

Perinatal Electronic Vapor Product Use All PRAMS Sites – PRAMS, 2016-2018

Background

Electronic vapor products (EVPs) comprise a diverse group of devices, including electronic cigarettes (e-cigarettes). EVP users inhale an aerosol that typically contains nicotine, flavorings, and other additives.¹ Nicotine is a developmental toxicant that adversely affects pregnancy and infant outcomes.² Therefore, EVPs are not safe for mother or baby during pregnancy.^{1,2}

Pregnancy Risk Assessment Monitoring System (PRAMS)

PRAMS collects site-specific, population-based data on maternal experiences and behaviors before, during, and shortly after pregnancy. Women are sampled for PRAMS between 2 and 6 months after having a live birth. PRAMS sites that met or exceeded the response rate threshold for 2016-2018 (55%) are included in overall estimates for this report.

Women[◇] Who Reported Electronic Vapor Product (EVP)* Use Before and During Pregnancy

PRAMS Indicator	All PRAMS Sites % (95% CI) [†]		
	2016 [‡]	2017 [§]	2018 [^]
Any EVP use in the past 2 years	6.7 (6.2-7.1)	6.5 (6.1-6.9)	5.9 (5.5-6.3)
Any EVP use in the 3 months before becoming pregnant	3.6 (3.3-3.9)	3.7 (3.4-4.0)	3.4 (3.2-3.8)
Any EVP use in the last 3 months of pregnancy	1.1 (0.9-1.2)	1.1 (1.0-1.3)	1.1 (0.9-1.3)
Daily [‡] EVP use in the last 3 months of pregnancy	0.5 (0.4-0.6)	0.4 (0.3-0.5)	0.5 (0.4-0.7)

[◇] Women with a recent live birth

* Electronic vapor products, defined on the PRAMS survey as: "Electronic cigarettes [e-cigarettes] and other electronic nicotine products (such as, vape pens, e-hookahs, hookah pens, e-cigars, e-pipes) are battery-powered devices that use nicotine liquid rather than tobacco leaves, and produce vapor instead of smoke."

[†] Weighted percent (95% Confidence Interval)

[‡] 31 PRAMS sites met the 55% response rate threshold for 2016 and include: Alaska, Arkansas, Colorado, Connecticut, Delaware, Hawaii, Illinois, Iowa, Louisiana, Maine, Maryland, Massachusetts, Michigan, Missouri, Nebraska, New Hampshire, New Jersey, New Mexico, New York City, New York State, Oklahoma, Pennsylvania, Rhode Island, Texas, Utah, Vermont, Virginia, Washington, West Virginia, Wisconsin, and Wyoming.

[§] 36 PRAMS sites met the 55% response rate threshold for 2017 and include: Alabama, Alaska, Colorado, Connecticut, Delaware, Georgia, Illinois, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Missouri, Montana, New Hampshire, New Jersey, New Mexico, New York City, New York State, North Carolina, North Dakota, Oklahoma, Pennsylvania, Puerto Rico, Rhode Island, South Dakota, Utah, Vermont, Virginia, Washington, West Virginia, Wisconsin, and Wyoming.

[^] 31 PRAMS sites met the 55% response rate threshold for 2018 and include: Alaska, Colorado, Connecticut, Delaware, Georgia, Illinois, Kansas, Kentucky, Louisiana, Maine, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Nebraska, New Jersey, New Mexico, New York City, North Dakota, Pennsylvania, Puerto Rico, Rhode Island, South Dakota, Utah, Vermont, Virginia, Washington, West Virginia, Wisconsin, and Wyoming.

[‡] Daily EVP use is defined as respondents who reported EVP use of 'once a day' or 'more than once a day'.

Use of EVPs and Combustible Cigarettes Alone or in Combination During[‡] Pregnancy, Among Women[◇] Who Used EVPS in the Past 2 Years

PRAMS Indicator	All PRAMS Sites % (95% CI) [†]		
	2016 [‡]	2017 [§]	2018 [^]
EVP use only	6.0 (4.6-7.8)	6.5 (5.1-8.2)	6.8 (5.3-8.8)
Cigarette use only	22.1 (19.5-25.0)	24.9 (22.3-27.8)	21.4 (18.7-24.4)
EVP and cigarette use	10.5 (8.6-12.6)	11.0 (9.1-13.1)	11.9 (9.7-14.5)

[‡] Data reported are during the last three months of pregnancy

[◇] [†] [‡] [§] [^] See footnotes in first table

Women[◇] Who Reported EVP Use Before and During Pregnancy, by Characteristics – All PRAMS Sites[^], 2018

Characteristic	Any EVP use in 3 months before pregnancy % (95% CI) [†]	Any EVP use in last 3 months of pregnancy % (95% CI) [†]	Daily [‡] EVP use in last 3 months of pregnancy % (95% CI) [†]
Maternal Race/Ethnicity			
Non-Hispanic White	4.5 (4.0-5.0)	1.5 (1.3-1.8)	0.7 (0.5-0.9)
Non-Hispanic Black	1.6 (1.2-2.0)	0.4 (0.3-0.6)	0.3 (0.2-0.5)
Hispanic	2.0 (1.6-2.6)	0.5 (0.3-0.8)	0.2 (0.1-0.5)
Non-Hispanic Asian or Pacific Islander	0.7 (0.4-1.3)	0.1 (0.0-0.2)	0.1 (0.0-0.2)
Non-Hispanic American Indian or Alaska Native	2.6 (1.9-3.7)	1.1 (0.6-1.8)	0.7 (0.3-1.4)
Non-Hispanic Other	5.5 (3.9-7.6)	1.2 (0.7-2.3)	0.9 (0.4-2.0)
Maternal Age (years)			
≤19	7.2 (5.3-9.7)	2.0 (1.1-3.6)	1.0 (0.5-2.4)
20-24	6.1 (5.2-7.1)	1.5 (1.1-2.1)	0.6 (0.3-1.0)
25-34	2.9 (2.6-3.3)	1.1 (0.9-1.4)	0.6 (0.4-0.7)
≥35	1.9 (1.4-2.5)	0.5 (0.3-0.9)	0.3 (0.2-0.5)
Highest level of education (years)			
<12	5.1 (4.1-6.4)	2.3 (1.7-3.3)	1.2 (0.7-2.1)
12	5.4 (4.7-6.2)	1.8 (1.3-2.3)	0.7 (0.5-1.0)
>12	2.4 (2.1-2.7)	0.6 (0.5-0.8)	0.3 (0.3-0.5)
Prenatal WIC Recipient			
No	2.8 (2.4-3.1)	0.8 (0.6-1.0)	0.4 (0.3-0.6)
Yes	4.8 (4.2-5.4)	1.7 (1.3-2.1)	0.7 (0.5-1.0)

Abbreviation: WIC = The Special Supplemental Nutrition Program for Women, Infants, and Children

^{◇†‡} See footnotes in first table

Summary

Based on results from the 2018 data for 31 PRAMS sites, among women with a recent live birth:

- 3.4% of women reported using EVPs during the 3 months before becoming pregnant and 1.1% reported using EVPs during the last 3 months of pregnancy.
- Among women who used EVPs in the past 2 years, 11.9% of women reported using EVPs in combination with combustible cigarettes during the last 3 months of pregnancy.

Resources

E-Cigarettes and Pregnancy: <https://www.cdc.gov/reproductivehealth/maternalinfanthealth/substance-abuse/e-cigarettes-pregnancy.htm>

ACOG Smoking Cessation Resources: <https://www.acog.org/topics/smoking-cessation>

ACOG Tobacco and Nicotine Cessation Toolkit: <https://www.acog.org/-/media/project/acog/acogorg/files/pdfs/publications/smoking-cessation-toolkit-2016.pdf>

References

1. US Department of Health and Human Services. E-cigarette use among youth and young adults: a report of the Surgeon General. Atlanta, GA: US Department of Health and Human Services, CDC; 2016.
2. American College of Obstetricians and Gynecologists. Tobacco and nicotine cessation during pregnancy. ACOG Committee Opinion No. 807. *Obstet Gynecol* 2020;135:e221–9.

To learn more about PRAMS methods and to see data availability by state and year visit: <https://www.cdc.gov/prams>



THE BEST SOURCE OF DATA ON MOTHERS AND BABIES