SUPPLEMENTARY MATERIALS

Supplementary Table 1: Characteristics of sampled rooms

Home type	Room type*	Mean (SD)		
		Sampling time [min]	Room area [m²]	Distance between rooms [m]
Hookah	Primary		47.8 (18.2)	6.6 (3.4)
Hookah	Secondary		35.8 (14.4)	
E-cigarette	Primary		54.7 (38.1)	8.7 (5.0)
E-cigarette	Secondary		29.7 (21.8)	
Cigarette	Primary		40.7 (23.4)	6.4 (2.8)
Cigarette	Secondary		32.6 (13.9)	
Non-smoking			52.5 (21.5)	

* Primary rooms were defined as rooms where e-cigarettes, cigarettes, or hookahs were being used and secondary rooms were rooms adjacent to where such products were being used

Abbreviations: SD = standard deviation

Supplemental Table 2. Post-ANOVA comparison of log-transformed data using Tukey Simultaneous Test, by pollutant and room type
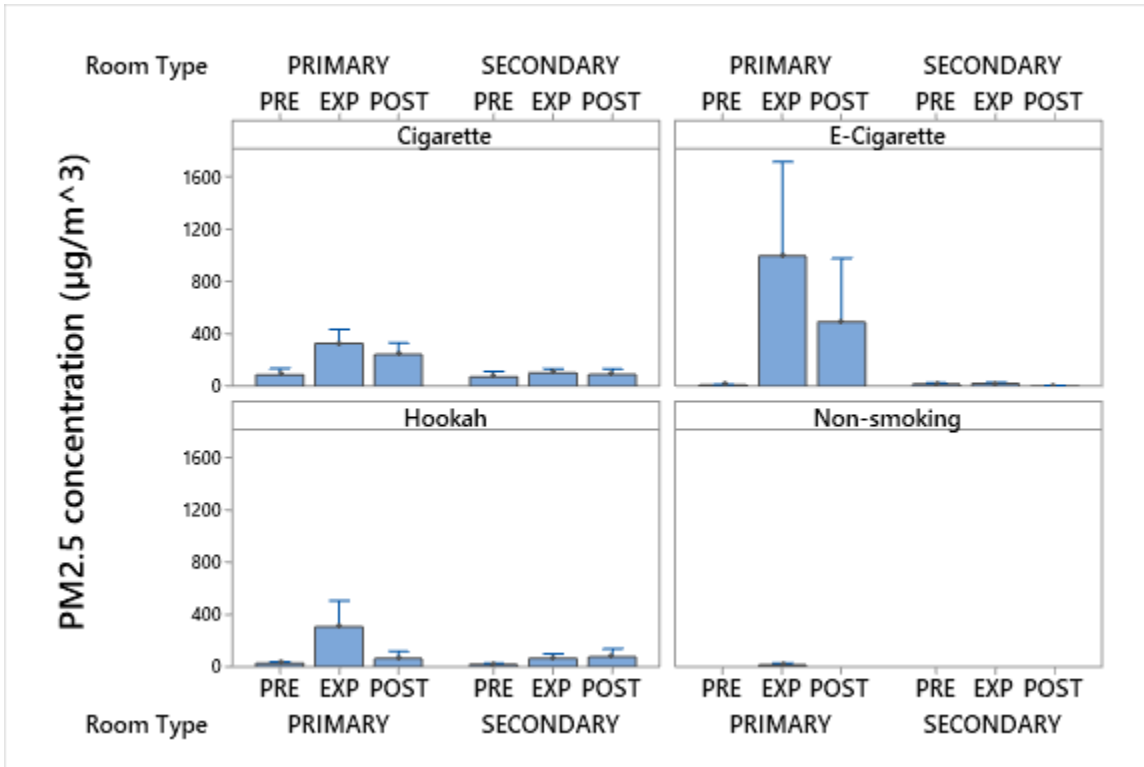
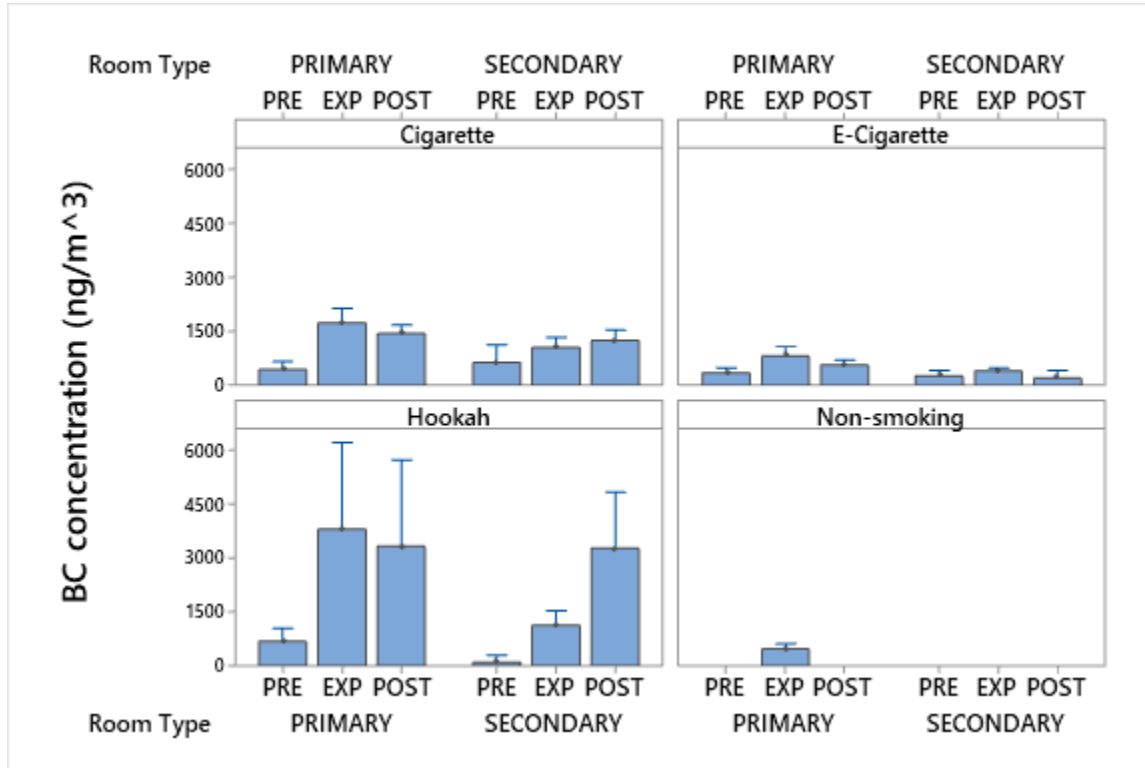| Comparison (mean product 1 minus mean product 2)	Room Type§	Pollutant	Difference of Means	95% CI
Nonsmoking - cigarette	Primary	PM$_{2.5}$ [µg/m³]	-1.7	-2.5, -0.9*
Nonsmoking - E-cigarette			-1.0	-1.8, -0.2*
Nonsmoking - hookah			-1.3	-2.2, -0.4*
Hookah - cigarette			-0.4	-1.3, 0.5
Hookah - E-cigarette			0.3	-0.6, 1.1
E-cigarette - cigarette			-0.6	-1.4, 0.2
Nonsmoking - cigarette	Primary	BC [ng/m³]	-0.6	-1.2, 0
Nonsmoking - E-cigarette			-0.3	-0.9, 0.3
Nonsmoking - hookah			-0.6	-1.3, 0
Hookah - cigarette			0.0	-0.6, 0.6
Hookah - E-cigarette			0.3	-0.3, 0.9
E-cigarette - cigarette			-0.3	-0.9, 0.3
Nonsmoking - cigarette	Primary	CO [ppm]	0.1	-0.2, 0.5
Nonsmoking - E-cigarette			0.0	-0.4, 0.4
Nonsmoking - hookah			-0.3	-0.7, 0
Hookah - cigarette			0.5	0.1, 0.9*
Hookah - E-cigarette			0.3	-0.1, 0.8
E-cigarette - cigarette			0.1	-0.3, 0.6
Nonsmoking - cigarette	Secondary	PM$_{2.5}$ [µg/m³]	-1.2	-2, -0.5*
Nonsmoking - E-cigarette			-0.4	-1.1, 0.3
Nonsmoking - hookah			-0.8	-1.6, -0.1*
Hookah - cigarette			-0.4	-1.2, 0.5
Hookah - E-cigarette			0.4	-0.4, 1.2
E-cigarette - cigarette			-0.8	-1.6, 0
Nonsmoking - cigarette	Secondary	BC [ng/m³]	-0.4	-1, 0.2
Nonsmoking - E-cigarette			0.0	-0.6, 0.6
Nonsmoking - hookah			-0.4	-1, 0.3
Hookah - cigarette			0.0	-0.6, 0.6
Hookah - E-cigarette			0.4	-0.2, 1
E-cigarette - cigarette			-0.4	-1, 0.2
Nonsmoking - cigarette	Secondary	CO [ppm]	0.1	-0.3, 0.5
Nonsmoking - E-cigarette			0.4	0, 0.9
Nonsmoking - hookah			-0.2	-0.6, 0.1
Hookah - cigarette			0.3	0.1, 0.8
Hookah - E-cigarette			0.7	0.2, 1.2*
E-cigarette - cigarette			-0.4	-0.9, 0.2

*Significant at p ≤ 0.05

§ Primary rooms were defined as rooms where e-cigarettes, cigarettes, or hookahs were being used and secondary rooms were defined as rooms adjacent to where such products were being used

Abbreviations: BC = black carbon; PM$_{2.5}$ = particulate matter with diameter less than 2.5 micrometers; CO = carbon monoxide; CI = confidence interval

Supplemental Figure 1. Mean particulate matter with diameter less than 2.5 micrometers (PM₂.₅) concentrations (columns) by product (cigarette, e-cigarette, hookah, non-smoking), room type (primary, secondary), and time period (pre-exposure (PRE), exposure (EXP), post-exposure (POST)). Blue bars above the columns represent one standard error from the mean. Primary rooms were defined as rooms where e-cigarettes, cigarettes, or hookahs were being used and secondary rooms were defined as rooms adjacent to where such products were being used. Non-smoking panels have only one bar, as air quality measurements were taken in only one room in the house and averaged for the entire time period, as there was no exposure period.

Supplemental Figure 2. Mean black carbon (BC) concentrations (columns) by product (cigarette, e-cigarette, hookah, non-smoking), room type (primary, secondary), and time period (pre-exposure, exposure, post-exposure). Blue bars above the columns represent one standard error from the mean. Primary rooms were defined as rooms where e-cigarettes, cigarettes, or hookahs were being used and secondary rooms were defined as rooms adjacent to where such products were being used. Non-smoking panels have only one bar, as air quality measurements were taken in only one room in the house and averaged for the entire time period, as there was no exposure period.

Supplemental Figure 3. Mean carbon monoxide (CO) concentrations (columns) by product (cigarette, e-cigarette, hookah, non-smoking), room type (primary, secondary), and time period (pre-exposure, exposure, post-exposure). Blue bars above the columns represent one standard error from the mean. Primary rooms were defined as rooms where e-cigarettes, cigarettes, or hookahs were being used and secondary rooms were defined as rooms adjacent to where such products were being used. Non-smoking panels have only one bar, as air quality measurements were taken in only one room in the house and averaged for the entire time period, as there was no exposure period.