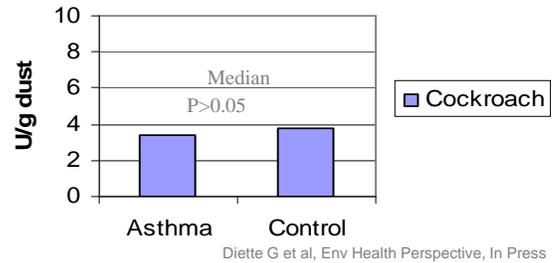


The Center for Childhood Asthma in the Urban Environment

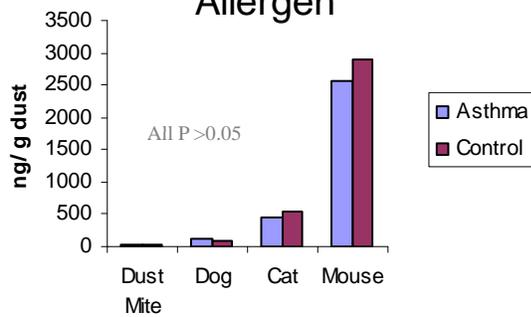
Elizabeth Matsui, MD MHS
 Patrick Breyse, PhD, Director
 Gregory Diette, MD MHS, Deputy Director
 Johns Hopkins University



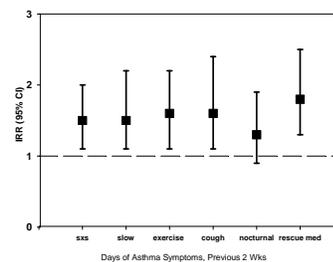
Bedroom Cockroach Allergen



Bedroom Settled Dust Allergen

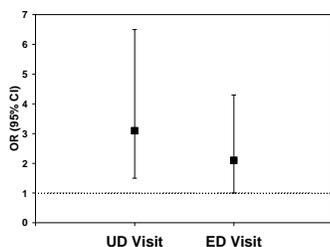


Recent Asthma Symptoms & Rescue Medication use



* adjusted for age, sex, atopy, cockroach sensitization and exposure, public health insurance, and study visit
 Matsui E et al, Ann Allergy Asthma Immunol. 2006 Oct;97(4):514-20.

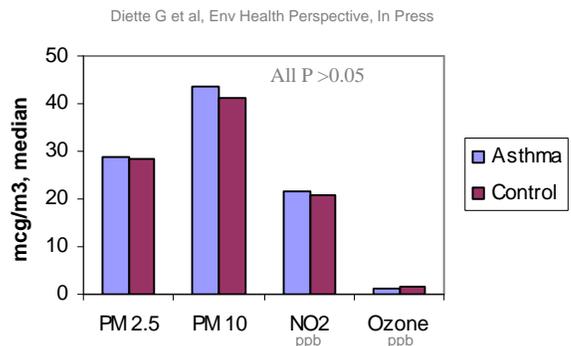
Asthma-related Health Care Use



- Hospitalization Adjusted OR: 69.9 (5.8-838.9)
- 9/10 hospitalizations occurred among sensitized/high exposure group

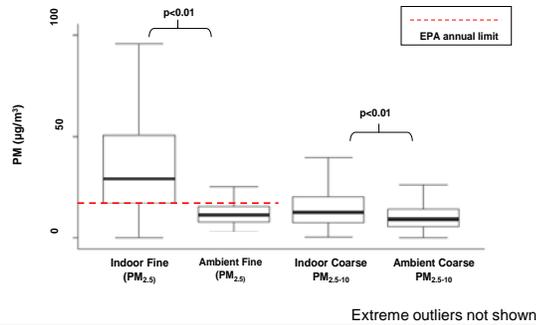
* adjusted for age, sex, atopy, cockroach sensitization and exposure, public health insurance, and study visit

Bedroom Air Pollutants



Distribution of Indoor PM in Children's Bedrooms

Figure 2. Distribution of Indoor and Ambient Fine and Coarse PM
 Boxplots display indoor and ambient fine and coarse PM. Indoor PM concentrations were significantly higher than ambient. The red dashed line demonstrates the EPA annual limit for ambient $PM_{2.5}$. Over 75% of homes had indoor PM concentrations that exceeded this limit.



Indoor PM Exposure and Asthma Morbidity

Outcomes	Coarse PM (per 10 $\mu\text{g}/\text{m}^3$)		Fine PM (per 10 $\mu\text{g}/\text{m}^3$)	
	IRR	P-value	IRR	P-value
Cough/wheeze/ chest tightness	1.06	0.03	1.02	0.21
Slow/stop activities	1.13	<0.01	1.01	0.47
Limited speech from wheeze	1.14	<0.01	1.04	0.19
Nocturnal Symptoms	1.10	<0.01	1.02	0.20
Symptoms with running	1.03	0.33	1.05	<0.01
Beta agonist use	1.10	<0.01	1.03	0.05

*Adjusted for age, gender, race, socioeconomic status

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 - Study Staff
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 - Data Management Core
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 - Adrian Mosley (chair)