Appendix

Table A1
Results for Youth
Dichotomous Nicotine Use in the Past 30 Days
Models with Covariates

	DID				SDID				
	β_{DD}	SE	p-value	N	β_{DD}	SE	p-value	N	Mean Y*
YRBS Age 14+									
Cigars	0.0061	0.0114	0.5898	790,870	0.0071	0.0131	0.5890	96	0.0853
Dual	0.0023	0.0050	0.6521	949,249	0.0138	0.0099	0.1641	96	0.0325
MTF Age 14+ Grades 8, 10 and 12									
Cigars	**0.0248****	**0.0125**	**0.0480**	70,150	0.0296	0.0181	0.1016	296	0.0619
Dual	0.0083	0.0060	0.1644	125,699	0.0063	0.0169	0.7093	296	0.0264
PATH Age 14-17									
Other Nicotine	-0.0007	0.0065	0.9103	49,245	-0.0012	0.0107	0.9092	266	0.0320
Dual	0.0036	0.0058	0.5331	50,028	0.0062	0.0075	0.4092	266	0.0169

* Mean for all the individual level data for each use variable. DID models use microdata and all treatment states, except YRBS does not have data from MA. SDID uses aggregate data. YRBS SDID models include NY MD RI as treatment states. MTF SDID models include MA, MD, NJ, NY as treatment states. PATH SDID models include NY NJ MD UT MA as treatment states. Cigars include cigarillos, and little cigars. Other Nicotine includes cigars, cigarillos, filtered cigars, pipe, smokeless tobacco, hookah, and snus. Dual is use of both e-cigarettes and cigarettes. Covariates are age, white, black, Asian, Hispanic, male, e-cigarette tax, cigarette tax and internet sales bans. *** =P <.01, ** =P <.05, * =P <.1

Table A2
Results for Adults
Dichotomous Nicotine Use in the Past 30 Days
DID and SDID Models with Covariates

	DID				SDID				
	β_{DD}	SE	p-value	N	β_{DD}	SE	p-value	N	Mean Y*
Young Adults 18-24									
BRFSS									
Smokeless	**0.0153*** **	**0.0031**	**0.0000**	202,213	**0.0177*** **	**0.0051**	**0.0005**	441	0.0528
Dual	-0.0059	0.0045	0.1893	89,306	-0.0061	0.0066	0.3529	192	0.0362
PATH									
Other Nicotine	0.0088	0.0197	0.6536	54,397	-0.0005	0.0232	0.9845	304	0.2268
Dual	**0.0170***	**0.0097**	**0.0808**	54,492	0.0006	0.0227	0.9774	304	0.0972
Older Adults Age 25+									
BRFSS									
Smokeless	**-0.0026*** **	**0.0007**	**0.0004**	3,321,048	-0.0016	0.0014	0.2770	441	0.0315
Dual	0.0002	0.0013	0.8823	1,453,631	0.0001	0.0013	0.9430	192	0.0162
PATH									
Other Nicotine	-0.0066	0.0081	0.4153	117,264	0.0084	0.0103	0.4179	304	0.1682
Dual	0.0094	0.0099	0.3408	117,968	0.0082	0.0117	0.4833	304	0.0809

* Mean for all the individual level data for each use variable. DID models use microdata and all treatment states. SDID uses aggregate data. BRFSS SDID includes all treatment states. PATH SDID treatment states are MD, MA, NJ, NY, and UT. Smokeless includes snus, snuff, and chewing tobacco for the BRFSS data. PATH starts in 2014 and excludes 2020. PATH other nicotine includes filtered cigar, cigarillo, traditional cigar, hookah, snus, smokeless, and pipe. Covariates are age, white, black, Asian, Hispanic, male, e-cigarette tax, cigarette tax, and internet sales ban. *** =P <.01, ** =P <.05, * =P <.1

Table A3
Results Without Covariates for Youth
Dichotomous Nicotine Use in the Past 30 Days

	DID				SDID				
	β_{DD}	SE	p-value	N	β_{DD}	SE	p-value	N	Mean Y*
YRBS Age 14+									
E-cigarette	-0.0010	0.0179	0.9563	627,596	0.0040	0.0144	0.7824	100	0.2020
Cigarette	0.0131	0.0136	0.3359	932,314	**0.0222***	**0.0117**	**0.0569**	132	0.0920
Cigar	0.0038	0.0121	0.7519	817,880	0.0102	0.0096	0.2902	96	0.0853
Dual	0.0066	0.0049	0.1810	982,752	**0.0140*****	**0.0038**	**0.0003**	96	0.0325
MTF Age 14+ Grades 8 10 and 12									
E-cigarette	-0.0074	0.0150	0.6229	164,236	**-0.0329***	**0.0173**	**0.0568**	296	0.1390
Cigarette	**0.0110***	**0.0066**	**0.0924**	304,984	-0.0218	0.0280	0.4361	296	0.0493
Cigar	0.0164	0.0102	0.1079	89,885	**0.0295****	**0.0126**	**0.0196**	296	0.0619
Dual	0.0056	0.0044	0.2066	161,871	-0.0073	0.0142	0.6078	296	0.0264
PATH Age 14-17									
E-cigarette	-0.0062	0.0126	0.6250	54,692	0.0054	0.0135	0.6906	266	0.0668
Cigarette	**0.0105***	**0.0061**	**0.0855**	54,815	**0.0174*****	**0.0062**	**0.0053**	266	0.0395
Other Nicotine	-0.0074	0.0074	0.3219	53,757	-0.0035	0.0069	0.6102	266	0.0320
Dual	-0.0016	0.0045	0.7283	54,626	0.0008	0.0045	0.8577	266	0.0169

* Mean for all the individual level data for each use variable. DID models use microdata and all treatment states. SDID uses aggregate data. YRBS SDID models include NY MD RI as treatment states. MTF SDID models include MA, MD, NJ, NY as treatment states. PATH SDID models include NY NJ MD UT MA as treatment states. YRBS data are from are every other year from 2015-2021. MTF and PATH starts in 2014 and excludes 2020. Cigars include cigarillos, and little cigars. Other Nicotine includes cigars, cigarillos, filtered cigars, pipe, smokeless tobacco, hookah, and snus. Dual is use of both e-cigarettes and cigarettes. *** =P <.01, ** =P <.05, * =P <.1

Table A4
Results Without Covariates for Adults
Dichotomous Nicotine Use in the Past 30 Days

	DID				SDID				
	β_{DD}	SE	p-value	N	β_{DD}	SE	p-value	N	Mean Y*
Young Adults 18-24									
BRFSS									
E-cigarette	**-0.0382*** **	**0.0116**	**0.0010**	89,672	**-0.0402*** **	**0.0115**	**0.0005**	192	0.1463
Cigarette	**0.0194*** **	**0.0059**	**0.0010**	201,469	**0.0190*** **	**0.0047**	**0.0001**	441	0.1171
Smokeless	**0.0145*** **	**0.0026**	**0.0000**	202,298	**0.0151*** **	**0.0035**	**0.0000**	441	0.0528
Dual	**-0.0066** **	**0.0028**	**0.0168**	89,328	-0.0064	0.0043	0.1394	192	0.0362
PATH									
E-cigarette	-0.0042	0.0184	0.8194	57,909	-0.0004	0.0186	0.9818	304	0.1902
Cigarette	0.0322	0.0272	0.2362	58,109	**0.0428** **	**0.0209**	**0.0409**	304	0.2469
Other Nicotine	0.0193	0.0205	0.3461	57,793	0.0057	0.0173	0.7408	304	0.2268
Dual	**0.0201*** **	**0.0065**	**0.0020**	57,894	**0.0174***	**0.0090**	**0.0533**	304	0.0972
Older Adults Age 25+									
BRFSS									
E-cigarette	-0.0019	0.0018	0.3090	1,463,370	-0.0027	0.0022	0.2251	192	0.0345
Cigarette	-0.0046	0.0038	0.2319	3,300,290	-0.0020	0.0032	0.5368	441	0.1443
Smokeless	**-0.0025** **	**0.0011**	**0.0164**	3,322,260	**-0.0030*** **	**0.0011**	**0.0068**	441	0.0315
Dual	0.0004	0.0007	0.5955	1,453,868	-0.0004	0.0007	0.6127	192	0.0162
PATH									
E-cigarette	0.0123	0.0134	0.3575	122,321	0.0087	0.0157	0.5793	304	0.1145
Cigarette	0.0015	0.0058	0.7967	123,065	0.0025	0.0077	0.7421	304	0.4023
Other Nicotine	0.0075	0.0059	0.1980	121,550	0.0100	0.0065	0.1262	304	0.1682
Dual	0.0106	0.0088	0.2259	122,284	0.0072	0.0074	0.3284	304	0.0809

* Mean for all the individual level data for each use variable. DID models use microdata and all treatment states. SDID uses aggregate data. BRFSS SDID includes all treatment states. PATH SDID treatment states are MD, MA, NJ, NY, UT. Smokeless includes snus, snuff, and chewing tobacco for the BRFSS data. PATH starts in 2014 and excludes 2020. PATH other nicotine includes filtered cigar, cigarillo, traditional cigar, hookah, snus, smokeless, and pipe. Covariates are age, white, black, Asian, Hispanic, male, e-cigarette tax, cigarette tax, and internet sales ban. *** =P <.01, ** =P <.05, * =P <.1

Table A5
Dichotomous Nicotine Use in the Past 30 Days
Results with Covariates for Male and Female Youth

	DID				SDID				
	β_{DD}	SE	p-value	N	β_{DD}	SE	p-value	N	*Mean Y
MALE YRBS Age 14+									
E-cigarette	0.0006	0.0254	0.9822	297,678	0.0137	0.0304	0.6517	100	0.2042
Cigarette	0.0169	0.0127	0.1826	439,808	**0.0506****	**0.0208**	**0.0151**	132	0.1020
Cigar	0.0113	0.0141	0.4210	387,806	**0.0228***	**0.0126**	**0.0703**	96	0.1128
Dual	0.0040	0.0059	0.5047	466,694	**0.0195***	**0.0110**	**0.0769**	96	0.0362
FEMALE YRBS Age 14+									
E-cigarette	-0.0119	0.0243	0.6236	308,727	-0.0264	0.0330	0.4245	100	0.1985
Cigarette	0.0125	0.0094	0.1799	462,674	**0.0222****	**0.0109**	**0.0417**	132	**0.0807**
Cigar	0.0008	0.0090	0.9286	403,064	-0.0051	0.0111	0.6446	96	0.0565
Dual	0.0007	0.0046	0.8842	482,555	0.0091	0.0131	0.4879	96	0.0281
MALE MTF Age 14+ Grades 8 10 and 12									
E-cigarette	-0.0019	0.0211	0.9282	62,298	0.0010	0.0293	0.9735	296	0.1418
Cigarette	**0.0318*****	**0.0101**	**0.0017**	115,955	0.0141	0.0235	0.5493	296	0.0513
Other Nicotine	**0.0468****	**0.0202**	**0.0208**	34,014	0.0078	0.0223	0.7251	288	0.0774
Dual	**0.0128***	**0.0071**	**0.0721**	61,430	0.0040	0.0199	0.8413	296	0.0292
FEMALE MTF Age 14+ Grades 8 10 and 12									
E-cigarette	-0.0236	0.0163	0.1476	65,096	-0.0387	0.0257	0.1321	296	0.1337
Cigarette	0.0096	0.0084	0.2563	118,701	-0.0107	0.0240	0.6570	296	0.0436
Cigar	0.0065	0.0088	0.4592	36,136	0.0090	0.0114	0.4287	288	0.0448
Dual	0.0040	0.0072	0.5751	64,269	-0.0089	0.0241	0.7133	296	0.0221
MALE PATH Age 14-17									
E-cigarette	-0.0121	0.0185	0.5134	25,886	0.0014	0.0250	0.9568	266	0.0704
Cigarette	0.0102	0.0132	0.4388	25,935	0.0194	0.0204	0.3410	266	0.0422
Cigar	0.0083	0.0111	0.4556	25,352	-0.0007	0.0144	0.9590	266	0.0430
Dual	-0.0022	0.0091	0.8075	25,847	0.0035	0.0115	0.7587	266	0.0183
FEMALE PATH Age 14-17									
E-cigarette	0.0045	0.0158	0.7762	24,196	0.0251	0.0230	0.2747	266	0.0661
Cigarette	**0.0252*****	**0.0088**	**0.0043**	24,254	0.0265	0.0169	0.1170	266	0.0419
Cigar	-0.0088	0.0083	0.2904	23,893	-0.0034	0.0137	0.8065	266	0.0254
Dual	**0.0102***	**0.0053**	**0.0550**	24,181	0.0131	0.0103	0.2058	266	0.0172

* Mean for all the individual level data for each use variable. DID models use microdata and all treatment states. SDID uses aggregate data. YRBS SDID models include NY MD RI as treatment states. MTF SDID models include MA, MD, NJ, NY as treatment states. YRBS data are from are every other year from 2015-2021. MTF starts in 2014 and excludes 2020. Cigars include cigarillos, and little cigars. Dual is use of both e-cigarettes and cigarettes. Covariates are age, white, black, Asian, Hispanic, male, e-cigarette tax, cigarette tax and internet sales bans. *** =P <.01, ** =P <.05, * =P <.1

Table A6
Dichotomous Nicotine Use in the Past 30 Days
Results with Covariates for Male and Female Adults

	DID				SDID				
	β_{DD}	SE	p-value	N	β_{DD}	SE	p-value	N	*Mean Y
Young Adults 18-24									
MALE BRFSS									
E-cigarette	**-0.0352****	**0.0148**	**0.0177**	49,020	-0.0257	0.0179	0.1508	192	0.1709
Cigarette	**0.0203*****	**0.0064**	**0.0014**	108,544	**0.0267*****	**0.0068**	**0.0001**	441	0.1315
Cigar	**0.0274*****	**0.0053**	**0.0000**	109,071	**0.0293*****	**0.0086**	**0.0006**	441	0.0852
Dual	**-0.0106***	**0.0054**	**0.0512**	48,802	-0.0120	0.0085	0.1587	192	0.0443
FEMALE BRFSS									
E-cigarette	-0.0284	0.0175	0.1051	40,630	-0.0284	0.0193	0.1413	192	0.1166
Cigarette	**0.0216*****	**0.0056**	**0.0001**	92,841	**0.0141****	**0.0068**	**0.0372**	441	0.1002
Cigar	0.0012	0.0030	0.7009	93,142	0.0026	0.0037	0.4854	441	0.0147
Dual	-0.0004	0.0052	0.9439	40,504	-0.0004	0.0064	0.9537	192	0.0265
MALE PATH									
E-cigarette	0.0135	0.0160	0.3996	27,034	-0.0211	0.0407	0.6043	304	0.2218
Cigarette	0.0290	0.0283	0.3053	27,132	0.0186	0.0520	0.7201	304	0.2812
Other Nicotine	0.0366	0.0281	0.1938	26,951	0.0094	0.0393	0.8102	304	0.2857
Dual	0.0280	0.0173	0.1063	27,026	-0.0244	0.0406	0.5475	304	0.1189
FEMALE PATH									
E-cigarette	-0.0129	0.0228	0.5717	27,470	0.0113	0.0386	0.7702	304	0.1591
Cigarette	0.0192	0.0324	0.5543	27,559	0.0407	0.0373	0.2758	304	0.2133
Cigar	-0.0198	0.0170	0.2433	27,446	-0.0162	0.0228	0.4755	304	0.1687
Dual	0.0045	0.0115	0.6922	27,466	0.0177	0.0184	0.3377	304	0.0758
Older Adults Age 25+									
MALE BRFSS									
E-cigarette	-0.0028	0.0044	0.5275	651,104	-0.0257	0.0179	0.1508	192	0.0391
Cigarette	-0.0023	0.0059	0.6999	1,447,291	**0.0267*****	**0.0068**	**0.0001**	441	0.1569
Cigar	-0.0017	0.0013	0.1876	1,457,338	**0.0293*****	**0.0086**	**0.0006**	441	0.0610
Dual	-0.0009	0.0016	0.5418	646,744	-0.0120	0.0085	0.1587	192	0.0174
FEMALE BRFSS									
E-cigarette	-0.0005	0.0035	0.8936	812,020	0.0009	0.0036	0.8032	192	0.0307
Cigarette	-0.0081	0.0049	0.1003	1,851,843	-0.0031	0.0042	0.4643	441	0.1344
Cigar	-0.0008	0.0008	0.2878	1,863,710	-0.0009	0.0010	0.3949	441	0.0084
Dual	0.0011	0.0014	0.4493	806,887	0.0017	0.0014	0.2206	192	0.0153
MALE PATH									
E-cigarette	0.0166	0.0188	0.3758	57,296	0.0188	0.0272	0.4892	304	0.1137
Cigarette	0.0133	0.0113	0.2395	57,612	-0.0017	0.0232	0.9400	304	0.4092
Other Nicotine	-0.0175	0.0128	0.1713	56,859	0.0151	0.0196	0.4423	304	0.2481
Dual Use	0.0008	0.0117	0.4911	57,274	0.0075	0.0195	0.6988	304	0.0784
FEMALE PATH									
E-cigarette	0.0109	0.0166	0.5115	60,705	-0.0020	0.0141	0.8879	304	0.1154
Cigarette	**-0.0193***	**0.0109**	**0.0759**	61,091	-0.0051	0.0206	0.8053	304	0.3962
Cigars	0.0016	0.0073	0.8294	60,405	-0.0019	0.0117	0.8696	304	0.0925
Dual	0.0117	0.0092	0.2051	60,694	0.0078	0.0100	0.4352	304	0.0833

* Mean for all the individual level data for each use variable. DID models use microdata and all treatment states. SDID uses aggregate data. BRFSS SDID includes all treatment states. PATH SDID treatment states are MD, MA, NJ, NY, UT. Smokeless includes snus, snuff, and chewing tobacco for the BRFSS data. PATH starts in 2014 and excludes 2020. PATH other nicotine includes filtered cigar, cigarillo, traditional cigar, hookah, snus, smokeless, and pipe. Covariates are age, white, black, Asian, Hispanic, male, e-cigarette tax, cigarette tax, and internet sales ban.
*** =P <.01, ** =P <.05, * =P <.1

Table A7
Dichotomous Nicotine Use in the Past 30 Days
Results with Covariates for White, Black, and Hispanic Youth

	DID				SDID				
	β_{DD}	SE	p-value	N	β_{DD}	SE	p-value	N	*Mean Y
WHITE, YRBS Age 14+									
E-cigarette	0.0017	0.0283	0.9532	338,521	-0.0248	0.0240	0.3020	100	0.2127
Cigarette	0.0139	0.0125	0.2680	493,452	**0.0239****	**0.0115**	**0.0373**	132	0.1013
Cigar	0.0069	0.0133	0.6058	451,910	0.0024	0.0094	0.7959	96	0.0825
Dual	0.0023	0.0070	0.7397	517,769	0.0111	0.0152	0.4647	100	0.0378
BLACK, YRBS Age 14+									
E-cigarette	-0.0068	0.0190	0.7216	79,736	-0.0050	0.0370	0.8934	100	0.1408
Cigarette	0.0149	0.0171	0.3848	124,979	0.0099	0.0183	0.5898	132	0.0526
Cigar	0.0046	0.0244	0.8497	110,981	0.0087	0.0277	0.7541	96	0.0861
Dual	0.0034	0.0036	0.3471	132,127	0.0010	0.0135	0.9383	100	0.0132
HISPANIC, YRBS Age 14+									
E-cigarette	-0.0017	0.0331	0.9591	105,519	-0.0264	0.0344	0.4432	100	0.2191
Cigarette	0.0200	0.0223	0.3698	163,723	0.0204	0.0157	0.1956	132	0.0921
Cigar	0.0110	0.0191	0.5648	135,591	0.0043	0.0198	0.8279	96	0.0897
Dual	0.0091	0.0065	0.1604	173,656	0.0082	0.0140	0.5584	100	0.0303
WHITE, MTF Age 14+ Grades 8 10 and 12									
E-cigarette	-0.0205	0.0138	0.1371	95,042	-0.0292	0.0290	0.3129	296	0.1668
Cigarette	**0.0185***	**0.0108**	**0.0868**	170,613	-0.0122	0.0282	0.6668	296	0.0595
Cigar	0.019	0.0193	0.3229	52,089	0.0255	0.0201	0.2036	296	0.0675
Dual	0.0079	0.0084	0.3474	93,994	0.0044	0.0174	0.8029	296	0.0335
BLACK, MTF Age 14+ Grades 8 10 and 12									
E-cigarette	-0.0268	0.0395	0.4975	25,298	0.0064	0.0766	0.9334	248	0.0943
Cigarette	0.0103	0.0124	0.4060	48,680	**0.0270****	**0.0126**	**0.0319**	248	0.0316
Cigar	**0.0576***	**0.0294**	**0.0501**	14,135	**0.0477***	**0.0248**	**0.0546**	240	0.0585
Dual	0.0047	0.0172	0.7860	24,773	0.0159	0.0134	0.2363	240	0.0137
HISPANIC, MTF Age 14+ Grades 8 10 and 12									
E-cigarette	**0.0338****	**0.0165**	**0.0407**	40,313	0.0076	0.0172	0.6606	248	0.1199
Cigarette	**0.0234***	**0.0122**	**0.0544**	75,449	**0.0378*****	**0.0105**	**0.0003**	248	0.0387
Cigar	**0.0308***	**0.0172**	**0.0726**	21,865	**0.0296****	**0.0147**	**0.0435**	248	0.0591
Dual	0.0118	0.0086	0.1695	39,694	0.0120	0.0108	0.2645	248	0.0199
WHITE, PATH Age 14-17									
E-cigarette	-0.0133	0.0192	0.4876	34,648	0.0139	0.0181	0.4439	259	0.0806
Cigarette	**0.0174***	**0.0095**	**0.0658**	34,715	**0.0204***	**0.0116**	**0.0780**	259	0.0477
Other Nicotine	0.0003	0.0078	0.9642	34,146	-0.0030	0.0089	0.7353	259	0.0369
Dual	0.0022	0.0062	0.7197	34,618	0.0011	0.0077	0.8909	259	0.0214
BLACK, PATH Age 14-17									
E-cigarette	-0.0041	0.0312	0.8950	8,444	-0.0827	0.1108	0.4557	217	0.0307
Cigarette	0.0163	0.0170	0.3381	8,467	0.0082	0.0145	0.5727	217	0.0249
Other Nicotine	-0.0210	0.0252	0.4049	8,227	-0.0059	0.0322	0.8555	217	0.0312
Dual	0.0025	0.0046	0.5846	8,429	-0.0039	0.0046	0.3958	217	0.0057
HISPANIC, PATH Age 14-17									
E-cigarette	0.0016	0.0303	0.9571	16,242	0.0087	0.0283	0.7593	252	0.0514
Cigarette	0.0113	0.0364	0.7558	16,292	0.0236	0.0292	0.4195	252	0.0322
Other Nicotine	-0.0230	0.0159	0.1471	15,948	-0.0521	0.0341	0.1266	252	0.0261
Dual	0.0005	0.0055	0.9309	16,217	-0.0094	0.0110	0.3912	252	0.0120

* Mean for all the individual level data for each use variable. DID models use microdata and all treatment states. SDID uses aggregate data. YRBS SDID models include NY MD RI as treatment states. MTF SDID models include MA, MD, NJ, NY as treatment states. YRBS data are from are every other year from 2015-2021. MTF starts in 2014 and excludes 2020. Cigars include cigarillos, and little cigars. Dual is use of both e-cigarettes and cigarettes. Covariates are age, male, e-cigarette tax, cigarette tax and internet sales bans. *** =P <.01, ** =P <.05, * =P <.1

Table A8
Dichotomous Nicotine Use in the Past 30 Days
Results with Covariates for White, Black, and Hispanic Adults

	DID				SDID				
	β_{DD}	SE	p-value	N	β_{DD}	SE	p-value	N	*Mean Y
Young Adults 18-24									
WHITE, BRFSS									
E-cigarette	-0.0234	0.0206	0.2555	54,474	-0.0153	0.0201	0.4472	192	0.1600
Cigarette	**0.0163***	**0.0089**	**0.0667**	123,854	0.0146	0.0096	0.1300	441	0.1279
Smokeless	**0.0146*****	**0.0046**	**0.0014**	124,244	**0.0126***	**0.0076**	**0.0968**	**441**	0.0642
Dual	-0.0089	0.0066	0.1733	54,282	-0.0087	0.0064	0.1744	192	0.0404
BLACK, BRFSS									
E-cigarette	**-0.0551***	**0.0333**	**0.0983**	8,143	-0.0395	0.0379	0.2975	184	0.0890
Cigarette	0.0105	0.0162	0.5165	18,082	-0.0034	0.0196	0.8618	414	0.0810
Smokeless	0.0006	0.0079	0.9444	18,129	-0.0021	0.0083	0.7994	414	0.0203
Dual	-0.0066	0.0182	0.7143	8,116	-0.0221	0.0189	0.2421	184	0.0179
HISPANIC, BRFSS									
E-cigarette	-0.0289	0.0190	0.1286	14,882	**-0.0399****	**0.0182**	**0.0280**	**192**	0.1275
Cigarette	**0.0173***	**0.0098**	**0.0790**	32,555	**0.0304****	**0.0143**	**0.0337**	**441**	0.0958
Smokeless	0.0090	0.0060	0.1344	32,774	0.0064	0.0126	0.6104	441	0.0346
Dual	0.0039	0.0103	0.7050	14,818	0.0127	0.0182	0.4861	192	0.0298
WHITE, PATH									
E-cigarette	-0.0071	0.0166	0.6679	36,963	-0.0092	0.0312	0.7671	304	0.2132
Cigarette	0.0165	0.0292	0.5737	37,084	0.0176	0.0476	0.7114	304	0.2650
Other Nicotine	0.0202	0.0202	0.3157	36,905	0.0267	0.0351	0.4467	304	0.2169
Dual	0.0057	0.0112	0.6118	36,956	-0.0085	0.0241	0.7237	304	0.1125
BLACK, PATH									
E-cigarette	0.0382	0.0817	0.6405	9,828	0.0112	0.0328	0.7333	200	0.1130
Cigarette	0.0222	0.0428	0.6042	9,793	0.0507	0.0415	0.2217	200	0.2059
Other Nicotine	0.0177	0.0254	0.4859	9,780	0.0076	0.0211	0.7183	200	0.2803
Dual	0.0090	0.0427	0.8336	9,769	-0.0117	0.0460	0.7984	200	0.0502
HISPANIC, PATH									
E-cigarette	-0.0059	0.0481	0.9025	15,866	0.0329	0.0480	0.4935	248	0.1652
Cigarette	0.0365	0.0469	0.4357	15,797	0.1164	0.0818	0.1549	248	0.2059
Other Nicotine	0.0229	0.0281	0.4162	15,790	**0.0986****	**0.0461**	**0.0323**	248	0.1933
Dual	-0.0166	0.0357	0.6417	15,772	-0.0059	0.0666	0.9291	248	0.0778

* Mean for all the individual level data for each use variable. DID models use microdata and all treatment states. SDID uses aggregate data. BRFSS SDID includes all treatment states. PATH SDID treatment states are MD, MA, NJ, NY, UT. Smokeless includes snus, snuff, and chewing tobacco for the BRFSS data. PATH starts in 2014 and excludes 2020. PATH other nicotine includes filtered cigar, cigarillo, traditional cigar, hookah, snus, smokeless, and pipe. Covariates are age, male, e-cigarette tax, cigarette tax, and internet sales ban. *** =P <.01, ** =P <.05, * =P <.1

Table A9
Dichotomous Nicotine Use in the Past 30 Days
Results with Covariates for White, Black, and Hispanic Adults

	DID				SDID				
	β_{DD}	SE	p-value	N	β_{DD}	SE	p-value	N	*Mean Y
Older Adults 25+									
WHITE, BRFSS									
E-cigarette	-0.0008	0.0035	0.8198	1,122,404	-0.0016	0.0031	0.5960	192	0.0340
Cigarette	-0.0043	0.0053	0.4159	2,545,406	-0.0036	0.0049	0.4609	441	0.1390
Smokeless	**-0.0029*** **	**0.0006**	**0.0000**	2,559,786	**-0.0030****	**0.0013**	**0.0233**	441	0.0327
Dual	-0.0001	0.0016	0.9709	1,115,766	-0.0010	0.0015	0.5022	192	0.0160
BLACK, BRFSS									
E-cigarette	-0.0054	0.0054	0.3166	116,002	-0.0103	0.0063	0.1015	192	0.0272
Cigarette	-0.0028	0.0104	0.7859	262,257	-0.0169	0.0119	0.1553	441	0.1731
Smokeless	0.0030	0.0030	0.3116	264,094	-0.0001	0.0065	0.9885	441	0.0223
Dual	-0.0034	0.0040	0.3976	115,080	**-0.0106****	**0.0052**	**0.0415**	192	0.0137
HISPANIC, BRFSS									
E-cigarette	-0.0099	0.0059	0.0963	102,025	-0.0122	0.0084	0.1444	192	0.0357
Cigarette	-0.0108	0.0089	0.2236	224,692	-0.0026	0.0134	0.8486	441	0.1328
Smokeless	**-0.0034****	**0.0015**	**0.0238**	226,880	**-0.0069****	**0.0032**	**0.0321**	441	0.0206
Dual	-0.0006	0.0046	0.8985	101,296	0.0037	0.0052	0.4751	192	0.0149
WHITE, PATH									
E-cigarette	0.0143	0.0170	0.4015	88,443	0.0018	0.0159	0.9075	304	0.1191
Cigarette	-0.0001	0.0096	0.9945	88,959	0.0014	0.0134	0.9188	304	0.3961
Other Nicotine	-0.0032	0.0103	0.7563	87,900	0.0142	0.0090	0.1161	304	0.1530
Dual	0.0090	0.0106	0.3959	88,422	0.0040	0.0118	0.7345	304	0.0843
BLACK, PATH									
E-cigarette	-0.0267	0.0326	0.4124	20,060	0.0557	0.0469	0.2354	240	0.0893
Cigarette	0.0160	0.0359	0.6549	19,902	-0.0139	0.0392	0.7226	240	0.4529
Other Nicotine	0.0173	0.0165	0.2936	19,892	0.0061	0.0180	0.7359	240	0.2319
Dual	-0.0149	0.0313	0.6344	19,815	-0.0328	0.0385	0.3937	240	0.0637
HISPANIC, PATH									
E-cigarette	0.0250	0.0354	0.4803	19,953	0.0471	0.0452	0.2978	232	0.1001
Cigarette	0.0289	0.0222	0.1935	19,842	-0.0103	0.0392	0.7936	232	0.3522
Other Nicotine	0.0114	0.0145	0.4322	19,830	0.0006	0.0239	0.9785	232	0.1366
Dual	-0.0189	0.0260	0.4657	19,699	-0.0641	0.0443	0.1478	232	0.0668

* Mean for all the individual level data for each use variable. DID models use microdata and all treatment states. SDID uses aggregate data. BRFSS SDID includes all treatment states. PATH SDID treatment states are MD, MA, NJ, NY, UT. Smokeless includes snus, snuff, and chewing tobacco for the BRFSS data. PATH starts in 2014 and excludes 2020. PATH other nicotine includes filtered cigar, cigarillo, traditional cigar, hookah, snus, smokeless, and pipe. Covariates are age, male, e-cigarette tax, cigarette tax, and internet sales ban. *** =P <.01, ** =P <.05, * =P <.1

Table A10 Data Sets			
Data/Type	**Sample Population**	**Approximate Sample Size**	**Time Period**
YRBSS/ In school survey	Youths 14+, 9th through 12th grade	150,000 per year, with state representative samples	E-cigarette and Dual: biennial 2015- 2021. Cigarette and other nicotine: biennial 2011-2021
MTF*/ In school survey	Youths 14+ 8th, 10th, and 12th grade students	45,000 per year	All outcomes for 2014 – 2022, 2020 was dropped, 50% of the students were not asked about e-cigarettes
PATH*/ At home survey	Youths 12-17, Young Adults 18-24, Adults 25+	13,000 youths per year 8,000 young adults 16,900 adults per year	All outcomes for 2014 – 2021, 2020 was dropped
BRFSS/ Telephone survey	Young Adults 18-24, Adults 25+	24,000 young adults per year 410,000 adults per year state representative samples	E-cigarette and Dual: 2016, 2017, 2021, 2022 Cigarette and other nicotine: 2014-2022
* Restricted version used and includes state of residence. All outcomes include e-cigarettes, cigarettes, other nicotine (which depends on the survey) and dual e-cigarette and cigarette use. All outcomes are defined as use in the past 30 days. 2020 was dropped due to collection issue which resulted from the COVID-19 pandemic.			

Table A11 Weighted Descriptive Data on Tobacco Use in all Included States		
Variable	2015	2021
Youth		
YRBS		
E-cigarette	0.2288	0.1798
Cigarette	0.1108	0.0403
Cigars	0.1029	0.0311
Dual	0.0751	0.0350
MTF		
E-cigarette	0.1423	0.1315
Cigarette	0.0705	0.0196
Cigars	0.0908	0.0220
Dual	0.0412	0.0157
PATH Age 14-17		
E-cigarette	0.0521	0.0605
Cigarette	0.0542	0.0123
Other nicotine	0.0470	0.0091
Dual	0.0204	0.0087
Young Adult		
BRFSS Age 18-24		
E-cigarette	0.0887	0.1791
Cigarette	0.1267	0.0611
Smokeless	0.0475	0.0339
Dual	0.0339	0.0322
Path Age 18-24		
E-cigarette	0.1608	0.1834
Cigarette	0.3361	0.0984
Other nicotine	0.3236	0.0955
Dual	0.1056	0.0563
Adult		
BRFSS Age 25+		
E-cigarette	0.0345	0.0401
Cigarette	0.1537	0.1292
Smokeless	0.0289	0.0273
Dual	0.0204	0.0146
Path Age 25+		
E-cigarette	0.1143	0.1026
Cigarette	0.4336	0.2950
Other nicotine	0.1947	0.1310
Dual	0.0876	0.0536
All BRFSS data are for 2016 rather than 2015. Path uses single-wave weights		

Table A12
Descriptive Data on Tobacco Policy

	Treatment States		All Other States	
Variable	2015	2021	2015	2021
State Tobacco Tax	3.1675	3.4040	1.1231	1.3804
Percent of States with an E-Cigarette Tax	0.0000	0.9365	0.0594	0.4935
Percent with an Internet Sales Ban	0.0000	0.5871	0.0059	0.0572
Treatment states are NY NJ MD UT RI MA.				

Table A13
Weighted Descriptive Data on Demographics in all Included States for Youth Age 14-17

	YRBS		MTF		PATH	
	2015	2021	2015	2021	2015	2021
White	0.6078	0.5650	0.6527	0.6645	0.6980	0.6747
Black	0.1353	0.1389	0.1549	0.1461	0.1583	0.1543
Hispanic	0.1472	0.1839	0.2065	0.2106	0.2256	0.2584
Asian	0.0355	0.0386	0.0025	0.0054	0.0496	0.0547
Male	0.5087	0.5080	0.4772	0.4943	0.5185	0.5124
Age	15.9986	15.7783	16.3744	15.9702	15.4685	15.4782
Path data uses single-wave weights.						

Table A14
Weighted Descriptive Data on Demographics in all Included States for Adults

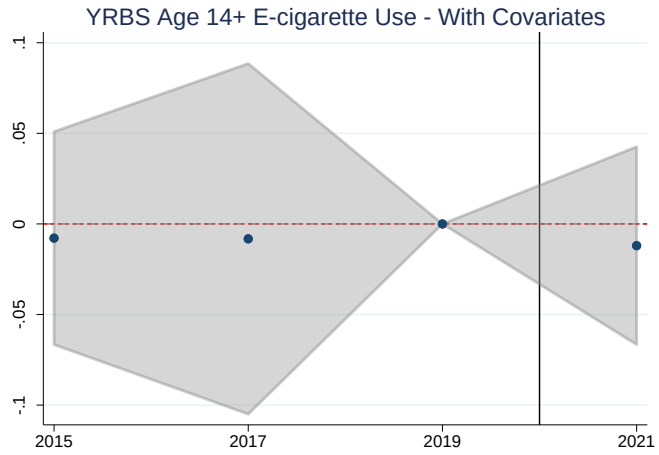
Young Adults 18-24				
	BRFSS		Path	
	2016	2021	2015	2021
White	0.5230	0.5038	0.6978	0.6964
Black	0.1206	0.0971	0.1519	0.1574
Hispanic	0.2180	0.2411	0.2114	0.2297
Asian	0.0749	0.0825	0.0749	0.0552
Male	0.5370	0.5479	0.5007	0.5044
Age	21.2062	21.1669	21.0551	21.0086
Older Adults 25+				
	BRFSS		Path	
	2016	2021	2015	2021
White	0.6822	0.6652	0.7859	0.7708
Black	0.1012	0.1018	0.1235	0.1270
Hispanic	0.1291	0.1283	0.1452	0.1595
Asian	0.0322	0.0360	0.0525	0.0588
Male	0.4600	0.4757	0.4752	0.4746
Age	53.4049	54.6412	50.9946	51.9253
Path data uses single-wave weights.				

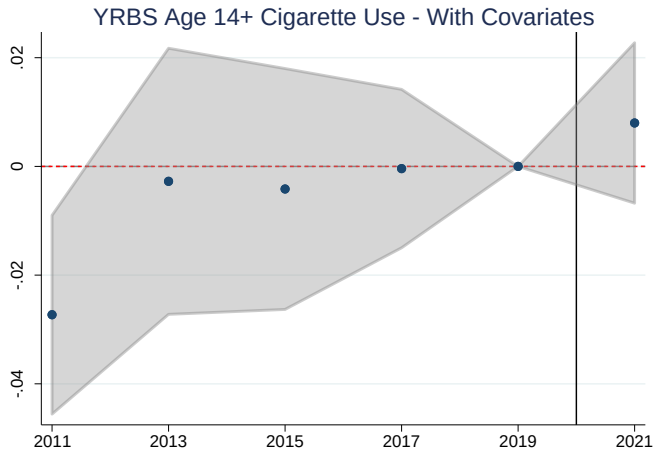
DID Event Study Plots

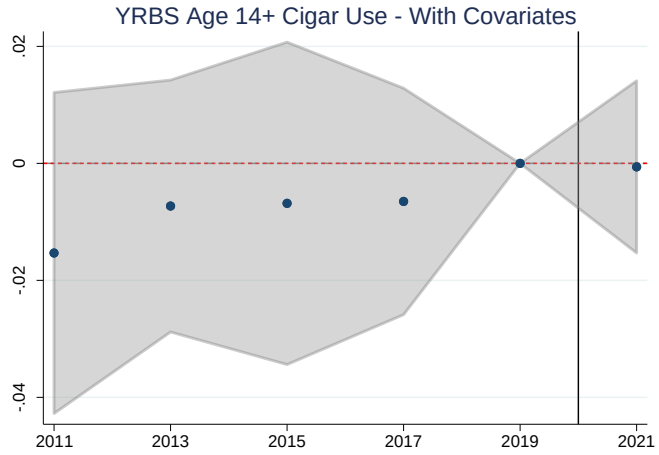
The event studies are for the models in table 3. Note that DID event studies are plots of coefficients from regression models with lead and lag treatment variables. The time period prior to the intervention is omitted. The shaded area in the graphs is the 95% confidence interval based on bootstrap methods.

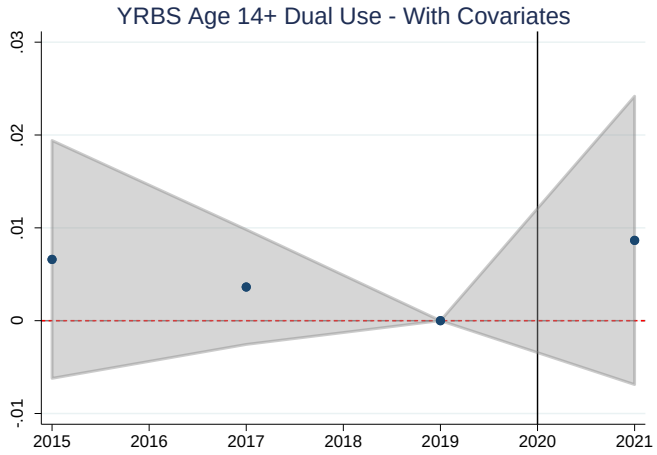
Youth Event Study Plots

Youth DID YRBS









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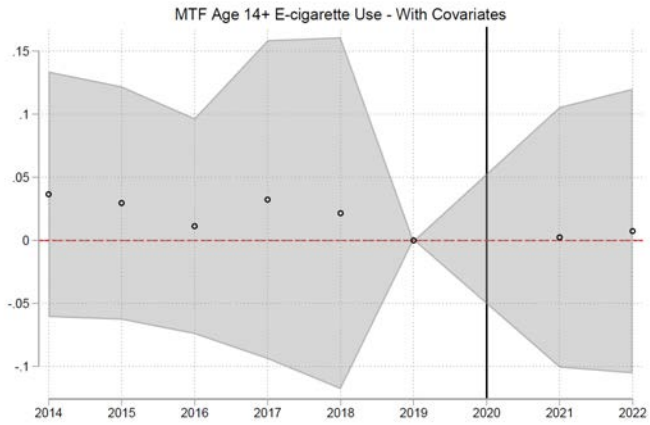
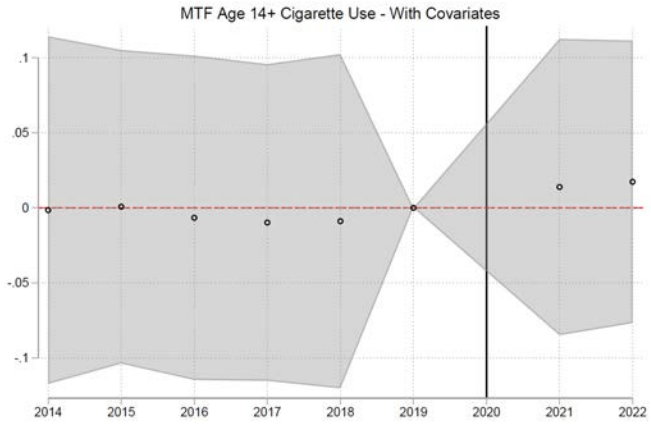
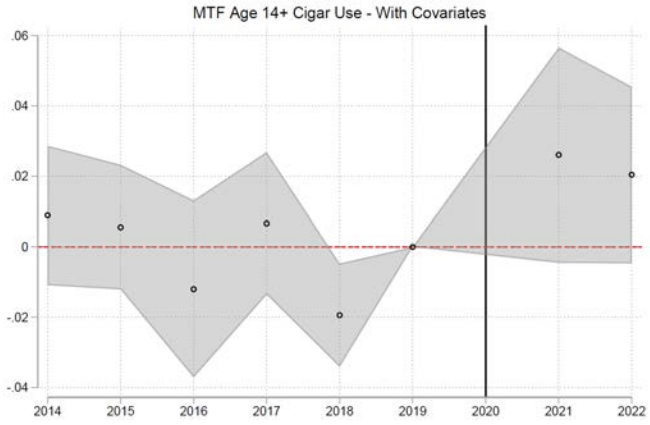
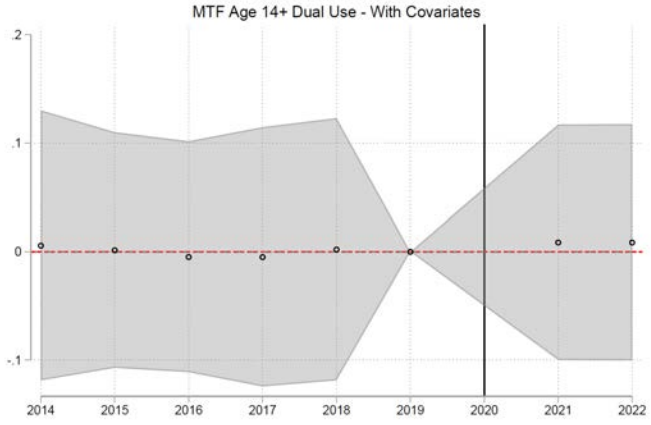
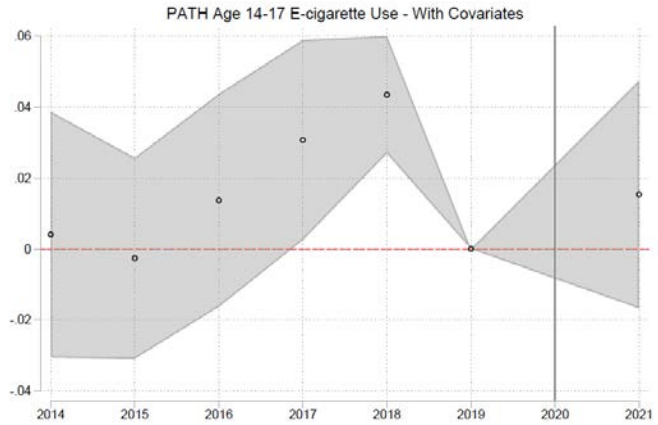


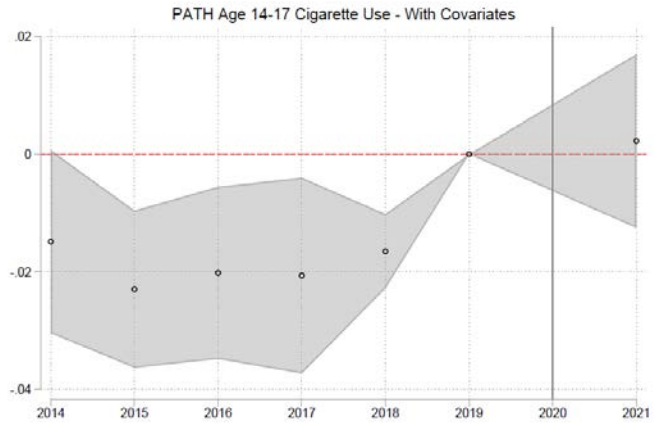


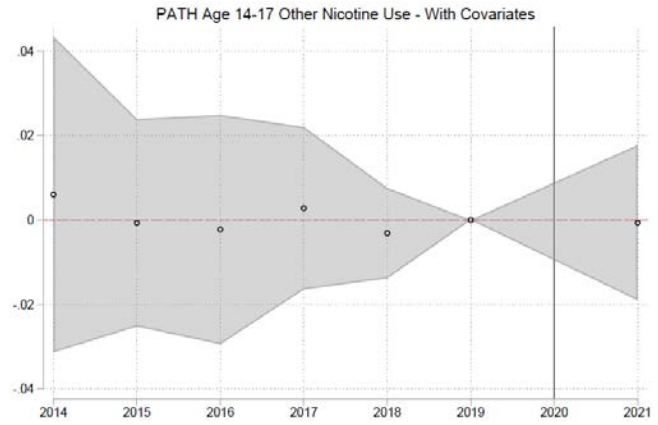


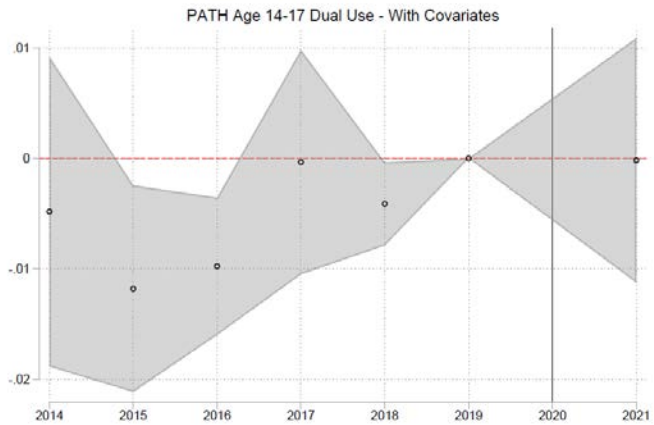


Youth DID PATH



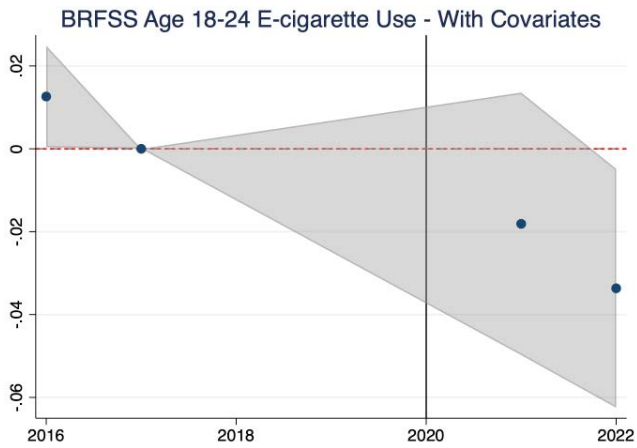


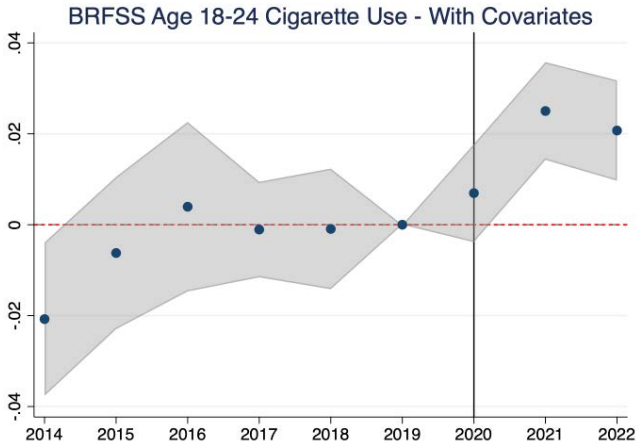


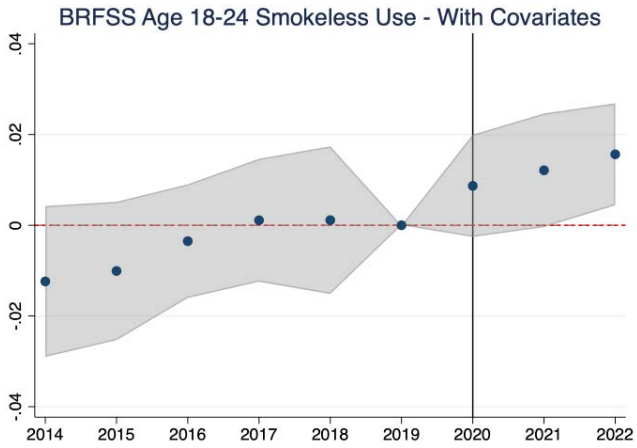


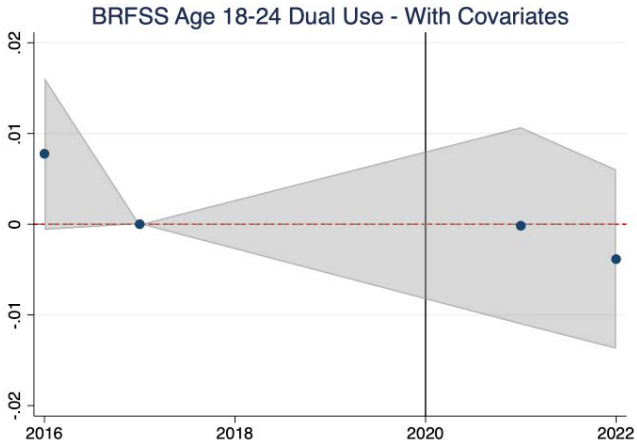
Age 18-24 Event Study Plots

Age 18-24 BRFSS DID

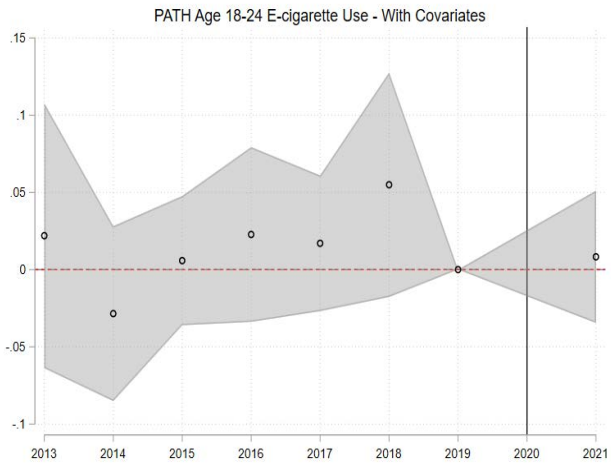


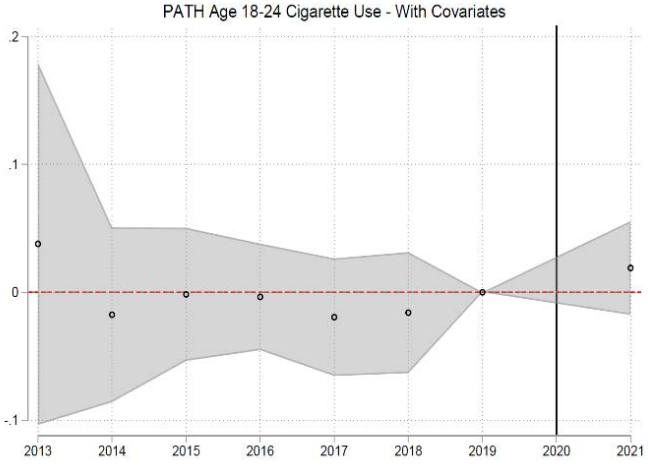


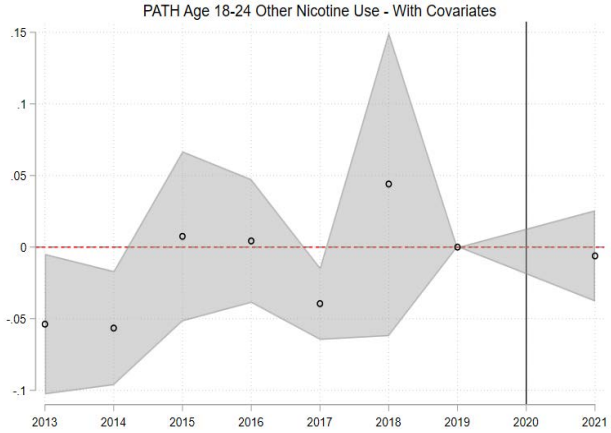


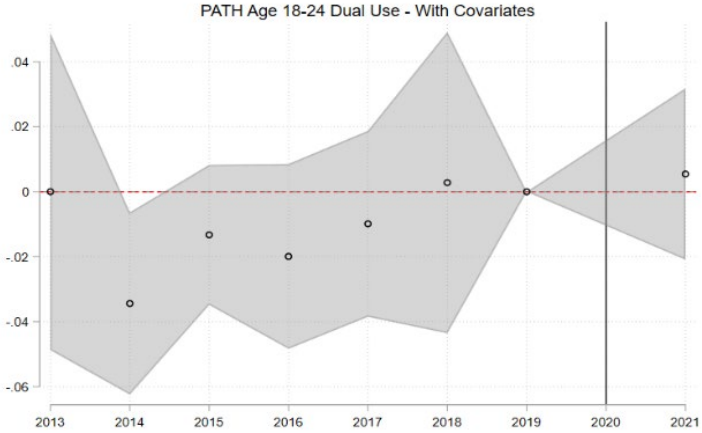


Age 18-24 PATH DID



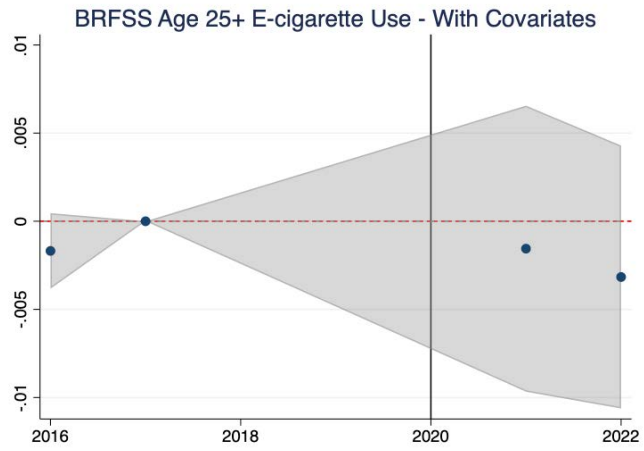


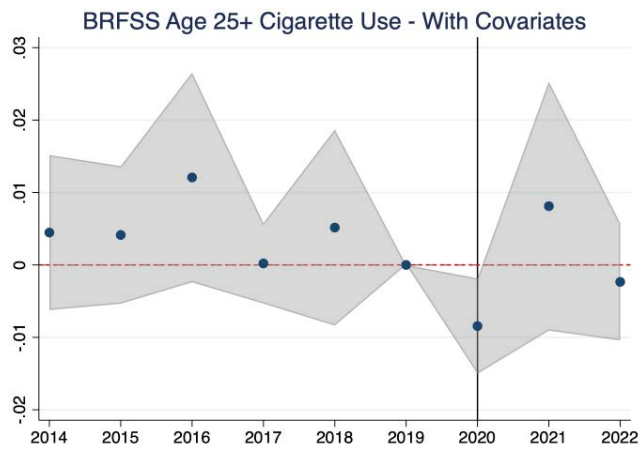


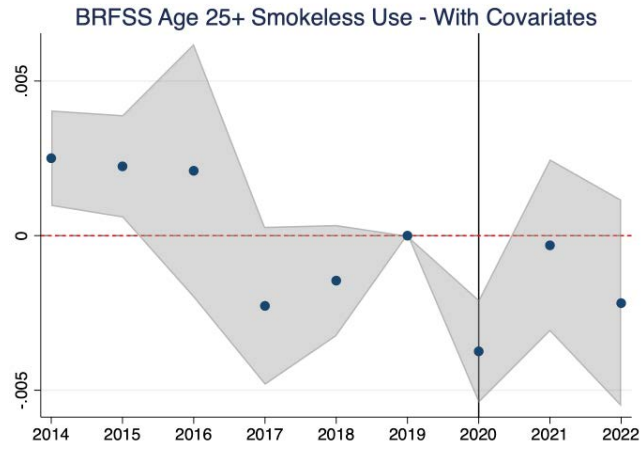


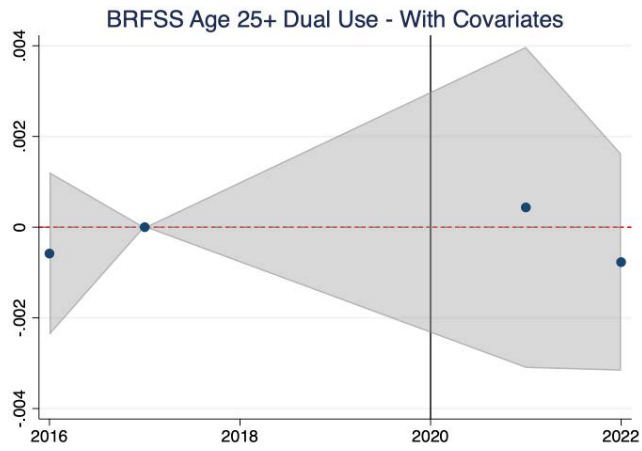
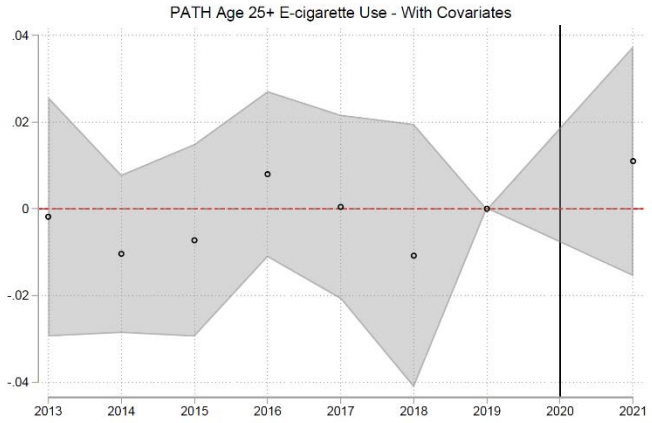
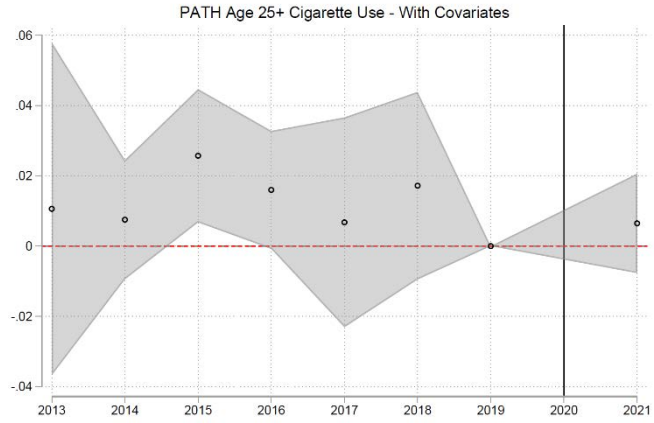
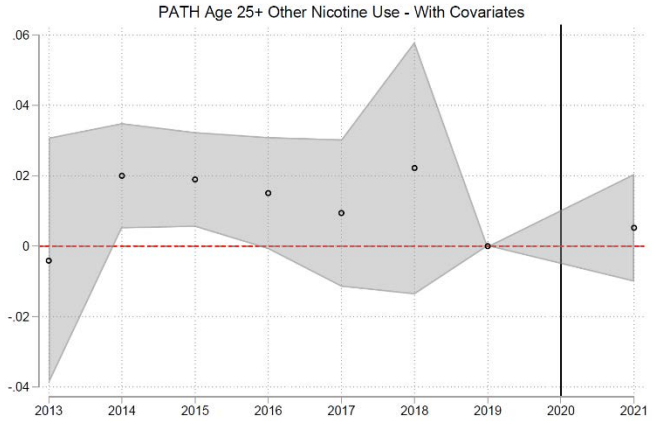
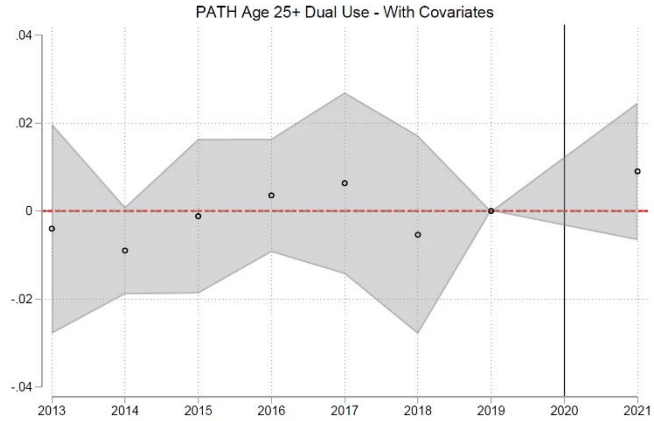
Age 25+ Event Study Plots

Age 25+ BRFSS DID









Age 25+ PATH DID