CARBON MONOXIDE DETECTOR PRESENCE AMONG REPRODUCTIVE AGE WOMEN IN SOUTH CAROLINA: A 2011 BEHAVIORAL RISK FACTOR SURVEILLANCE SYSTEM ANALYSIS

INTRODUCTION	RESULTS	
 Carbon monoxide (CO) is: A colorless, odorless gas 	Covariate of Interest Previous Pregnancy	Category Level
 Detected by CO detector in home Chronic CO exposure in pregnancy is usually caused by smoking¹ 	Body Mass Index	- No
 Acute CO poisoning in pregnancy has been associated with increased: 		Obese Overwei
 Maternal mortality (18-24%)¹ Fetal mortality (36-67%)¹ Accidental household exposure to CO is the 	Current Smoker	Yes
 Accidental nousehold exposure to CO is the most frequent cause of poisoning in pregnancy¹ In 2013, 41% of women in South Carolina (SC) 	Health Insurance	• No
 reported their pregnancy was unintended² 32% were mistimed² 9% were unwanted² Due to the high fetal mortality rate associated 	General Health Status	Poor Fair Good Very Goo
with CO exposure and high incidence of unintended pregnancy in SC, we investigated the associations between CO detector presence	Home Ownership	Other Arran Rent
in the residence and demographic characteristics of reproductive aged (18-44 years old) women in South Carolina using data from the Behavioral Risk Factor Surveillance System (BRFSS)	Marital Status	Unm Never Marrie Separated
METHODS	Age Group	25-34 18-24
 2011 SC BRFSS data were obtained (n=12,948) Study sample restricted to reproductive aged 	Race/Ethnicity	Other race/et Non-Hispanio
 women: Who were not currently pregnant Who responded yes/no to "Do you have a carbon monoxide detector in your home?" Final sample size = 1,160 	Income Level	\$35k \$25K \$15K - <\$25K <\$15K
 Survey logistic regression analysis done in SAS 9.2 Significance of bivariate associations evaluated via odds ratios and 95% confidence intervals 	Education Level	Some High School G Less Than Hi
	Currently Family Planning	
CONTACT INFORMATION	-2 -1 0	1 2
Chelsea Lynes, MSPH DHEC BRFSS Coordinator	Figure 1. Odds Ratios and 95% Co CO Detector Presence in Ho	
SC DHEC PROMOTE PROTECT PROSPER lynescl@dhec.sc.gov South Carolina Department of Health and Environmental Control	Lower Confidence Level –	Upper O Point Estimate



1. Friedman P, Guo XM, Stiller RJ, Laifer SA. Carbon monoxide exposure during pregnancy. Obstet Gynecol Surv. 2015 Nov;70(11):705-12. 2. South Carolina Pregnancy Risk Assessment Monitoring System. 2013 data.

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			RESUL
el	Referent Level		Table 1. Su identified
	Yes		<i>Referent le</i> Covariate
	Normal Weight		Compared graduates
weight			Those wi
Underweigh	t No		HS gradu
			Compared household
	Yes		<\$15K \$15K - <\$
r	Excellent		Compared Whites,
Good			Non-Hisp Other rac
rangement	Own		Compared married,
	Married		Those wheen mark
Inmarried Couple rried			Compared their home
ed	Widowed		Those wh
Divorced			
	35-44		CON
e/ethnicities anic Blacks	Non-Hispanic White		• Non-pr lower c
35K - <\$50K 5K - <\$35K 25K	\$50K +		home: • Re ar • Ha • Re • W
me College ool Graduate n High School	College Graduate		 Same a of SC Family
No	Yes		presenIt may
	4 5 S Association betwee (SC BRFSS 2011)	een	efforts, on repr inciden
per Confidence Level			B

TS continued

Subset of the significant associations				
level,	Odds ratio (95%			
te of interest	confidence interval)			
d to college				
? <i>S</i> ,				
vith less than HS	0.42 (0.23, 0.80)			
uates	0.53 (0.33, 0.85)			
ed to an annual				
ld income of \$50K+,				
	0.45 (0.26, 0.79)			
<\$25K	0.52 (0.30, 0.87)			
ed to Non-Hispanic				
spanic Blacks	0.46 (0.32, 0.69)			
ace/ethnicities	0.37 (0.17, 0.78)			
ed to those who are				
vho have never arried	0.56 (0.38, 0.83)			
ed to those who own ne,				
vho rent their	0.47 (0.32, 0.74)			

ICLUSIONS

- regnant women of reproductive age with odds of having a CO detector in the
- eported lower educational attainment nd income level
- lad never been married
- ented their home
- Vere not non-Hispanic White
- associations found in general population
- planning was not associated with the nce of CO detectors
- be important to focus educational i.e. CO sources and detector placement, roductive age women in SC due to high
- nce of unintended pregnancy



Track it. Map it. 🐋 Use it. SC Environmental Public Health Tracking

REFERENCE