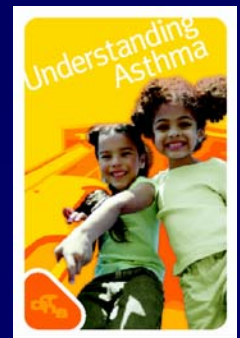


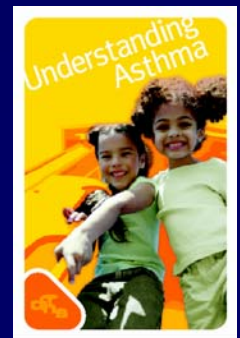
# **Asthma Environmental Policies and Practices and Asthma Staff Awareness in California Childcare Centers**

**Environmental Health Investigations Branch  
Childhood Asthma Initiative  
California Department of Health Services**



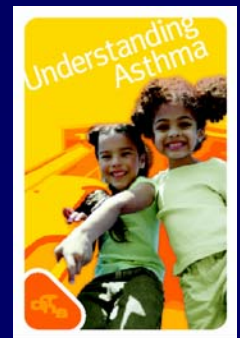
# Childhood Asthma Initiative

- **Funded by the California Children and Families Commission**
- **Collaborative effort between three branches of the California Department of Health Services**
  - **Environmental Health Investigations Branch**
  - **Chronic Disease Control Branch**
  - **Children's Medical Services**



# Asthma

- **Most common chronic disease of children**
- **Prevalence in US children less than 4 years old is 5.8%\***
- **Prevalence in California children unknown**
- **Management**
  - **Therapy**
  - **Reduce or eliminate asthma “triggers” in the environment**

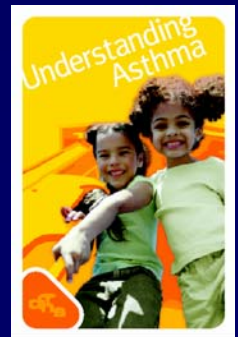


\*CDC. Surveillance for Asthma, US, 1960-1995, MMWR. 1998; 17:SS-1

# Childcare in California

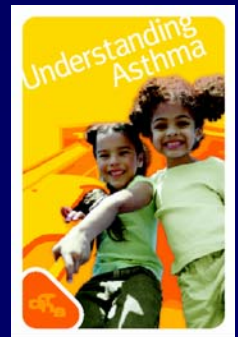
- ~9,600 licensed preschool (2 yrs to first-grade) childcare centers (CCCs)\*
- >500,000 children spend at least part of day in licensed CCCs\*
- ~146,000 staff\*
- No asthma policies nor universal education for CCCs

\*CA Dept of Social Services, Community Care Licensing, 2001



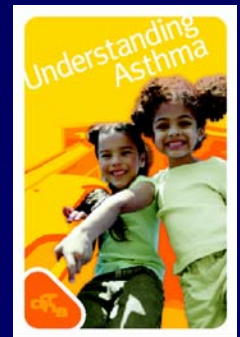
# Current Understanding

- **Limited information about CCCs asthma policies and practices and asthma awareness among staff**
- **Most studies conducted outside US**
  - **primary schoolteachers have a limited understanding of asthma**

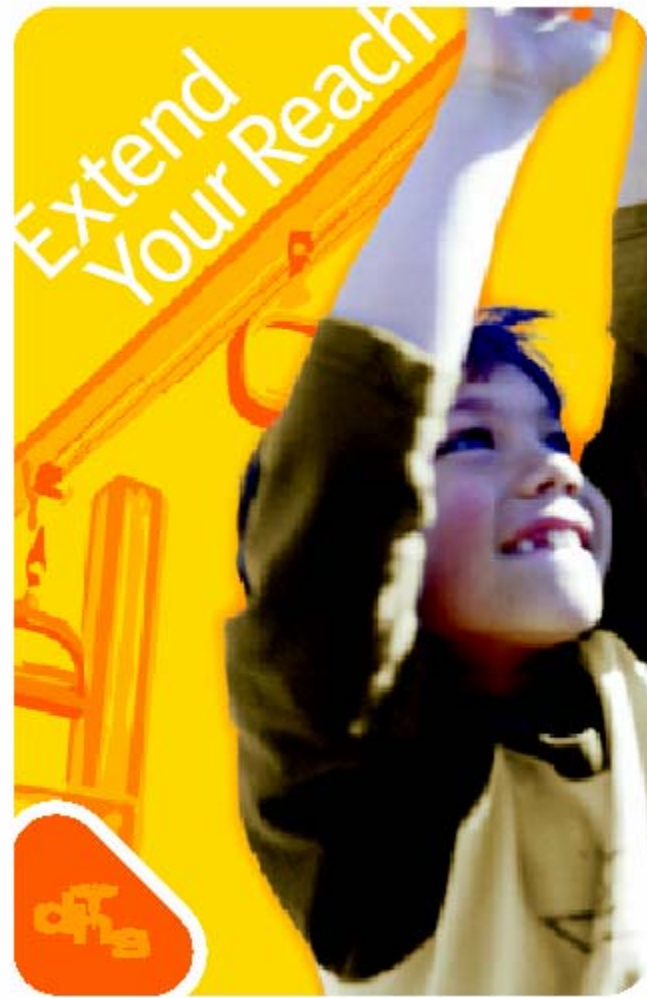


# Methods

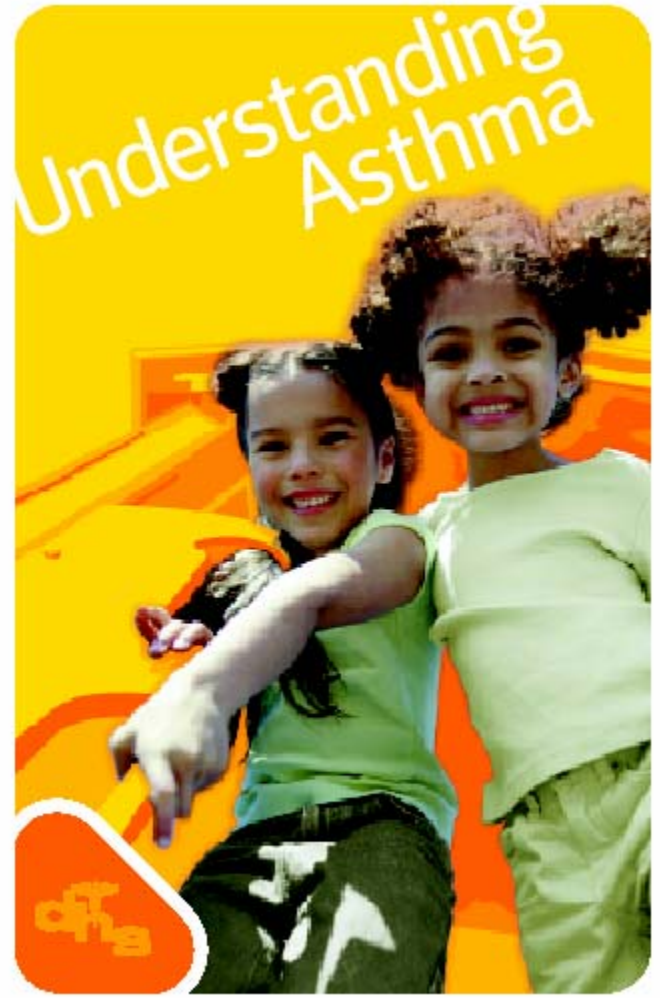
- **Conducted by the Environmental Health Investigations Branch**
- **Descriptive cross-sectional study**
- **Statewide mailing of two surveys**
  - Site director
  - Staff
- **Incentives, multiple mailings, pre-addressed brochures, postage paid**
- **Feedback results and bilingual multimedia asthma materials**

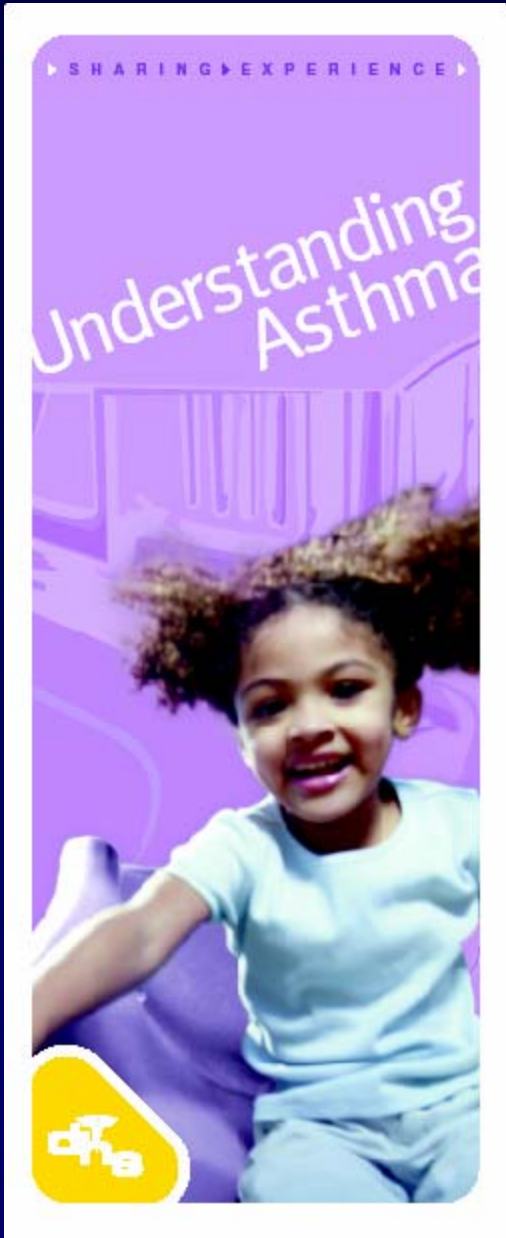


Extend  
Your Reach



Understanding  
Asthma





Site Director Survey

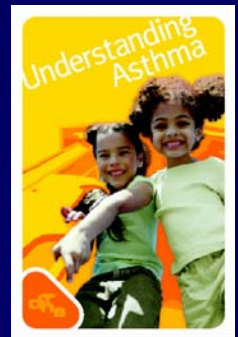


Staff Survey



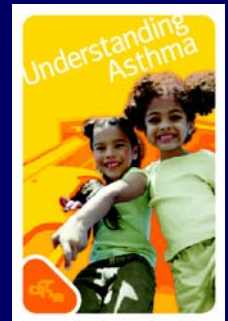
# Survey Sample

- Randomly selected CA licensed preschool CCCs and their site directors  
N=1,250 including 136 Head Start
- Up to 3 staff members in these CCCs, selected by next birthday method  
N=3,750



# Site Director Survey

- **Focus on information about CCC, esp. environmental factors associated with asthma** [link to survey instrument]
  - 5 demographic questions
  - 5 asthma meds and training questions
  - 13 asthma triggers in CCC questions
  - 16 environmental policies and practices questions
- **Survey modified from Ohio Dept of Health, Indoor Environments Program**



# Site Director Survey Results

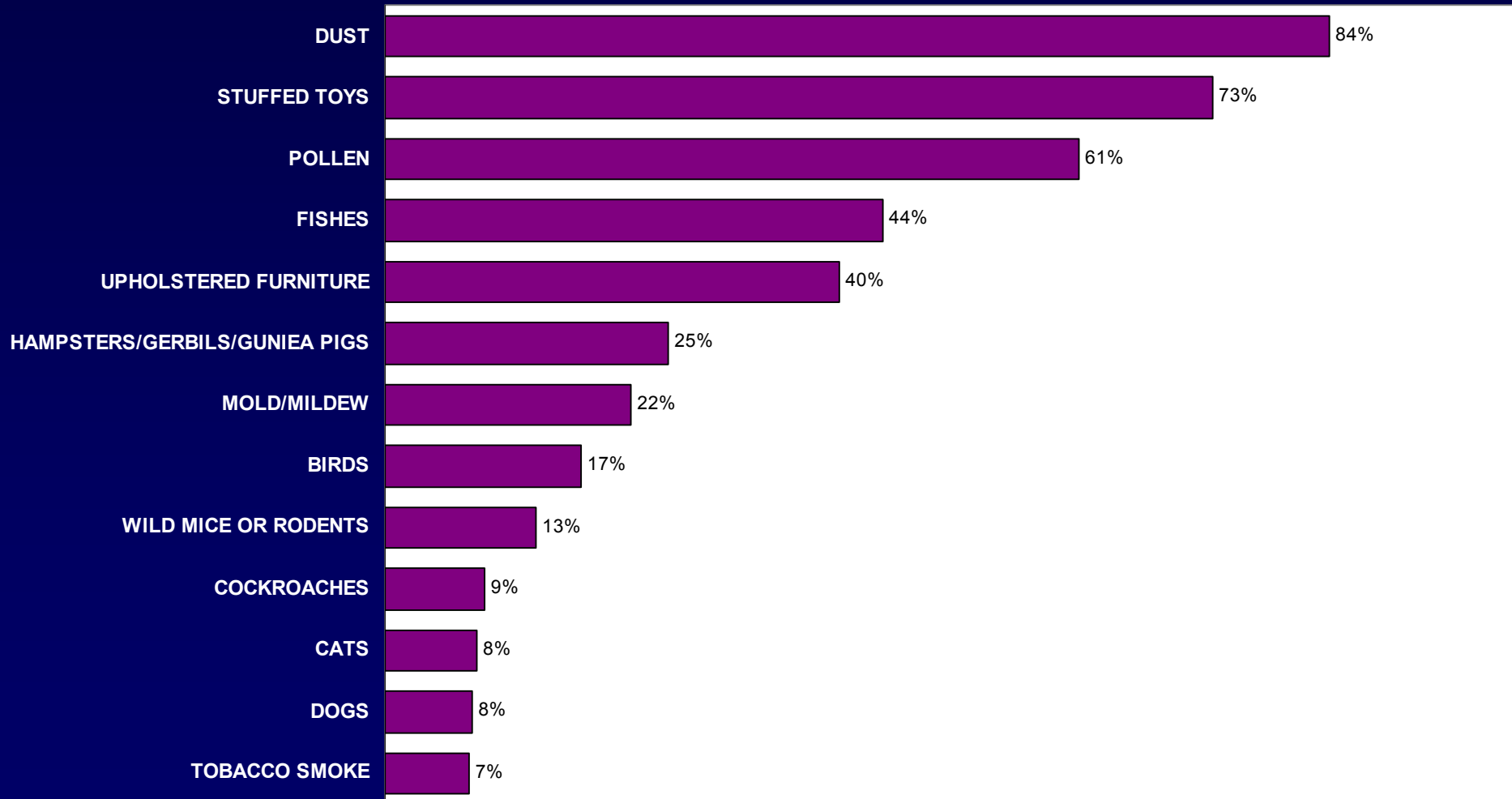
**N = 284 (24% Response)**

<b>Variables per CCC</b>	<b>Median</b>	<b>Range</b>
<b>Children enrolled</b>	<b>48</b>	<b>1-1356</b>
<b>Children with asthma</b>	<b>2</b>	<b>0-55</b>
<b>Total staff</b>	<b>9</b>	<b>1-133</b>
<b>Fully qualified teachers</b>	<b>5</b>	<b>1-50</b>
	<b>n</b>	<b>%</b>
<b>Treated asthma episode at CCC</b>	<b>157</b>	<b>55%</b>

# Environmental Triggers, n=284

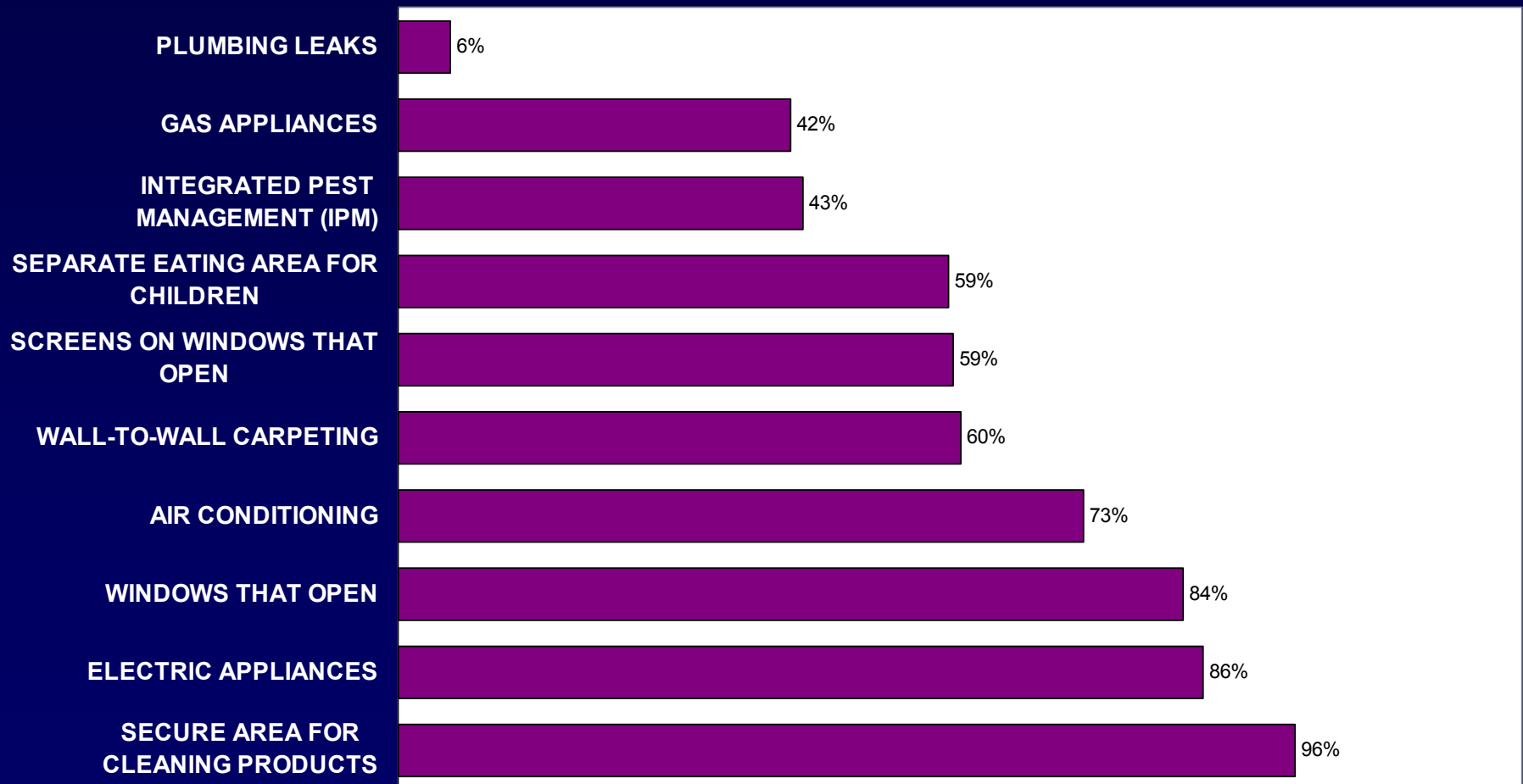
## Are any of the following items in this CCC?

(Percent of Site Directors Who Answered “YES”)



# Policies and Practices, n=284

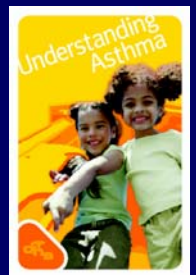
Does this childcare center have the following?  
(Percent of Site Directors Who Answered "Yes")



# Staff Survey

- **Assessment of staff asthma knowledge, attitudes, and beliefs** [[link to survey instrument](#)]
  - **21 True / False / Don't Know asthma fact questions**
  - **11 Likert-scale asthma opinion questions**
  - **9 basic demographic questions**
- **Survey modified from Chicago Asthma Surveillance Initiative\***

\*Grant E, et al., Development of a survey of asthma knowledge, attitudes, and perceptions. Chest 1999;116:178S-183S.



# Staff Survey Results

n = 666 (18% Response)

	Mean	SD
Age (yrs)	40	11.8
# yrs in business	10.9	7.4
	n	%
Female	648	97%
White	350	54%
≥ College degree	265	40%
Personal asthma	113	17%
Asthma in family/household	313	47%

# Staff Asthma Knowledge

## True/False Questions

(Percent Answered Correct)



# Staff Asthma Knowledge, n=666

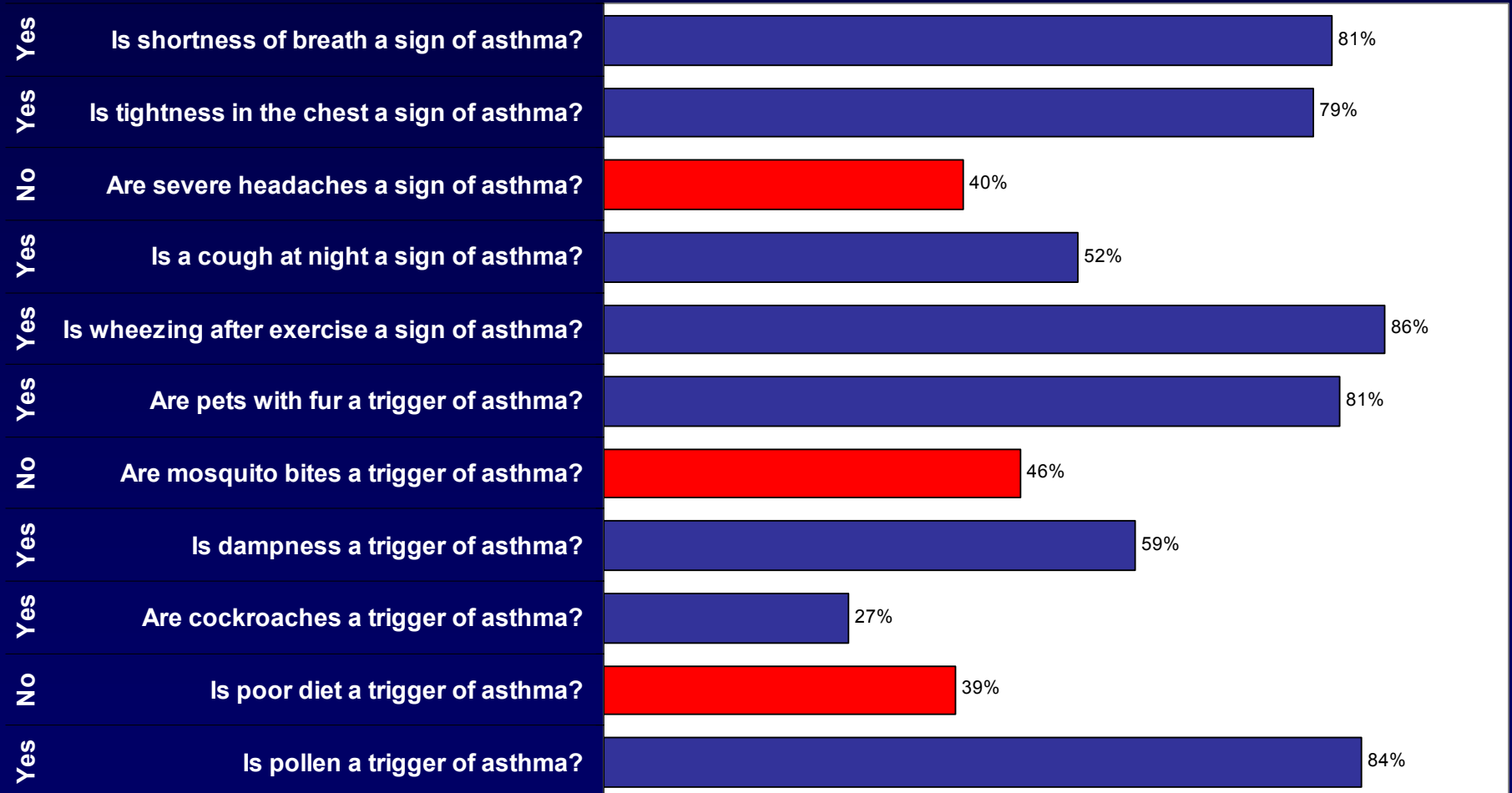
Overall mean correct 66%  $\pm$  SD 15%

	Correct answer	% who answered CORRECTLY
<b>General questions most frequently correct:</b>		
When asthma attacks stop, you don't have asthma	False	94.7%
Asthma is mainly an emotional illness	False	92.8%
<b>General questions most frequently wrong:</b>		
Asthma cannot be cured	True	58.3%
A vaporizer is a good treatment for asthma	False	30.6%

# Staff Asthma Knowledge

## Yes/No Questions

(Percent Answered Correct)

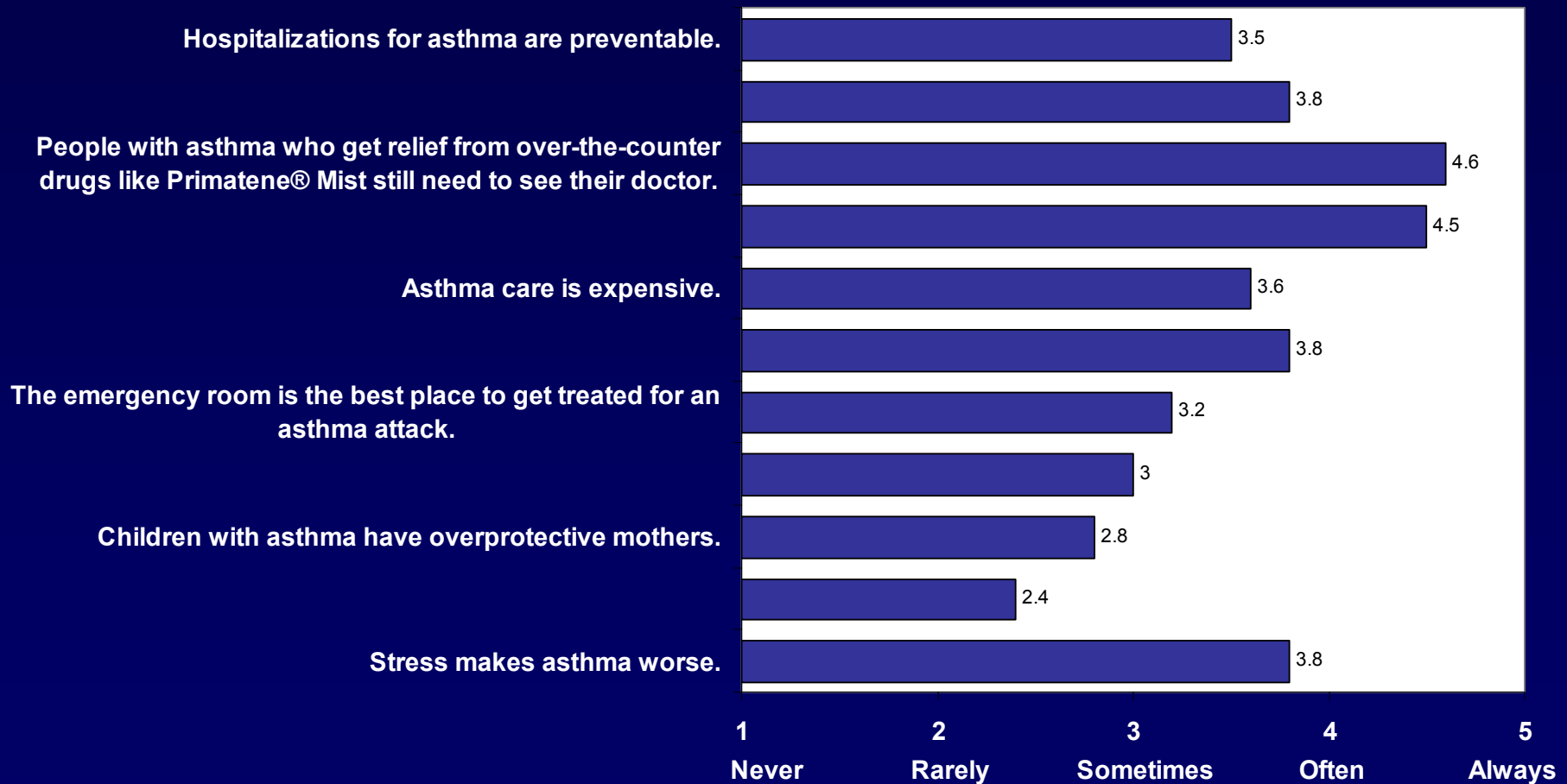


# Staff Asthma Knowledge of Asthma Signs

	<b>Correct answer</b>	<b>% who answered CORRECTLY</b>
<b>Asthma sign questions most frequently correct:</b>		
Is wheezing after exercise a sign of asthma?	Yes	86.3%
Is shortness of breath a sign of asthma?	Yes	80.5%
<b>Asthma sign questions most frequently wrong:</b>		
Is cough at night a sign of asthma?	Yes	52.4%
Are severe headaches a sign of asthma?	No	39.8%

# Staff Asthma Attitudes and Beliefs

(Average Score on Scale of 1-5)



# Staff Asthma Attitudes and Beliefs

## Statements towards “Always True” (5):

Mean

People with asthma who get relief from over-the-counter drugs like Primatene<sup>®</sup>

4.6

Mist still need to see their doctor

Asthma is a serious disease

4.5

## Statements toward “Never True” (1):

Children with asthma have overprotective mothers

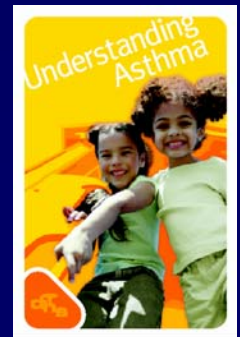
2.8

People without insurance do not get asthma care

2.4

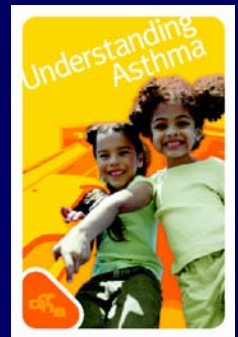
# Conclusions

- **Largest study on these issues**
- **Environmental risk factors common in CCCs**
- **High variability of asthma knowledge among childcare staff**



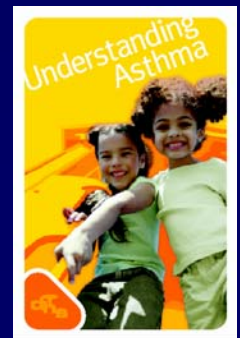
# Possible Limitations

- **Low response rate**
  - **Extrapolation of the results may be difficult**
- **High rate of having treated asthma and having asthma medications on site**
  - **Suggests individuals who responded to our survey may have more awareness of asthma than the general childcare center population**



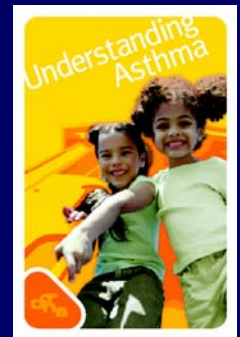
# How Will Results Be Used?

- **Assess how various characteristics influence policies, practices, and awareness of asthma**
- **Generate program-planning activities**
- **Determine model policies and recommended procedures**
- **Develop appropriate educational materials**
- **Provides baseline of information**



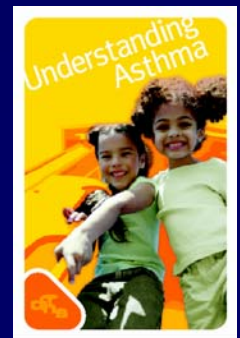
# Next Steps

- **Develop asthma resource kit for childcare providers**
  - **Guidance on controlling potential asthma triggers in the childcare environment**
  - **Fact Sheets**
    - Environmental Triggers**
    - Integrated Pest Management and Cleaning**
    - Furred and Feathered Animal Management**
  - **Model pet policy**



# Next Steps

- **Newsletter Articles**
  - Health Connections
  - Bridges
  - Head Start
  - Others
- **Materials available on web**
- **Clearinghouse distribution**



# Useful Materials

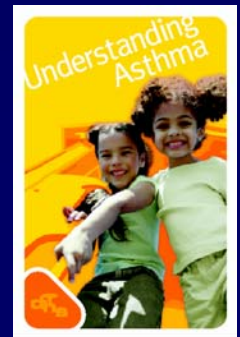
- **“How asthma-friendly is your childcare center?” (checklist and resource list)**

[http://www.nhlbi.nih.gov/health/public/lung/asthma/chc\\_chk.htm](http://www.nhlbi.nih.gov/health/public/lung/asthma/chc_chk.htm)

- **Child Asthma Action Plan (in English, Spanish, Chinese, Vietnamese)**

– Order by calling (800) 333-3212, or

<http://www.rampasthma.org/childactionplan.htm>



# Acknowledgements

- **California Children and Families Commission**
- **California Dept of Health Services and the Childhood Asthma Initiative**

**Michelle Goveia, MD, MPH**

**Nazerah Shaikh, MPH**

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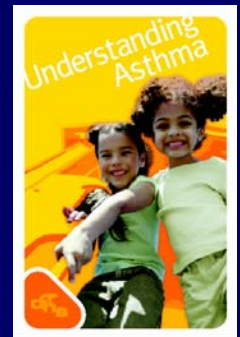
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**Dan Burley**

**Katherine Feldman, DVM, MPH**

- **Centers for Disease Control and Prevention**

**Andrea Winqvist, MD**



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