



USAsthma
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California Breathing and Asthma Management Academy (AsMA) Model

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The State of Asthma in California and the Asthma Management Academy

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California Breathing

California Department of Public Health's (CDPH) California Breathing Unit focuses on asthma surveillance and developing interventions that improve asthma self-management and environmental conditions that cause or worsen asthma in the most impacted communities.



Presentation Objectives

- 1) Discuss the burden of asthma in California
- 2) Introduce the Asthma Management Academy
- 3) Demonstrate the impact of the Asthma Management Academy

The State of Asthma in California

Asthma in California

How many people in California have asthma?



5.7 Million People

Asthma in California (continued)

Every year, asthma causes:



94,000
9,700

Emergency
Department Visits
Hospitalizations



351 Deaths



1 in 5 children with
asthma to miss school



1 in 9 adults with
asthma to miss work

Asthma in California (continued)

Asthma costs  **13 Billion** per year including:



medical expenses



premature deaths



missed school days



missed work days



Data Sources: California Health Interview Survey (2021); California Department of Health Care Access and Information (2021); California Department of Public Health Vital Records (2021); Nurmagambetov, Kuwahara, Garbe (2018) *Annals of the American Thoracic Society* 15: 348-356; Barnett, Nurmagambetov (2011) *Journal of Allergy and Clinical Immunology* 127: 145-152

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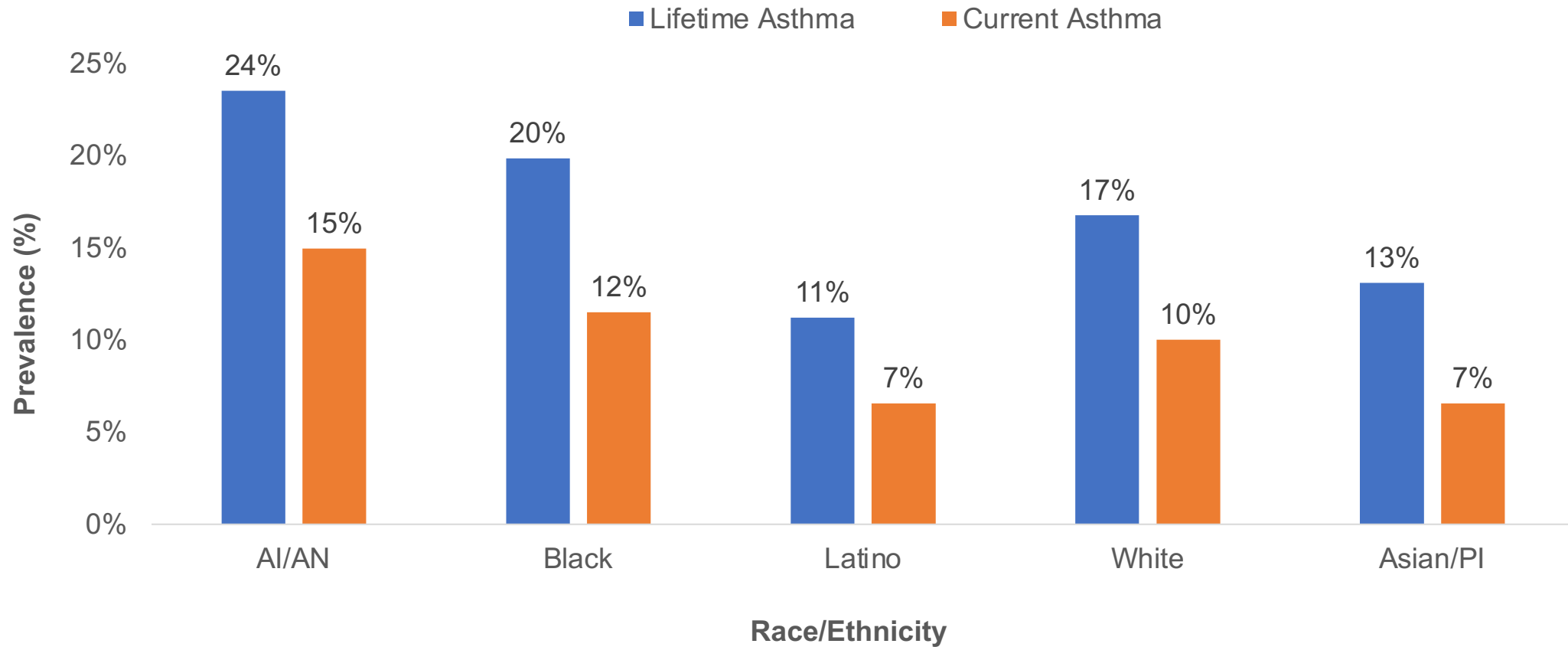
Contact us at California.Breathing@cdph.ca.gov



Asthma Inequities

Lifetime and Current Asthma Prevalence by Race/Ethnicity

All ages



Data source: CHIS, 2021

Abbreviations: AI/AN = American Indian or Alaskan Native

PI = Pacific Islander

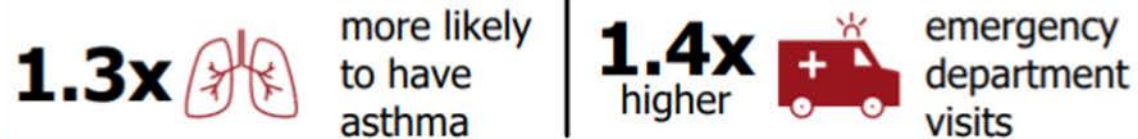
Asthma Racial Inequities in California

Compared to White Californians:

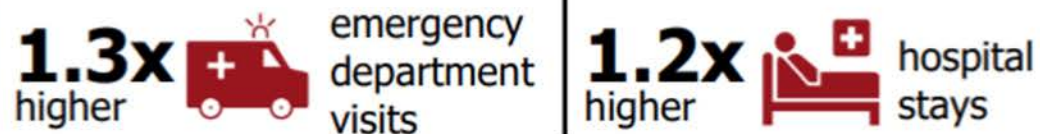
- **Black Californians** are more likely to suffer from severe asthma and die from asthma



- **American Indian and Alaskan Native Californians** are more likely to have asthma and suffer from severe asthma



- **Hispanic or Latino Californians** are less likely to have asthma than White Californians, but are more likely to suffer from severe asthma



Asthma Inequities in California Children

Compared to adults, children (0-17 years old) are more likely to have severe asthma

2x
higher



emergency
department
visits

3x
higher



hospital
stays

Compared to White children:

- Black children** are more likely to have asthma and suffer from severe asthma

2x



more likely to
have asthma

6x
higher



emergency
department
visits

5x
higher



hospital
stays

- Hispanic or Latino children** are more likely to have asthma and suffer from severe asthma

2x



more likely to
have asthma

2x
higher



emergency
department
visits

1.4x
higher



hospital
stays

California Breathing Focus Areas

- Racial/ethnic groups with documented asthma disparities
- Children
- Areas of California with high asthma burden



The logo for the Asthma Management Academy (ASMA) features the letters 'ASMA' in a white, serif font. The letter 'A' is stylized with four colorful triangles (orange, green, blue, and red) pointing towards its center. The letters 'S', 'M', and 'A' are plain white.

Asthma
Management
Academy

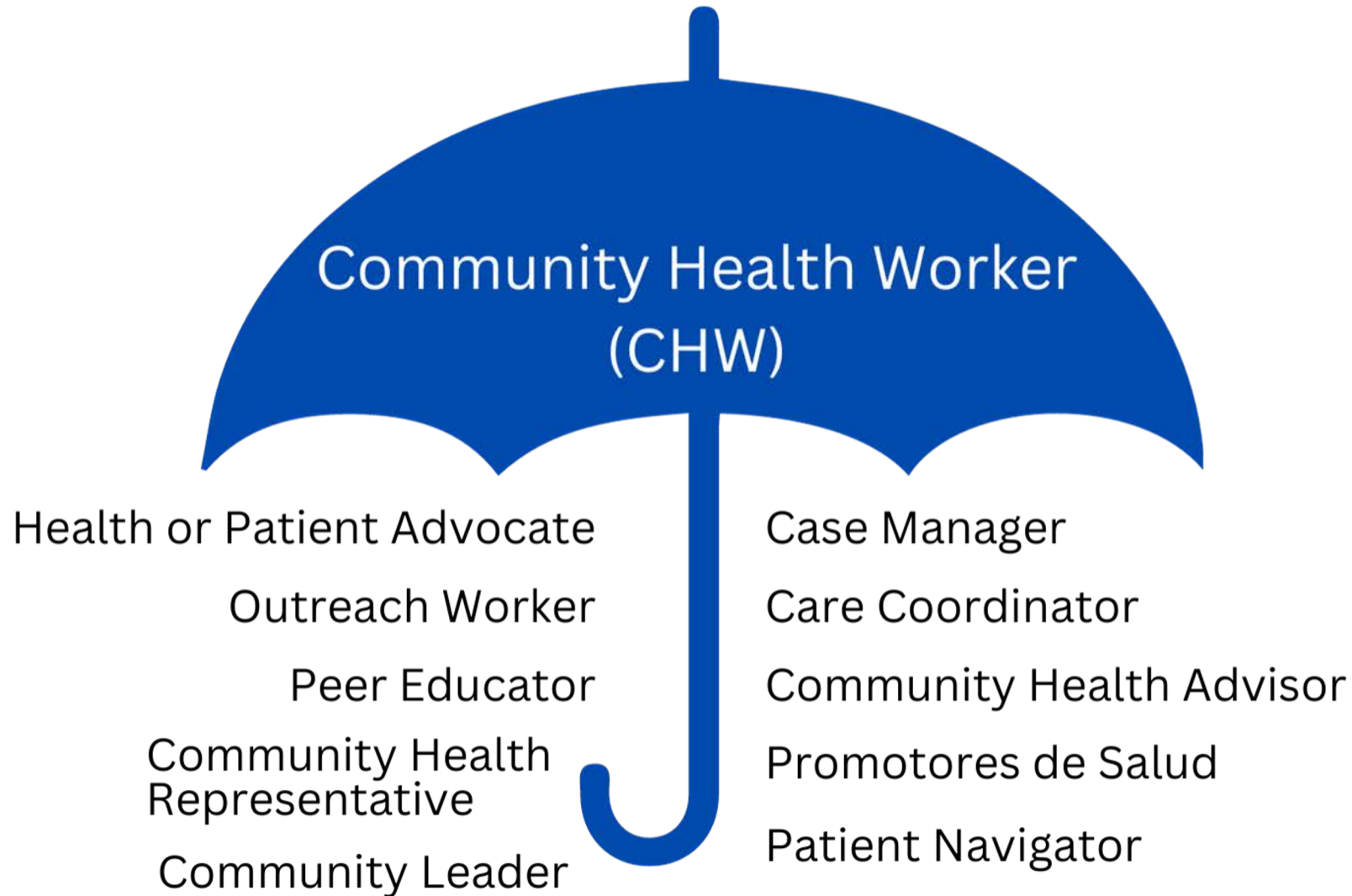
Asthma Management Academy

Community Health Worker (CHW) Focus



Community Health Workers (CHWs) are trusted members of the community that leverage shared experiences and linguistic and cultural relationships to bridge their community and health services.

Who are CHWs?



CHWs and Asthma Care

Families that receive asthma self-management education from CHWs experience improved health outcomes including:

- Reduced health care visits and costs
- Better medication adherence
- Reduced missed work or school days
- Increased confidence to self-manage asthma
- Ability to identify and reduce asthma triggers



What is the Asthma Management Academy (AsMA)?



CHWs receive training on:

- How to deliver evidence-based asthma self-management (AS-ME) education
- How to conduct an in-home trigger assessment
- Best practices for asthma home visiting

Goals of the AsMA

- Reduce the asthma burden in the most impacted communities in California
- Provide culturally and linguistically appropriate professional development for CHWs



Photo source: CDPH, Environmental Health Investigations Branch

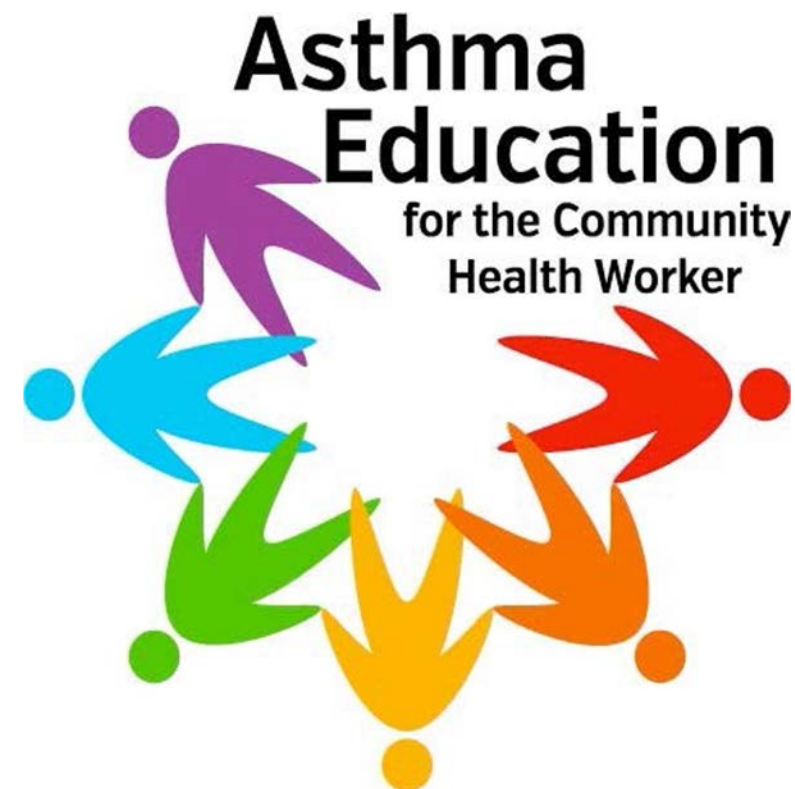
AsMA Training Details

Training Partners



AsMA Curriculum

- Association of Asthma Educators' (AAE) *Asthma Education for the CHW* curriculum
- Co-facilitated by a CHW and certified asthma educator (AE-C)
- Interactive and participatory modules
- Skill-based testing



AsMA Modules

- **AAE Module 1:** The basics of asthma
- **AAE Module 2:** Trigger identification and reduction
- **AAE Module 3:** Medications
- **AAE Module 4:** Medication delivery devices
- **AAE Module 5:** Assessment and monitoring
- **CDPH Module:** In-home asthma trigger assessment
- **CDPH Module:** Best practices for asthma home visiting

AsMA Training Logistics

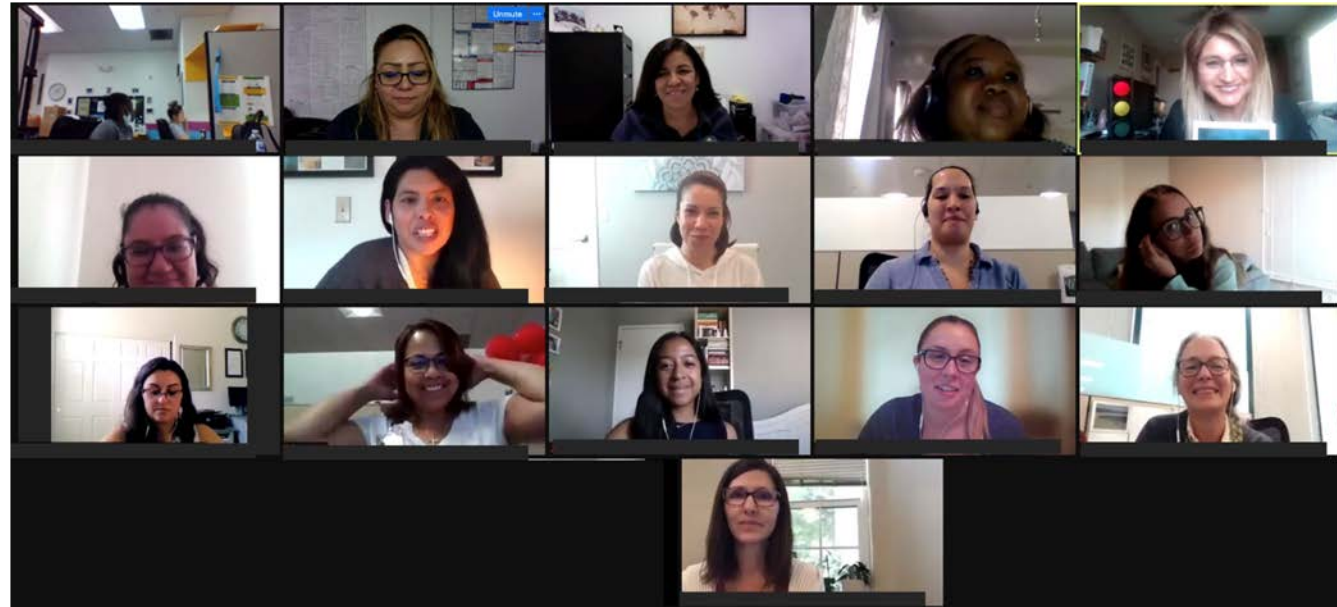
- ~18-20-hours of training
- virtual training or in-person
- Available in English or Spanish
- 10 participants per AsMA



Highly Interactive Training



In-person trainings



Virtual trainings via Zoom

Teach-back Method

The teach-back method is a way of checking understanding by asking clients to state in their own words what they need to know or do about their health.



Certificates of Completion

- Certificate of Completion from CDPH California Breathing
- Certificate of Completion from AAE
 - Pass with 80% or higher
 - Scenario-based competency test
 - Not a certification exam



San Bernardino County, 2018

Impact of the AsMA

AsMA Partner Organizations and Participants



The AsMA has trained **634** CHWs from **91** organizations including:



Federally Qualified Health Centers



Community-Based Organizations



Managed Care Plans



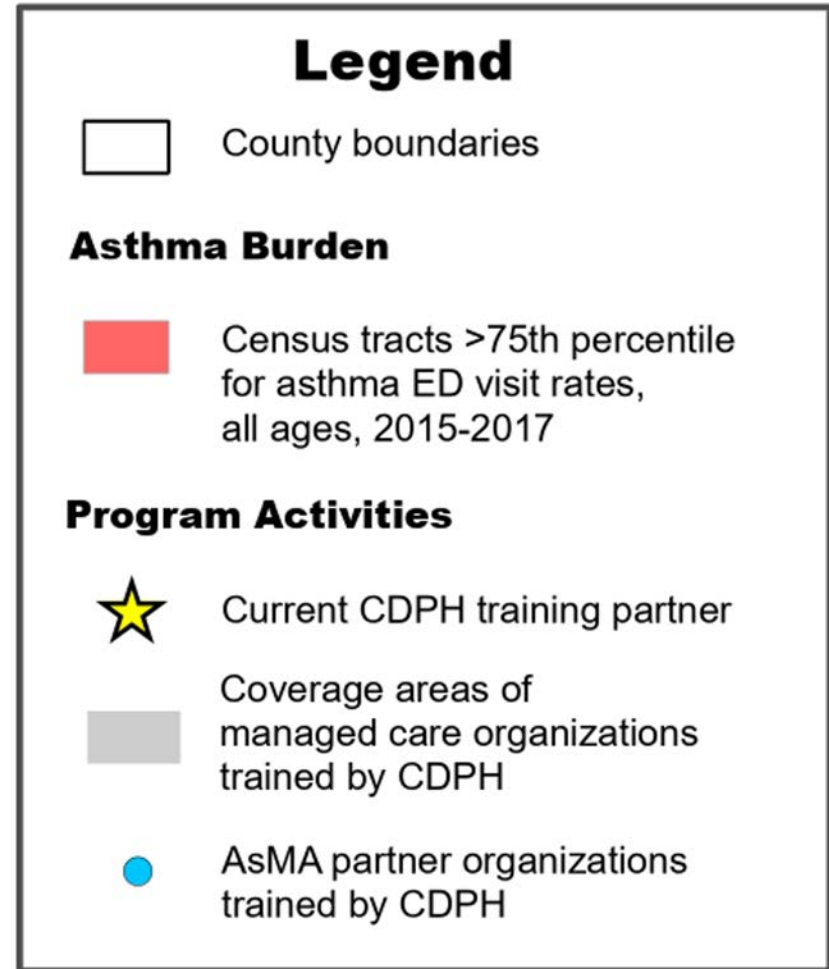
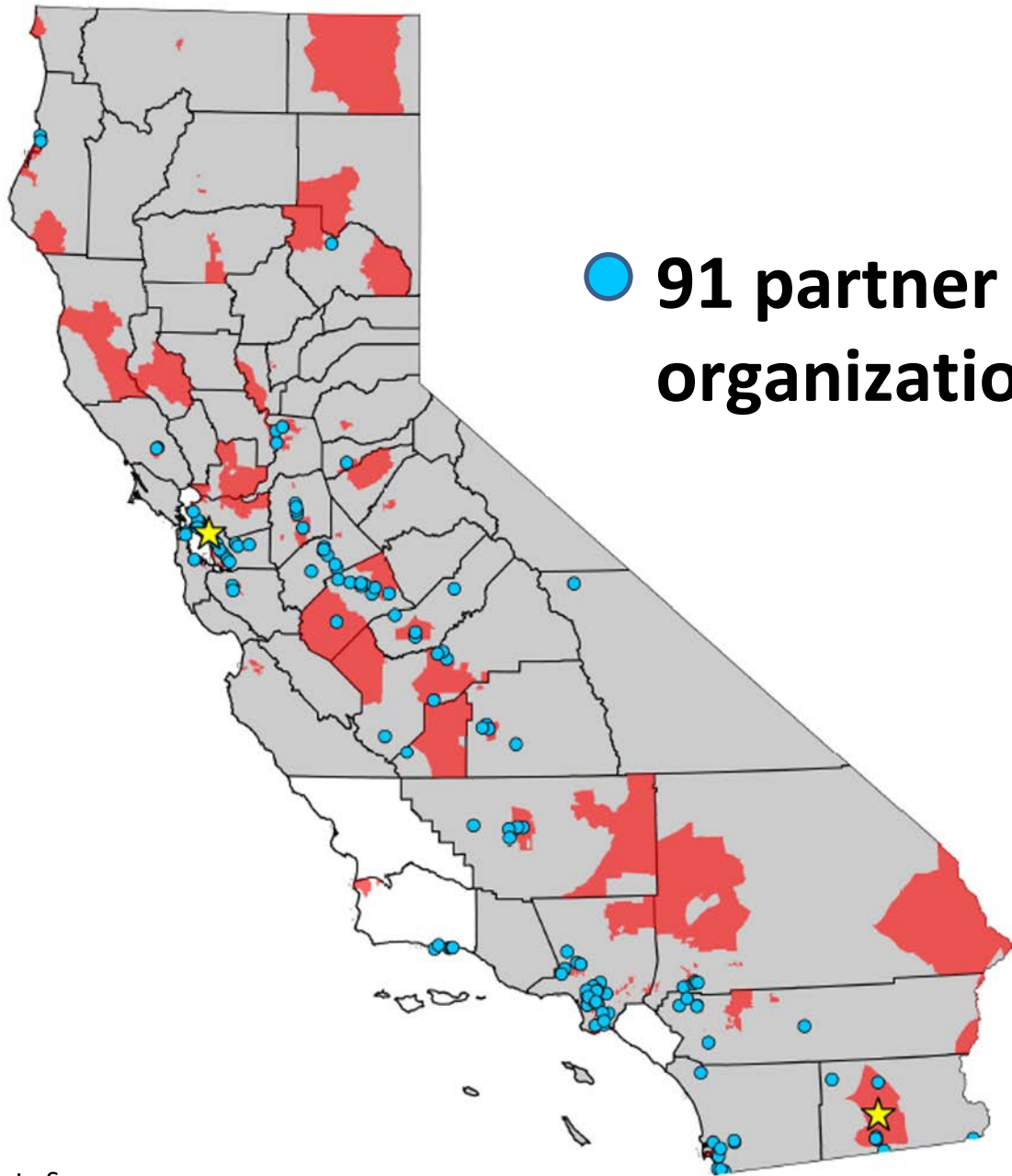
Local Health Departments



Hospitals

Asthma Burden and AsMA Activities

● 91 partner organizations



Data Sources:
Office of Environmental Health Hazard Assessment (census tracts >75th pctl for asthma ED visits)
California Department of Health Care Services (health plan coverage areas)

AsMA Data Collection

AsMA participants CHW Knowledge and Skills

Knowledge-based questions

- Pre and Post-tests
- Post-test quizzes after Modules

Skill-based metrics

- Teach-back rubrics
- Competency test (Scenario-based)

Client Asthma Outcomes Client data from AsMA partners

Emergency Department (ED) Visits & Hospitalizations

Improved asthma control

- Asthma Control Test (ACT)
- Self-reported improvement

Missed work or school days

CHW Knowledge and Skills

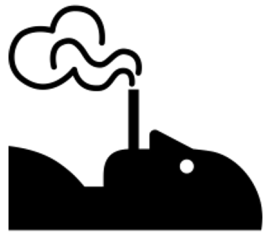
AsMA participants increased their asthma knowledge and skills. On average, participants scored

98%

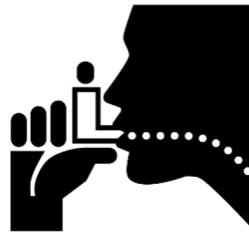
on a competency test covering:



The scope of asthma



Asthma triggers, such as mold, pests, and smoking



Asthma medications and teaching proper use of asthma medication delivery devices



Using asthma assessment and monitoring tools, such as the ACT, AAP



Impact on Individuals with Asthma



Among individuals with poorly controlled asthma who completed **at least one asthma education session** taught by AsMA-trained CHWs:



83%

had **reduced** emergency department visits and hospitalizations



70%

had **fewer** missed work or school days



70%

had **improved** asthma control

Summary Slide

- Asthma continues to be a health concern in California, especially for Black Californians.
- The AsMA is a peer-lead training for CHWs where they learn how to deliver evidence-based asthma education.
- Asthma education delivered by AsMA-trained CHWs improved asthma outcomes in patients with poorly controlled asthma.

Acknowledgements

**Thank you to all who make the
Asthma Management Academy possible!**

- AsMA Facilitators
 - Comite Civico del Valle
 - Roots Community Health Center
 - Certified Asthma Educators
- AsMA Participants and Partner Organizations
- Association of Asthma Educators
- Centers for Disease Control and Prevention



Contact Information

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510-620-3624

California Breathing Asthma Surveillance

Data sources:



california
health
interview
survey



- Prevalence
- Missed work and school days
- Management practices



- Emergency Department Visits
- Hospital Discharges

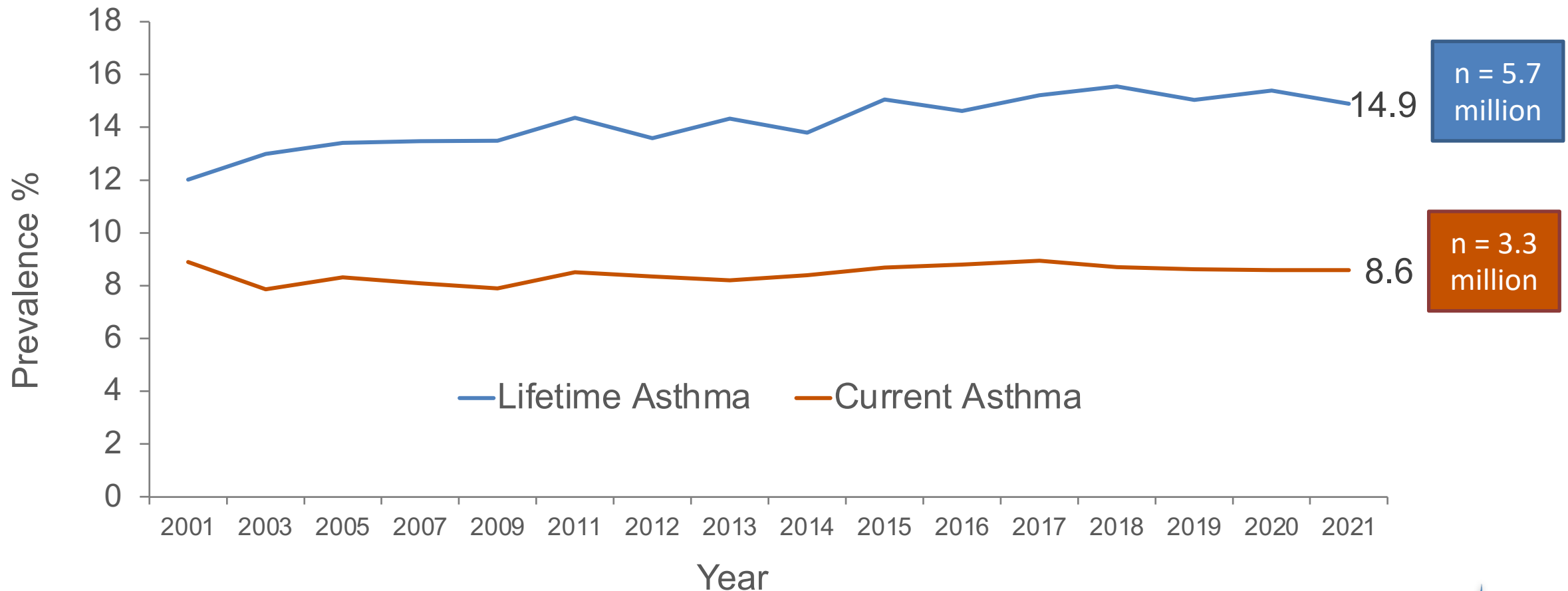


- Deaths

Asthma indicators:

Asthma Prevalence

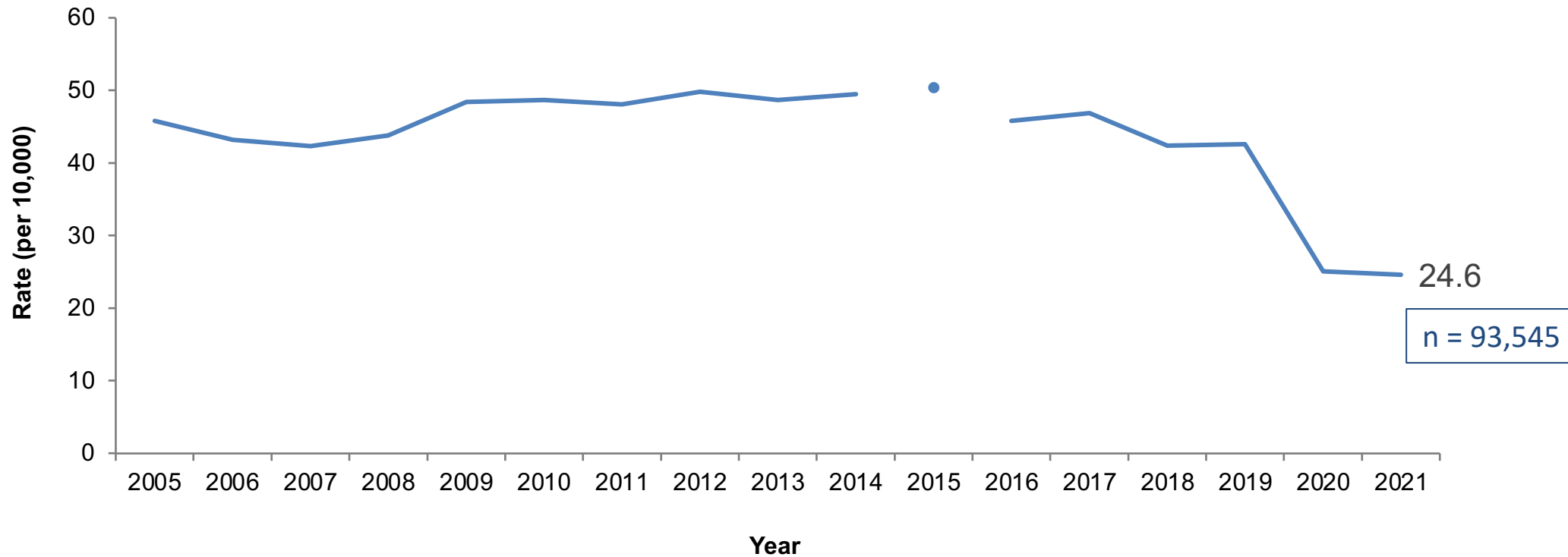
Lifetime and Current Asthma Prevalence (2001–2021)



Data source: CHIS, 2001-2021

Asthma-related Emergency Department (ED) Visits

Age-Adjusted Asthma ED Visits per 10,000 Residents California and the U.S., 2005–2021

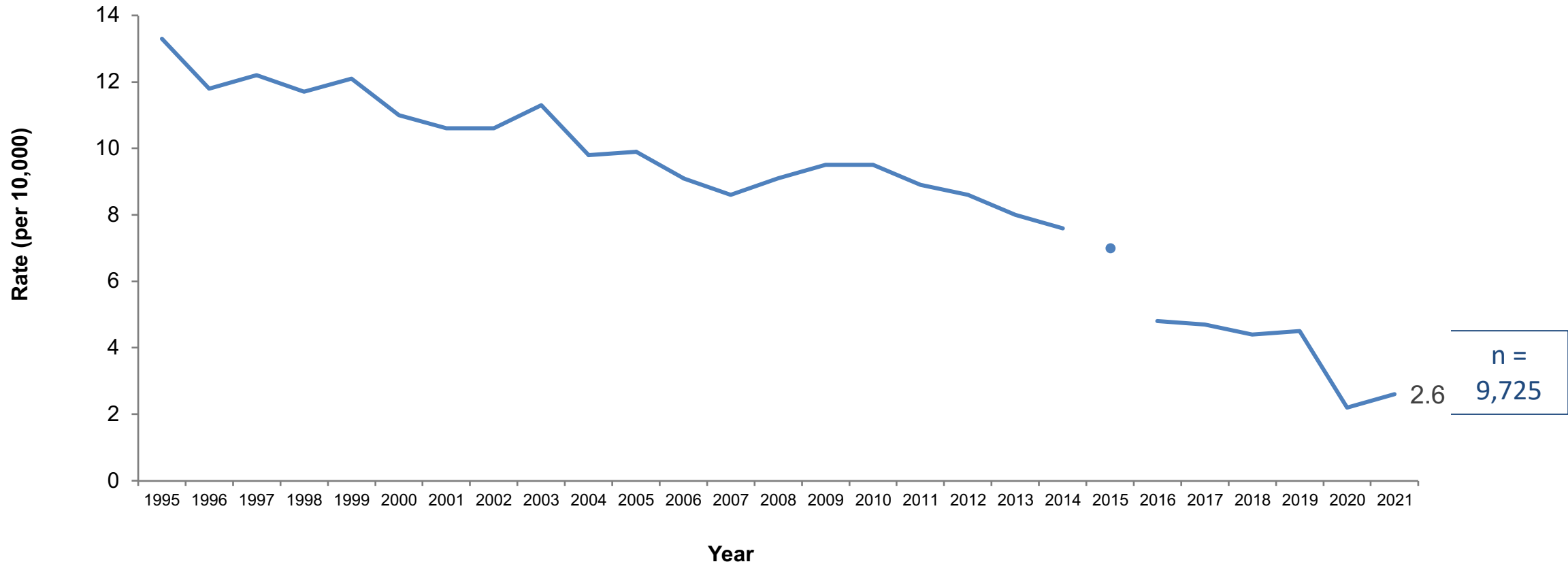


Data sources: CA data from the Office of Statewide Health Planning and Development (OSHPD), 2005–2021

Note: Diagnosis codes changed from ICD-CM-9 to ICD-CM-10 on October 1, 2015. Direct comparisons should not be made between data collected prior to and after this change.

Asthma-related Hospitalizations

Age-Adjusted Asthma Hospitalizations per 10,000 Residents California and the U.S., 1995–2021



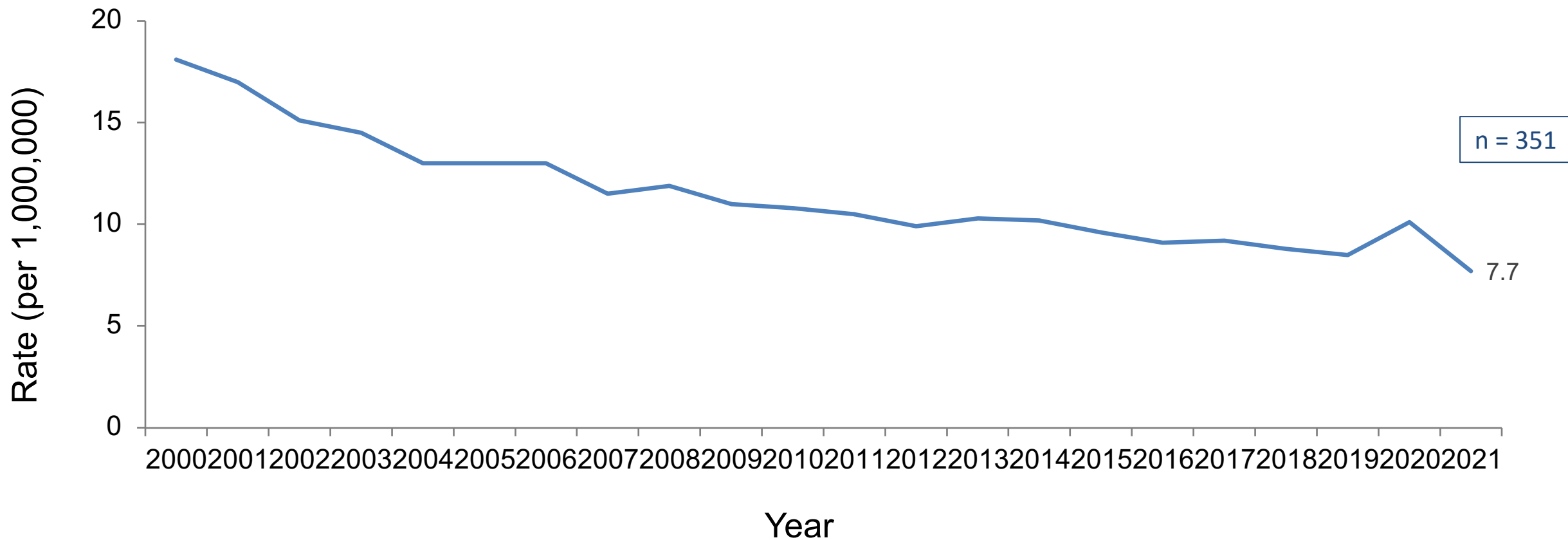
Data sources: Department of Health Care Access and Information (HCAI), 2005–2021

Note: Diagnosis codes changed from ICD-CM-9 to ICD-CM-10 on October 1, 2015. Direct comparisons should not be made between data collected prior to and after this change.



Asthma-related Deaths

Age-Adjusted Asthma Deaths per 1,000,000 Residents California and the U.S., 2000–2021



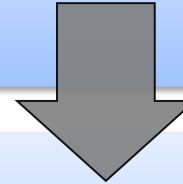
Data sources: CA data from CDPH Vital Records, 2000–2021



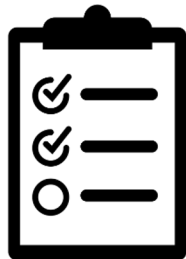
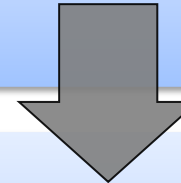
AsMA Partner Organization Recruitment Efforts



**Organization that can provide
asthma self-management
education (AS-ME) to clients**



**Has CHWs in the
organization**



**If possible, provides
de-identified client-level data
to measure impact of AsMA**

Client Ages

57% Children 0-17
years old



33% Adults 18 years old
and older



10% Unknown age



Client Race and Ethnicity

