–1.64) |
| Mice or rats seenk | 1.33 | (0.72–2.46) | 1.38 | (0.90–2.12) |
| Mold seen or smelledk | 1.42 | (0.91–2.21) | 1.40 | (0.99–1.97) |

CI, confidence interval; ED/UCV, emergency department or urgent care center visits.

a Classified survey participants with active asthma if they reported taking asthma medication in the past 3 months (the established definition of active asthma uses a 12-month time frame15-17), experienced asthma symptoms in the past 12 months, or talked to a doctor or other health professional about his or her asthma in the past 12 months.

b Adjusted for sex, race/ethnicity, annual householdincome, smoking history, and asthma severity.

c Asthma-related hospitalizations the past 12 months. Reference is older adults with no asthma-related hospitalizations in the past 12 months.

d Asthma-related ED/UCV the past 12 months. Reference is older adults with no asthma-related ED/UCV in the past 12 months.

e Ever told by a doctor or other health professional that he or she had chronic obstructive pulmonary disease (COPD), emphysema, or chronic bronchitis.

f Ever told by a doctor, nurse, or other health professional that he or she had a heart attack, myocardial infarction, angina, or coronary heart disease.

g Ever told by a doctor or other health professional that he or she was depressed.

h Ever told that he or she had diabetes (not including gestational diabetes, prediabetes, or borderline diabetes).

i Body mass index ≥30 kg/m2.

j In the past week.

k In the past 30 days.

**Table E6.** Demographics and Asthma-Related Measures Among Older Adults (Aged ≥65 Years) with Active Asthma by Sex: Behavioral Risk Factor Surveillance System Asthma Call-Back Survey, 2006–2010

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | | | | **Sex** | | | | | |  | |
| **Characteristic** | **All**  (N = 14,076)  n (weighted %; 95% CI) | | | | **Male**  (n = 3,782) | | **Female**  (n = 10,294) | | | | ***P*** | |
|  | n (weighted %; 95% CI) | | n (weighted %; 95% CI) | | | |  | |
| **Demographics** |  |  | | |  |  | |  |  | | |  |
| Household income, annual |  |  | | |  |  | |  |  | | | <.0001 |
| <$15,000 | 2,368 | (14.5; 13.3–15.6) | | | 391 | (10.6; 8.3–12.9) | | 1,977 | (16.3; 14.9–17.7) | | |  |
| $15,000–$24,999 | 3,364 | (21.8; 20.5–23.1) | | | 774 | (18.0; 15.7–20.2) | | 2,590 | (23.6; 22.0–25.2) | | |  |
| $25,000–$49,999 | 3,836 | (27.0; 25.6–28.3) | | | 1,192 | (28.6; 26.0–31.2) | | 2,644 | (26.2; 24.6–27.8) | | |  |
| $50,000–$74,999 | 1,290 | (10.9; 9.9–11.9) | | | 532 | (15.3; 13.2–17.4) | | 758 | (8.8; 7.7–9.9) | | |  |
| >$75,000 | 1,244 | (11.8; 10.6–12.9) | | | 560 | (19.1; 16.3–21.8) | | 684 | (8.3; 7.3–9.4) | | |  |
| Unknown | 1,974 | (14.1; 13.1–15.2) | | | 333 | (8.4; 7.0–9.9) | | 1,641 | (16.8; 15.5–18.2) | | |  |
| Race/ethnicity |  |  | | |  |  | |  |  | | | .009 |
| White, non-Hispanic | 12,031 | (81.0; 79.5–82.4) | | | 3,309 | (83.6; 80.9–86.3) | | 8,722 | (79.8; 78.2–81.5) | | |  |
| Black, non-Hispanic | 683 | (7.1; 6.2–8.0) | | | 127 | (4.7; 3.4–6.0) | | 556 | (8.3; 7.1–9.4) | | |  |
| Other, non-Hispanic | 347 | (2.5; 1.8–3.1) | | | 102 | (2.8; 1.8–3.8) | | 245 | (2.3; 1.4–3.1) | | |  |
| Multiracial, non-Hispanic | 363 | (1.8; 1.5–2.1) | | | 94 | (1.6; 1.1–2.2) | | 269 | (1.9; 1.5–2.3) | | |  |
| Hispanic | 501 | (6.6; 5.5–7.7) | | | 110 | (6.6; 4.3–9.0) | | 391 | (6.6; 5.3–7.8) | | |  |
| Unknown | 151 | (1.0; 0.8–1.3) | | | --a | --a | | 111 | (1.2; 0.8–1.6) | | |  |
| **Clinical** |  |  | | |  |  | |  |  | | |  |
| Asthma controlb |  |  | | |  |  | |  |  | | | .01 |
| Well controlled | 5,440 | (39.4; 37.8–41.0) | | | 1,454 | (40.2; 37.2–43.2) | | 3,986 | (39.0; 37.2–40.9) | | |  |
| Not well controlled | 3,852 | (26.7; 25.3–28.1) | | | 957 | (23.5; 21.0–26.0) | | 2,895 | (28.2; 26.5–29.8) | | |  |
| Very poorly controlled | 4,784 | (33.9; 32.4–35.4) | | | 1,371 | (36.3; 33.3–39.3) | | 3,413 | (32.8; 31.1–34.5) | | |  |
| Asthma medication usec |  |  | | |  |  | |  |  | | | 0.11 |
| None | 3,319 | (23.7; 22.3–25.1) | | | 900 | (21.4; 18.9–23.8) | | 2,419 | (24.8; 23.1–26.5) | | |  |
| SABA only | 2,474 | (18.0; 16.8–19.2) | | | 676 | (19.9; 17.3–22.5) | | 1,798 | (17.1; 15.8–18.4) | | |  |
| ≥1 asthma controller medicationd | 8,171 | (57.3; 55.7–58.9) | | | 2,179 | (57.6; 54.5–60.6) | | 5,992 | (57.2; 54.5–60.6) | | |  |
| Oral corticosteroid onlye | 112 | (0.9; 0.5–1.3) | | | --a | --a | | 85 | (0.8; 0.5–1.2) | | |  |
| Asthma severityf |  |  | | |  |  | |  |  | | | .61 |
| Intermittent | 6,300 | (46.1; 44.5–47.8) | | | 1,658 | (45.5; 42.4–48.6) | | 4,642 | (46.4; 44.6–48.3) | | |  |
| Persistent | 7,655 | (53.9; 52.2–55.5) | | | 2,085 | (54.5; 51.4–57.6) | | 5,570 | (53.6; 51.7–55.4) | | |  |
| Smoked ≥100 cigarettes ever |  |  | | |  |  | |  |  | | | <.0001 |
| Yes | 8,163 | (58.2; 56.6–59.8) | | | 2,719 | (69.6; 66.6–72.7) | | 5,444 | (52.8; 50.9–54.7) | | |  |
| No | 5,913 | (41.8; 40.2–43.4) | | | 1,063 | (30.4; 27.3–33.4) | | 4,850 | (47.2; 45.3–49.1) | | |  |
| Total | 14,076 | | g | 3,782 | | (94.3; 93.6–95.0) | | 10,294 | | (5.7; 5.0–6.4) | | |

CI, confidence interval; SABA, short-acting β agonist.

a Results based on <50 unweighted respondents or for which the relative standard error was >0.3 were suppressed.

b Based on day symptoms, night symptoms, and SABA use in the past three months. More information on defining asthma control using ACBS data is available in Zahran HS, et al, “Assessing asthma control and associated risk factors among persons with current asthma - findings from the child and adult Asthma Call-back Survey,” *J Asthma,* 2014.13

c In the past 3 months.

d Defined as inhaled corticosteroids, long-acting β agonists, leukotriene modifiers, methylxanthines, cromolyn, nedocromil, or immunomodulators.

e Without SABA or asthma controller medication.

f Asthma severity not classified for 121 observations because of incomplete information. Asthma severity was measured according to previously published methods consistent with the 2007 National Asthma Education and Prevention Program Guidelines for the Diagnosis and Management of Asthma. Briefly, older adults whose asthma was well controlled without asthma controller medication use in the past three months were categorized as having intermittent asthma. Persistent asthma included all older adults reported to use asthma controller medication (regardless of asthma control status) and those not reported to use asthma controller medication but classified with uncontrolled asthma. More information on defining asthma severity using ACBS data is available in Zahran HS, et al, “Assessing asthma severity among children and adults with current asthma,” *J Asthma,* 2014.13

g Total study population representative of 2,629,097 adults aged ≥65 years with active asthma in 40 U.S. states, the District of Columbia, and Puerto Rico.

**Table E7.** Clinical, Financial, and Environmental Factors Associated with Female Sex Among Older Adults (Aged ≥65 Years) with Active Asthma: Behavioral Risk Factor Surveillance System Asthma Call-Back Survey, 2006–2010

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | **Sex** | | | | |  | | |
| **Variable** | | **Male**  (n = 3,782)  weighted %  (95% CI) | | **Female**  (n = 10,294)  weighted %  (95% CI) | | | **Odds**  **Ratio**a  (95% CI) | | |
| **Clinical comorbidities** | | |  | |  |  | |  |  |
| Chronic obstructive pulmonary diseaseb | 50.5 | | (47.4–53.5) | | 56.8 | (54.9–58.6) | | 1.54 | (1.32–1.79) |
| Coronary artery diseasec | 32.5 | | (29.5–35.5) | | 22.9 | (21.3–24.4) | | 0.63 | (0.53–0.74) |
| Depressiond | 20.1 | | (17.7–22.5) | | 30.6 | (28.8–32.3) | | 1.83 | (1.54–2.18) |
| Diabetese | 24.4 | | (21.9–26.8) | | 23.8 | (22.2–25.5) | | 0.96 | (0.81–1.14) |
| Obesityf | 27.1 | | (24.6–29.6) | | 36.8 | (35.0–38.6) | | 1.53 | (1.32–1.79) |
|  |  | |  | |  |  | |  |  |
| **Cost as a barrier to asthma-related health care** | | |  | |  |  | |  |  |
| Unable to see primary care doctor | 3.5 | | (2.5–4.5) | | 3.8 | (3.9–5.6) | | 1.41 | (1.01–1.98) |
| Unable to see specialist | 2.0 | | (1.2–2.8) | | 3.0 | (2.3–3.8) | | 1.61 | (0.99–2.61) |
| Unable to buy medication | 6.7 | | (5.1–8.3) | | 9.5 | (8.5–10.6) | | 1.54 | (1.16–2.05) |
|  |  | |  | |  |  | |  |  |
| **Home environment** |  | |  | |  |  | |  |  |
| Secondhand smokeg | 10.2 | | (8.3–12.1) | | 9.7 | (8.5–10.8) | | 1.15 | (0.90–1.47) |
| Pets in bedroom | 29.1 | | (26.3–31.9) | | 29.4 | (27.7–31.0) | | 1.10 | (0.94–1.30) |
| Cockroaches seenh | 7.6 | | (6.2–9.0) | | 9.3 | (8.2–10.4) | | 1.21 | (0.95–1.55) |
| Mice or rats seenh | 4.9 | | (3.8–5.9) | | 4.7 | (3.9–5.5) | | 0.97 | (0.73–1.29) |
| Mold seen or smelledh | 9.4 | | (8.4–10.5) | | 12.3 | (11.6–13.0) | | 1.29 | (0.92–1.80) |

CI, confidence interval.

a Adjusted for race/ethnicity, annual householdincome, smoking history, and asthma severity. Reference is male older adults.

b Ever told by a doctor or other health professional that he or she had chronic obstructive pulmonary disease (COPD), emphysema, or chronic bronchitis.

c Ever told by a doctor, nurse, or other health professional that he or she had a heart attack, myocardial infarction, angina, or coronary heart disease.

d Ever told by a doctor or other health professional that he or she was depressed.

e Ever told that he or she had diabetes (not including gestational diabetes, prediabetes, or borderline diabetes).

f Body mass index ≥30 kg/m2.

g In the past week.

h In the past 30 days.