

Supplementary Online Content

Sun R, Mendez D, Warner KE. Trends in nicotine product use among US adolescents, 1999-2020. *JAMA Netw Open.* 2021;4(8):e2118788.
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eFigure 1. Mean Nicotine Product Days (NPDs), Capped at 30 Days and Uncapped

eFigure 2. Mean Nicotine Product Days (NPDs) by Tobacco Product Type, Capped at 30 Days and Uncapped

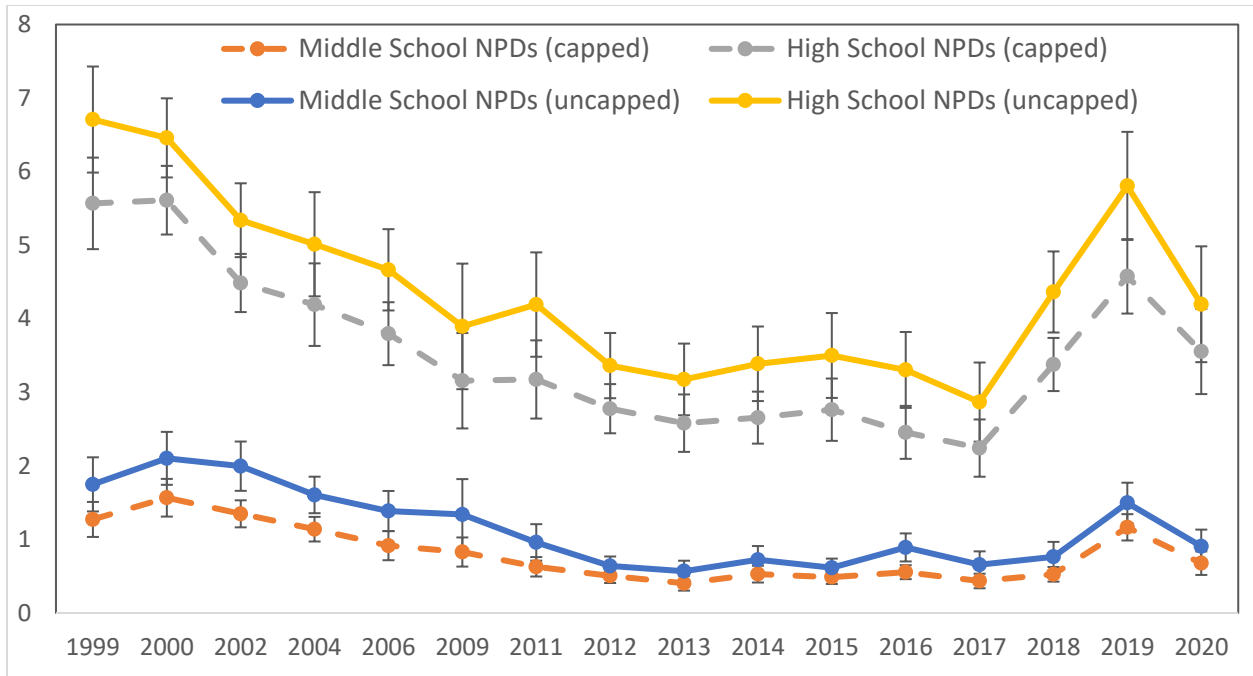
eFigure 3. Mean Nicotine Product Days (NPDs) and Mean NPDs Estimated by Dominant Product Use

eFigure 4. Mean Nicotine Product Days (NPDs) Among Nicotine Users

eTable 1. Mean Risk-Adjusted Nicotine Product Days (NPDs) for Middle School Students

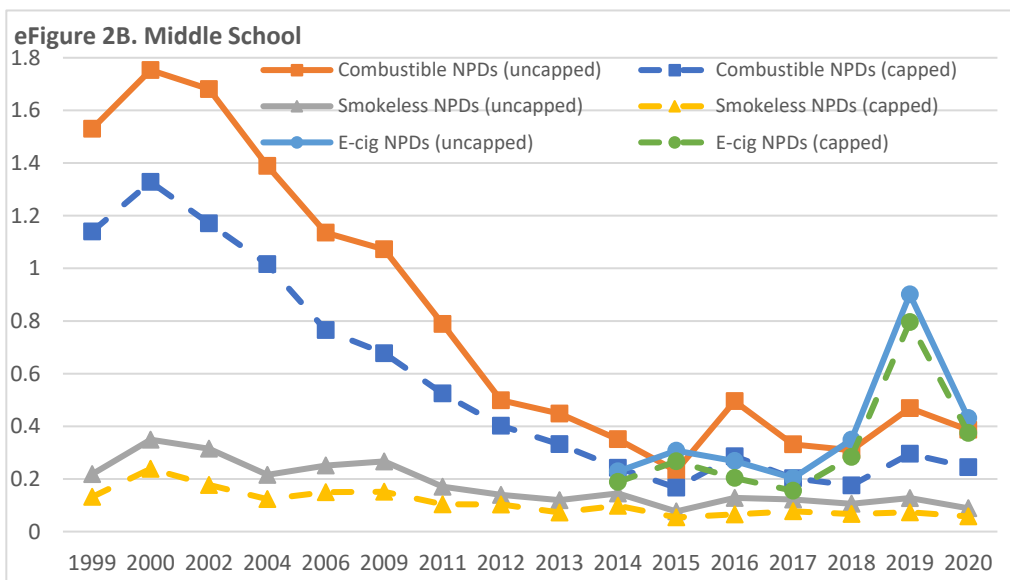
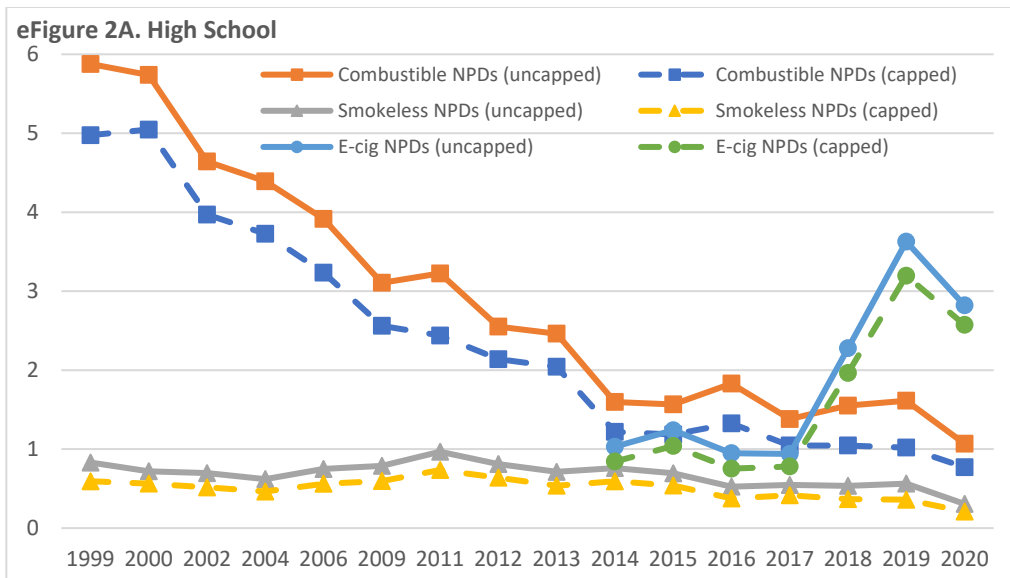
eTable 2. Mean Risk-Adjusted Nicotine Product Days (NPDs) for High School Students

This supplementary material has been provided by the authors to give readers additional information about their work.



eFigure 1. Mean Nicotine Product Days (NPDs), Capped at 30 Days (dashed) and Uncapped (solid).

Mean NPDs are 98.6% correlated for middle school students and 99.2% correlated for high school students.



eFigure 2. Mean Nicotine Product Days (NPDs) by Tobacco Product Type, Capped at 30 Days (dashed) and Uncapped (solid).

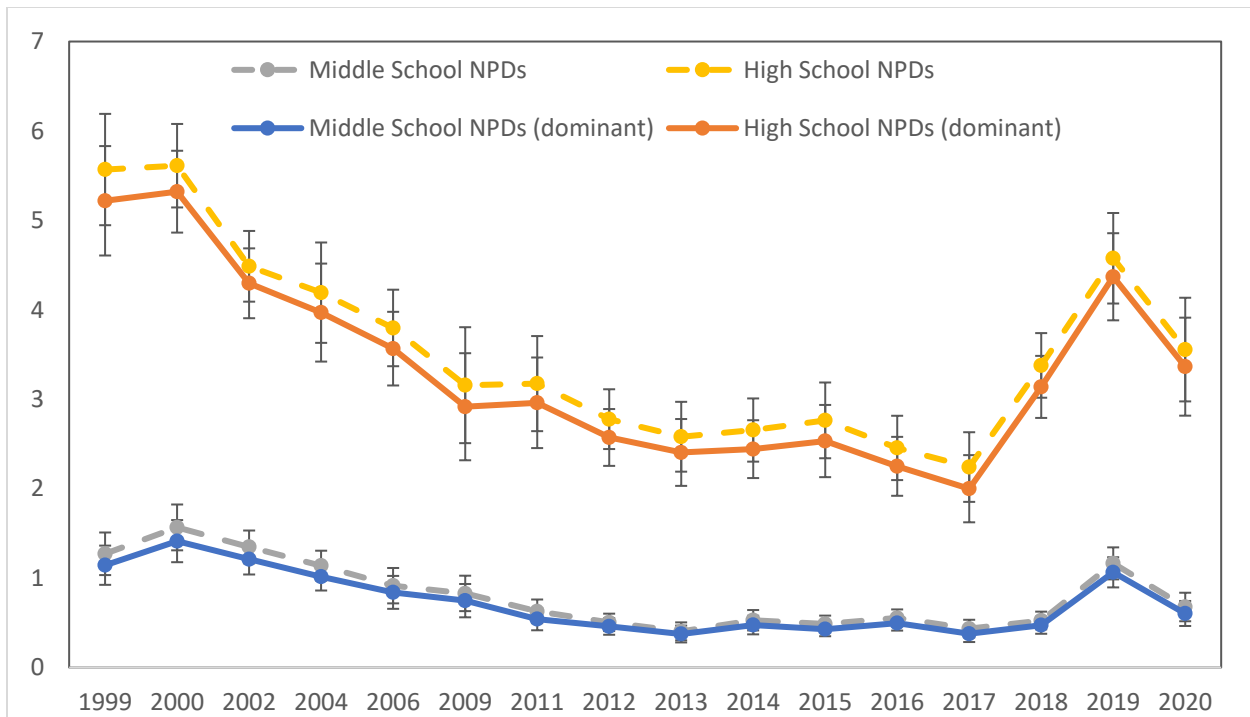
Combustible tobacco includes cigarettes, cigars, hookahs, bidis and kreteks in available years.

Smokeless tobacco includes chewing tobacco, snuff, and dip. For high school students, mean

combustible NPDs (capped and uncapped) are 99.8% correlated, mean smokeless NPDs 98.6%

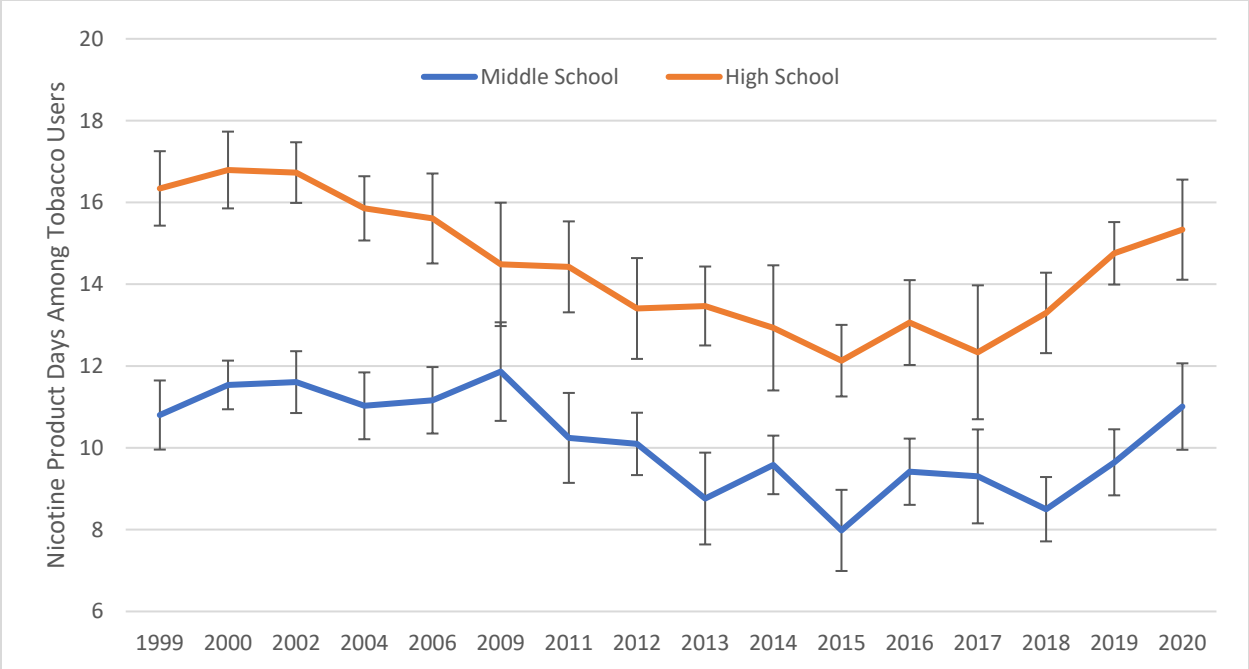
and mean e-cig NPDs 99.9% correlated. For middle school students, these correlations are 99.4%,

97.7% and 99.9%.



eFigure 3. Mean Nicotine Product Days (NPDs) (dashed) and Mean NPDs Estimated by Dominant Product Use (solid).

Mean NPDs for both middle school and high school are 99.9% correlated.



eFigure 4. Mean Nicotine Product Days (NPDs) Among Nicotine Users.

eTable 1. Mean Risk-Adjusted Nicotine Product Days (NPDs) for Middle School Students

Year	Mean risk-adjusted NPDs (95% CI)				
	E-cigarette risk weight				
	0.10	0.25	0.50	0.75	1.0
1999	1.55 (1.25,1.86)	1.55 (1.25,1.86)	1.55 (1.25,1.86)	1.55 (1.25,1.86)	1.55 (1.25,1.86)
2000	1.79 (1.51,2.07)	1.79 (1.51,2.07)	1.79 (1.51,2.07)	1.79 (1.51,2.07)	1.79 (1.51,2.07)
2002	1.71 (1.44,1.99)	1.71 (1.44,1.99)	1.71 (1.44,1.99)	1.71 (1.44,1.99)	1.71 (1.44,1.99)
2004	1.41 (1.19,1.64)	1.41 (1.19,1.64)	1.41 (1.19,1.64)	1.41 (1.19,1.64)	1.41 (1.19,1.64)
2006	1.16 (0.92,1.40)	1.16 (0.92,1.40)	1.16 (0.92,1.40)	1.16 (0.92,1.40)	1.16 (0.92,1.40)
2009	1.10 (0.73,1.47)	1.10 (0.73,1.47)	1.10 (0.73,1.47)	1.10 (0.73,1.47)	1.10 (0.73,1.47)
2011	0.81 (0.60,1.01)	0.81 (0.60,1.01)	0.81 (0.60,1.01)	0.81 (0.60,1.01)	0.81 (0.60,1.01)
2012	0.51 (0.41,0.62)	0.51 (0.41,0.62)	0.51 (0.41,0.62)	0.51 (0.41,0.62)	0.51 (0.41,0.62)
2013	0.46 (0.34,0.58)	0.46 (0.34,0.58)	0.46 (0.34,0.58)	0.46 (0.34,0.58)	0.46 (0.34,0.58)
2014	0.39 (0.26,0.52)	0.42 (0.28,0.56)	0.48 (0.32,0.64)	0.54 (0.36,0.71)	0.59 (0.40,0.79)
2015	0.27 (0.20,0.34)	0.32 (0.24,0.40)	0.39 (0.30,0.49)	0.47 (0.36,0.58)	0.55 (0.42,0.67)
2016	0.53 (0.40,0.67)	0.58 (0.44,0.71)	0.64 (0.49,0.79)	0.71 (0.55,0.87)	0.78 (0.60,0.95)
2017	0.36 (0.24,0.49)	0.39 (0.26,0.53)	0.44 (0.30,0.59)	0.50 (0.34,0.65)	0.55 (0.38,0.72)
2018	0.35 (0.22,0.49)	0.41 (0.26,0.55)	0.49 (0.33,0.66)	0.58 (0.40,0.77)	0.67 (0.46,0.87)
2019	0.57 (0.42,0.73)	0.71 (0.53,0.89)	0.93 (0.71,1.15)	1.16 (0.90,1.41)	1.38 (1.09,1.68)
2020	0.44 (0.30,0.58)	0.50 (0.35,0.66)	0.61 (0.43,0.79)	0.72 (0.51,0.93)	0.83 (0.59,1.06)

eTable 2. Mean Risk-Adjusted Nicotine Product Days (NPDs) for High School Students

Year	Mean risk-adjusted NPDs (95% CI)				
	E-cigarette risk weight				
	0.10	0.25	0.50	0.75	1.0
1999	5.96 (5.35,6.57)	5.96 (5.35,6.57)	5.96 (5.35,6.57)	5.96 (5.35,6.57)	5.96 (5.35,6.57)
2000	5.81 (5.34,6.28)	5.81 (5.34,6.28)	5.81 (5.34,6.28)	5.81 (5.34,6.28)	5.81 (5.34,6.28)
2002	4.71 (4.29,5.13)	4.71 (4.29,5.13)	4.71 (4.29,5.13)	4.71 (4.29,5.13)	4.71 (4.29,5.13)
2004	4.45 (3.85,5.06)	4.45 (3.85,5.06)	4.45 (3.85,5.06)	4.45 (3.85,5.06)	4.45 (3.85,5.06)
2006	3.99 (3.53,4.46)	3.99 (3.53,4.46)	3.99 (3.53,4.46)	3.99 (3.53,4.46)	3.99 (3.53,4.46)
2009	3.19 (2.55,3.82)	3.19 (2.55,3.82)	3.19 (2.55,3.82)	3.19 (2.55,3.82)	3.19 (2.55,3.82)
2011	3.32 (2.77,3.88)	3.32 (2.77,3.88)	3.32 (2.77,3.88)	3.32 (2.77,3.88)	3.32 (2.77,3.88)
2012	2.63 (2.28,2.99)	2.63 (2.28,2.99)	2.63 (2.28,2.99)	2.63 (2.28,2.99)	2.63 (2.28,2.99)
2013	2.53 (2.16,2.91)	2.53 (2.16,2.91)	2.53 (2.16,2.91)	2.53 (2.16,2.91)	2.53 (2.16,2.91)
2014	1.78 (1.49,2.06)	1.93 (1.61,2.25)	2.19 (1.80,2.58)	2.45 (1.99,2.90)	2.70 (2.19,3.22)
2015	1.76 (1.41,2.11)	1.95 (1.56,2.34)	2.26 (1.81,2.71)	2.57 (2.06,3.08)	2.88 (2.31,3.45)
2016	1.98 (1.57,2.38)	2.12 (1.69,2.55)	2.36 (1.88,2.83)	2.59 (2.08,3.11)	2.83 (2.27,3.39)
2017	1.53 (1.24,1.82)	1.67 (1.34,2.00)	1.91 (1.52,2.29)	2.14 (1.70,2.58)	2.38 (1.88,2.87)
2018	1.83 (1.54,2.12)	2.17 (1.84,2.51)	2.74 (2.33,3.16)	3.31 (2.82,3.81)	3.88 (3.31,4.45)
2019	2.03 (1.57,2.49)	2.58 (2.05,3.11)	3.48 (2.84,4.12)	4.39 (3.64,5.14)	5.30 (4.43,6.16)
2020	1.38 (1.02,1.75)	1.81 (1.37,2.24)	2.51 (1.95,3.07)	3.22 (2.54,3.90)	3.92 (3.12,4.72)