

**Appendix**  
**Cost of Cigarette Smoking Attributable Productivity Losses, U.S., 2018**  
**Shrestha et al.**

**Appendix Table 1.** Data Sources and Descriptions

<b>Data sources</b>	<b>Year</b>	<b>Data used for</b>	<b>Questions and/or variables in the dataset</b>	<b>Remarks</b>
National Health Interview Survey (NHIS) <sup>8</sup>	2014-2018	Cigarette smoking status used in all cost estimates; and absenteeism, home productivity, and inability to work cost estimates	The following NHIS questions were used to create cigarette smoking status variables, used in all cost analyses: <ul style="list-style-type: none"> <li>- Have you smoked at least 100 cigarettes in your ENTIRE Life (NHIS variable: SMKEV)?</li> <li>- Do you NOW smoke cigarettes every day, some days or not at all (NHIS variable: SMKNOW)?</li> <li>- How long has it been since you quit smoking cigarettes (NHIS variable: SMKQTP and SMKSTAT2)?</li> </ul> Absenteeism days: During the past 12 months, about how many days did you miss work at a job or business because of illness or injury (NHIS variable: WKDAYR)? Home productivity loss days: During the past 12 months, about how many days did illness or injury keep you in bed more than half of the day (include days while an overnight patient in a hospital) (NHIS variable: BEDDAYS)? Inability to workdays: What is the main reason you did not work last week (NHIS variable: WHYNOWKA and “disabled” as the main reason for not working last week)?	NHIS was the primary source of data for this analysis.
Behavioral Risk Factor Surveillance System (BRFSS) Survey <sup>16</sup>	2018	All cost estimates	BRFSS variable: _SMOKER3 (computed variable)	BRFSS was used to estimate the number of adults who smoked cigarettes in 2018; it was used in all cost estimates.
Current Population Survey (CPS) Annual Social and Economic Supplement <sup>14</sup>	2018	All cost estimates	Earnings (adult civilian persons)	CPS new micro data access tool (beta version) was used to obtain the 2018 earnings estimates.
Expectancy Data <sup>19</sup>	2018	Home productivity cost		Expectancy Data reports dollar value of a day of household work at the national level for 2018.
Bureau of Labor Statistics (BLS) <sup>20</sup>	2018	Home productivity cost		BLS state-to-national wage ratio was used to estimate dollar value of a day; at the state level for 2018.
Bunn et al. <sup>4</sup>	2006	Presenteeism cost		Presenteeism rates as estimated by Bunn et al. (2006) was used to estimate presenteeism costs.

**Appendix**  
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**Shrestha et al.**

**Appendix Table 2.** Parameter Estimates for Calculating Morbidity-Related Productivity Cost Attributable to Cigarette Smoking, U.S. State

State	Per employee who smoked cigarettes						Per adult who smoked cigarettes					
	Absenteeism days <sup>a</sup>			Presenteeism days <sup>b</sup>			Bed days <sup>c</sup>			% Unable to work <sup>d</sup>		
	Currently or Formerly Smoked	Currently Smoke	Formerly Smoked	Currently or Formerly Smoked	Currently Smoke	Formerly Smoked	Currently or Formerly Smoked	Currently Smoke	Formerly Smoked	Currently or Formerly Smoked	Currently Smoke	Formerly Smoked
Alabama	0.59	0.87	0.37	2.72	4.14	1.63	2.75	3.60	2.08	2.61%	3.55%	1.88%
Alaska	0.58	0.92	0.31	2.73	4.13	1.62	2.49	3.12	1.98	1.82%	2.22%	1.50%
Arizona	0.55	0.91	0.35	2.49	4.13	1.62	2.53	3.43	2.04	1.64%	2.42%	1.21%
Arkansas	0.64	0.89	0.40	2.84	4.14	1.63	2.83	3.58	2.12	2.66%	3.49%	1.87%
California	0.54	0.94	0.34	2.47	4.13	1.62	2.41	3.15	2.03	1.68%	2.27%	1.39%
Colorado	0.57	0.98	0.35	2.52	4.13	1.62	2.38	3.12	1.97	1.67%	2.19%	1.38%
Connecticut	0.48	0.92	0.28	2.39	4.13	1.62	2.20	3.04	1.82	1.93%	2.79%	1.54%
Delaware	0.58	0.87	0.38	2.61	4.14	1.63	2.80	3.63	2.27	2.55%	3.54%	1.91%
District of Columbia	0.54	0.87	0.32	2.62	4.14	1.63	2.56	3.63	1.85	2.49%	3.51%	1.81%
Florida	0.53	0.83	0.38	2.49	4.14	1.63	2.78	3.83	2.22	2.49%	3.78%	1.81%
Georgia	0.58	0.87	0.36	2.70	4.14	1.63	2.65	3.44	2.06	2.57%	3.36%	1.98%
Hawaii	0.55	0.95	0.35	2.48	4.13	1.62	2.42	3.17	2.03	1.65%	2.19%	1.37%
Idaho	0.58	0.92	0.37	2.59	4.13	1.62	2.59	3.39	2.09	1.74%	2.37%	1.34%
Illinois	0.53	0.88	0.30	2.64	4.14	1.63	2.39	3.18	1.85	2.16%	2.94%	1.63%
Indiana	0.58	0.88	0.32	2.80	4.14	1.63	2.57	3.41	1.83	2.36%	3.16%	1.66%
Iowa	0.56	0.90	0.33	2.64	4.14	1.63	2.41	3.27	1.81	2.14%	2.98%	1.56%
Kansas	0.56	0.92	0.31	2.66	4.14	1.63	2.50	3.43	1.85	2.23%	3.10%	1.62%
Kentucky	0.59	0.87	0.34	2.78	4.14	1.63	2.73	3.53	2.04	2.61%	3.35%	1.96%
Louisiana	0.61	0.89	0.36	2.82	4.14	1.63	2.78	3.57	2.05	2.66%	3.49%	1.89%
Maine	0.52	0.90	0.32	2.51	4.13	1.62	2.26	3.02	1.83	1.97%	2.76%	1.53%
Maryland	0.52	0.85	0.35	2.50	4.14	1.63	2.66	3.61	2.15	2.53%	3.57%	1.97%

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**Cost of Cigarette Smoking Attributable Productivity Losses, U.S., 2018**  
**Shrestha et al.**

Massachusetts	(0.18-0.87)	(0.41-1.29)	(0.05-0.65)	(2.49-2.51)	(4.11-4.16)	(1.62-1.63)	(1.49-3.84)	(2.41-4.81)	(0.99-3.31)	(1.45%-3.62%)	(2.42%-4.72%)	(0.92%-3.03%)
	0.52	0.91	0.31	2.49	4.13	1.62	2.24	2.94	1.87	1.91%	2.63%	1.52%
Michigan	(0.20-0.83)	(0.50-1.33)	(0.04-0.57)	(2.47-2.51)	(4.10-4.17)	(1.61-1.64)	(1.16-3.32)	(1.83-4.04)	(0.81-2.93)	(1.12%-2.69%)	(1.85%-3.42%)	(0.73%-2.31%)
	0.56	0.93	0.30	2.67	4.14	1.63	2.56	3.47	1.91	2.29%	3.17%	1.66%
Minnesota	(0.22-0.90)	(0.44-1.41)	(0.07-0.53)	(2.65-2.69)	(4.11-4.16)	(1.62-1.63)	(1.44-3.69)	(2.25-4.69)	(0.85-2.97)	(1.49%-3.09%)	(2.31%-4.03%)	(0.91%-2.41%)
	0.53	0.90	0.31	2.55	4.14	1.63	2.37	3.25	1.85	2.13%	2.95%	1.66%
Mississippi	(0.20-0.85)	(0.42-1.38)	(0.07-0.55)	(2.53-2.56)	(4.11-4.16)	(1.62-1.63)	(1.29-3.45)	(2.08-4.42)	(0.83-2.88)	(1.35%-2.92%)	(2.12%-3.78%)	(0.90%-2.41%)
	0.61	0.84	0.39	2.83	4.14	1.63	2.83	3.71	2.02	2.75%	3.69%	1.87%
Missouri	(0.23-0.98)	(0.41-1.28)	(0.06-0.71)	(2.81-2.85)	(4.11-4.16)	(1.62-1.63)	(1.68-3.98)	(2.49-4.92)	(0.93-3.11)	(1.65%-3.85%)	(2.51%-4.87%)	(0.84%-2.90%)
	0.58	0.90	0.32	2.74	4.14	1.63	2.54	3.38	1.87	2.25%	3.06%	1.60%
Montana	(0.22-0.94)	(0.41-1.39)	(0.07-0.57)	(2.72-2.75)	(4.11-4.16)	(1.62-1.63)	(1.43-3.65)	(2.18-4.58)	(0.82-2.91)	(1.47%-3.02%)	(2.22%-3.90%)	(0.87%-2.32%)
	0.59	0.91	0.37	2.63	4.13	1.62	2.62	3.43	2.06	1.78%	2.43%	1.33%
Nebraska	(0.22-0.96)	(0.48-1.35)	(0.05-0.69)	(2.61-2.65)	(4.10-4.16)	(1.61-1.64)	(1.44-3.80)	(2.20-4.67)	(0.92-3.21)	(1.01%-2.55%)	(1.65%-3.20%)	(0.57%-2.10%)
	0.55	0.91	0.32	2.63	4.14	1.63	2.46	3.36	1.86	2.21%	3.05%	1.64%
Nevada	(0.21-0.90)	(0.42-1.39)	(0.07-0.57)	(2.62-2.65)	(4.11-4.16)	(1.62-1.63)	(1.36-3.56)	(2.16-4.55)	(0.82-2.89)	(1.42%-2.99%)	(2.21%-3.90%)	(0.89%-2.38%)
	0.56	0.94	0.34	2.57	4.13	1.62	2.55	3.32	2.08	1.71%	2.29%	1.36%
New Hampshire	(0.21-0.92)	(0.48-1.39)	(0.05-0.63)	(2.55-2.59)	(4.10-4.16)	(1.61-1.64)	(1.38-3.72)	(2.10-4.53)	(0.93-3.22)	(0.95%-2.49%)	(1.53%-3.05%)	(0.59%-2.14%)
	0.53	0.96	0.30	2.49	4.13	1.62	2.29	3.08	1.87	1.97%	2.74%	1.56%
New Jersey	(0.21-0.84)	(0.53-1.40)	(0.04-0.55)	(2.47-2.50)	(4.09-4.16)	(1.61-1.63)	(1.21-3.37)	(1.97-4.19)	(0.81-2.93)	(1.16%-2.78%)	(1.92%-3.57%)	(0.75%-2.36%)
	0.53	0.97	0.28	2.51	4.13	1.63	2.32	3.22	1.82	2.01%	2.93%	1.49%
New Mexico	(0.22-0.84)	(0.54-1.41)	(0.04-0.52)	(2.49-2.53)	(4.09-4.16)	(1.61-1.64)	(1.21-3.42)	(2.01-4.42)	(0.77-2.86)	(1.20%-2.82%)	(2.06%-3.81%)	(0.72%-2.27%)
	0.58	0.91	0.39	2.56	4.13	1.62	2.56	3.50	2.01	1.72%	2.51%	1.24%
New York	(0.21-0.95)	(0.47-1.34)	(0.05-0.72)	(2.54-2.58)	(4.10-4.16)	(1.61-1.64)	(1.39-3.74)	(2.24-4.76)	(0.88-3.13)	(0.98%-2.46%)	(1.73%-3.28%)	(0.53%-1.97%)
	0.51	0.93	0.29	2.51	4.13	1.62	2.24	2.99	1.83	1.96%	2.70%	1.56%
North Carolina	(0.21-0.82)	(0.51-1.35)	(0.04-0.53)	(2.49-2.53)	(4.09-4.17)	(1.61-1.63)	(1.17-3.31)	(1.87-4.11)	(0.79-2.87)	(1.15%-2.78%)	(1.87%-3.52%)	(0.75%-2.37%)
	0.56	0.84	0.37	2.64	4.14	1.63	2.71	3.59	2.11	2.58%	3.48%	1.96%
North Dakota	(0.20-0.92)	(0.41-1.28)	(0.06-0.68)	(2.62-2.65)	(4.11-4.17)	(1.62-1.63)	(1.55-3.87)	(2.36-4.81)	(0.99-3.23)	(1.49%-3.67%)	(2.36%-4.60%)	(0.90%-3.03%)
	0.60	0.93	0.33	2.75	4.14	1.63	2.37	3.06	1.80	2.13%	2.75%	1.63%
Ohio	(0.23-0.96)	(0.43-1.43)	(0.07-0.58)	(2.73-2.76)	(4.11-4.16)	(1.62-1.63)	(1.32-3.41)	(1.96-4.16)	(0.80-2.81)	(1.36%-2.90%)	(1.96%-3.54%)	(0.88%-2.38%)
	0.56	0.89	0.29	2.75	4.14	1.63	2.62	3.54	1.88	2.34%	3.21%	1.62%
Oklahoma	(0.22-0.91)	(0.41-1.37)	(0.07-0.52)	(2.74-2.77)	(4.11-4.16)	(1.62-1.63)	(1.49-3.76)	(2.28-4.79)	(0.83-2.92)	(1.54%-3.14%)	(2.34%-4.09%)	(0.88%-2.36%)
	0.56	0.80	0.37	2.73	4.14	1.63	2.69	3.47	2.06	2.60%	3.45%	1.92%
Oregon	(0.20-0.91)	(0.38-1.22)	(0.06-0.68)	(2.71-2.74)	(4.11-4.17)	(1.62-1.63)	(1.56-3.81)	(2.30-4.64)	(0.96-3.16)	(1.51%-3.69%)	(2.31%-4.59%)	(0.88%-2.97%)
	0.56	0.91	0.36	2.53	4.13	1.62	2.58	3.50	2.05	1.70%	2.45%	1.28%
Pennsylvania	(0.20-0.92)	(0.47-1.35)	(0.05-0.67)	(2.51-2.55)	(4.10-4.16)	(1.61-1.64)	(1.39-3.76)	(2.25-4.75)	(0.90-3.19)	(0.96%-2.45%)	(1.67%-3.23%)	(0.55%-2.00%)
	0.54	0.93	0.27	2.62	4.13	1.62	2.35	3.15	1.82	2.06%	2.82%	1.55%
Rhode Island	(0.23-0.84)	(0.51-1.36)	(0.04-0.51)	(2.60-2.64)	(4.09-4.17)	(1.61-1.63)	(1.27-3.44)	(1.99-4.32)	(0.78-2.85)	(1.25%-2.88%)	(1.98%-3.67%)	(0.75%-2.35%)
	0.51	0.95	0.28	2.49	4.13	1.62	2.27	3.09	1.83	1.98%	2.75%	1.56%
South Carolina	(0.21-0.82)	(0.51-1.39)	(0.04-0.52)	(2.47-2.51)	(4.09-4.16)	(1.61-1.63)	(1.19-3.34)	(1.95-4.22)	(0.78-2.87)	(1.18%-2.78%)	(1.96%-3.54%)	(0.76%-2.36%)
	0.58	0.84	0.40	2.66	4.14	1.63	2.74	3.62	2.12	2.59%	3.57%	1.89%
South Dakota	(0.20-0.96)	(0.40-1.28)	(0.06-0.74)	(2.64-2.67)	(4.11-4.17)	(1.62-1.63)	(1.57-3.91)	(2.41-4.83)	(0.98-3.26)	(1.50%-3.68%)	(2.43%-4.72%)	(0.85%-2.94%)
	0.58	0.90	0.33	2.71	4.14	1.63	2.40	3.10	1.87	2.13%	2.84%	1.59%
Tennessee	(0.22-0.93)	(0.42-1.39)	(0.07-0.59)	(2.69-2.72)	(4.11-4.16)	(1.62-1.63)	(1.33-3.47)	(1.99-4.21)	(0.82-2.91)	(1.37%-2.90%)	(2.03%-3.65%)	(0.87%-2.32%)
	0.59	0.84	0.37	2.77	4.14	1.63	2.89	3.90	2.03	2.72%	3.80%	1.80%
Texas	(0.19-0.96)	(0.41-1.28)	(0.06-0.69)	(2.75-2.79)	(4.11-4.16)	(1.62-1.63)	(1.71-4.07)	(2.61-5.19)	(0.94-3.12)	(1.65%-3.80%)	(2.65%-4.96%)	(0.80%-2.81%)
	0.54	0.83	0.34	2.63	4.14	1.63	2.60	3.54	1.96	2.60%	3.63%	1.91%
Utah	(0.19-0.88)	(0.40-1.25)	(0.06-0.63)	(2.61-2.64)	(4.11-4.16)	(1.62-1.63)	(1.50-3.69)	(2.38-4.71)	(0.92-3.01)	(1.52%-3.69%)	(2.48%-4.79%)	(0.88%-2.95%)
	0.55	0.95	0.33	2.52	4.13	1.62	2.30	3.19	1.80	1.68%	2.23%	1.37%
Vermont	(0.21-0.89)	(0.50-1.41)	(0.06-0.60)	(2.50-2.54)	(4.10-4.16)	(1.61-1.63)	(1.29-3.31)	(2.07-4.30)	(0.86-2.75)	(0.92%-2.44%)	(1.50%-2.97%)	(0.60%-2.15%)
	0.48	0.86	0.32	2.40	4.13	1.63	2.19	2.99	1.83	1.86%	2.63%	1.51%

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**Shrestha et al.**

	(0.18-0.79)	(0.47-1.25)	(0.05-0.58)	(2.38-2.42)	(4.10-4.17)	(1.61-1.64)	(1.12-3.26)	(1.83-4.14)	(0.79-2.86)	(1.07%-2.65%)	(1.84%-3.42%)	(0.72%-2.30%)
Virginia	0.53	0.83	0.33	2.62	4.14	1.63	2.64	3.46	2.10	2.54%	3.46%	1.93%
	(0.19-0.87)	(0.41-1.26)	(0.05-0.61)	(2.60-2.63)	(4.11-4.17)	(1.62-1.63)	(1.50-3.78)	(2.29-4.63)	(0.98-3.23)	(1.46%-3.61%)	(2.32%-4.61%)	(0.90%-2.96%)
Washington	0.52	0.88	0.35	2.42	4.13	1.62	2.51	3.43	2.08	1.74%	2.51%	1.38%
	(0.18-0.86)	(0.46-1.31)	(0.05-0.65)	(2.40-2.44)	(4.10-4.16)	(1.61-1.64)	(1.34-3.68)	(2.21-4.65)	(0.93-3.22)	(0.96%-2.53%)	(1.71%-3.30%)	(0.61%-2.16%)
West Virginia	0.63	0.85	0.39	2.90	4.14	1.63	2.88	3.61	2.11	2.70%	3.49%	1.88%
	(0.23-1.02)	(0.40-1.30)	(0.06-0.73)	(2.88-2.92)	(4.11-4.16)	(1.62-1.63)	(1.71-4.05)	(2.40-4.82)	(0.98-3.34)	(1.63%-2.78%)	(2.39%-4.59%)	(0.83%-2.94%)
Wisconsin	0.53	0.86	0.32	2.59	4.14	1.63	2.49	3.48	1.87	2.20%	3.16%	1.61%
	(0.20-0.86)	(0.40-1.32)	(0.07-0.57)	(2.57-2.60)	(4.10-4.16)	(1.62-1.63)	(1.37-3.61)	(2.22-4.74)	(0.83-2.91)	(1.41%-2.99%)	(2.28%-4.03%)	(0.87%-2.34%)
Wyoming	0.60	0.94	0.36	2.66	4.13	1.62	2.54	3.30	1.99	1.74%	2.33%	1.32%
	(0.23-0.98)	(0.48-1.41)	(0.05-0.67)	(2.64-2.68)	(4.10-4.16)	(1.61-1.64)	(1.42-3.66)	(2.14-4.45)	(0.90-3.08)	(1.00%-2.49%)	(1.59%-3.07%)	(0.57%-2.08%)
<b>State Summary</b>												
Median	0.56	0.90	0.34	2.62	4.14	1.63	2.54	3.43	1.98	2.14%	2.95%	1.61%
Min	0.48	0.80	0.27	2.39	4.13	1.62	2.19	2.94	1.80	1.64%	2.19%	1.21%
Max	0.64	0.98	0.40	2.90	4.14	1.63	2.89	3.90	2.27	2.75%	3.80%	1.98%

*Notes:* Values in parentheses are, 95% prediction intervals, based on 95% CIs of regression-based estimates.

<sup>a</sup>This estimate was used to calculate the absenteeism cost attributable to cigarette smoking. A negative binomial regression model that controlled for socio-demographic factors, was used with the 2014-2018 National Health Interview Survey (NHIS) data, to estimate absenteeism days per adult employee who smoked cigarettes.

<sup>b</sup>This estimate was used to calculate the presenteeism cost attributable to cigarette smoking. To estimate presenteeism days per employee who smoked cigarettes, we assumed 1.685 percent of presenteeism rate for those who currently smoke cigarettes and 0.66 percent of presenteeism rate for those who formerly smoked cigarettes, calculated based on the number of presenteeism days among those who currently smoke or formerly smoked compared to those who never smoked cigarettes.<sup>4</sup>

<sup>c</sup>This estimate was used to calculate the home productivity cost attributable to cigarette smoking. A negative binomial regression model that controlled for socio-demographic factors, was used with the 2014-2018 NHIS data, to estimate bed days per adult who smoked cigarettes.

<sup>d</sup>This estimate was used to calculate the inability to work cost attributable to cigarette smoking. A logistic regression model, that controlled for socio-demographic factors, was used with the 2014-2018 NHIS data to estimate the percent of adults who smoked cigarettes and were unable to work.

## Appendix Cost of Cigarette Smoking Attributable Productivity Losses, U.S., 2018 Shrestha et al.

**Appendix Table 3. Total Annual Morbidity-Related Productivity Losses (millions, 2018\$) Attributable to Cigarette Smoking, U.S. State**

State	Absenteeism costs <sup>a</sup>			Presenteeism costs <sup>b</sup>			Household productivity costs <sup>c</sup>			Inability to work costs <sup>d</sup>			Total morbidity costs <sup>e</sup>		
	Currently or Formerly Smoked	Currently Smoke	Formerly Smoked	Currently or Formerly Smoked	Currently Smoke	Formerly Smoked	Currently or Formerly Smoked	Currently Smoke	Formerly Smoked	Currently or Formerly Smoked	Currently Smoke	Formerly Smoked	Currently or Formerly Smoked	Currently Smoke	Formerly Smoked
Alabama	\$135 (\$57-\$212)	\$99 (\$51-\$148)	\$36 (\$7-\$65)	\$653 (\$650-\$656)	\$458 (\$456-\$461)	\$195 (\$194-\$196)	\$200 (\$118-\$281)	\$117 (\$79-\$154)	\$83 (\$39-\$127)	\$1,710 (\$994-\$2,426)	\$1,002 (\$670-\$1,333)	\$708 (\$324-\$1,093)	\$2,697 (\$1,819-\$3,576)	\$1,676 (\$1,256-\$2,096)	\$1,021 (\$556-\$1,480)
Alaska	\$25 (\$11-\$38)	\$19 (\$10-\$28)	\$6 (\$1-\$11)	\$116 (\$115-\$117)	\$79 (\$79-\$80)	\$37 (\$36-\$37)	\$35 (\$20-\$50)	\$20 (\$13-\$26)	\$15 (\$7-\$24)	\$224 (\$128-\$320)	\$121 (\$81-\$162)	\$103 (\$48-\$158)	\$400 (\$275-\$525)	\$239 (\$182-\$295)	\$161 (\$93-\$230)
Arizona	\$197 (\$88-\$307)	\$136 (\$75-\$197)	\$61 (\$13-\$110)	\$896 (\$889-\$902)	\$564 (\$560-\$569)	\$331 (\$329-\$333)	\$266 (\$141-\$390)	\$126 (\$81-\$171)	\$140 (\$60-\$219)	\$1,700 (\$944-\$2,458)	\$863 (\$575-\$1,150)	\$837 (\$369-\$1,307)	\$3,058 (\$2,063-\$4,056)	\$1,689 (\$1,291-\$2,087)	\$1,369 (\$772-\$1,969)
Arkansas	\$96 (\$41-\$150)	\$74 (\$37-\$110)	\$22 (\$4-\$40)	\$446 (\$444-\$449)	\$332 (\$330-\$334)	\$114 (\$114-\$115)	\$129 (\$77-\$180)	\$80 (\$55-\$106)	\$48 (\$23-\$74)	\$1,203 (\$729-\$1,678)	\$767 (\$526-\$1,008)	\$436 (\$203-\$670)	\$1,874 (\$1,292-\$2,457)	\$1,253 (\$948-\$1,558)	\$621 (\$344-\$899)
California	\$1,004 (\$448-\$1,559)	\$682 (\$380-\$984)	\$322 (\$68-\$576)	\$4,878 (\$4,844-\$4,912)	\$2,939 (\$2,916-\$2,962)	\$1,938 (\$1,927-\$1,949)	\$1,354 (\$726-\$1,982)	\$594 (\$386-\$803)	\$760 (\$340-\$1,180)	\$9,710 (\$5,232-\$14,197)	\$4,462 (\$2,932-\$5,991)	\$5,248 (\$2,300-\$8,206)	\$16,946 (\$11,250-\$22,651)	\$8,677 (\$6,614-\$10,740)	\$8,268 (\$4,636-\$11,911)
Colorado	\$190 (\$85-\$295)	\$132 (\$72-\$193)	\$58 (\$13-\$103)	\$884 (\$878-\$890)	\$543 (\$539-\$547)	\$341 (\$339-\$343)	\$225 (\$123-\$326)	\$106 (\$69-\$143)	\$119 (\$54-\$183)	\$1,686 (\$932-\$2,441)	\$798 (\$530-\$1,066)	\$888 (\$402-\$1,375)	\$2,985 (\$2,019-\$3,952)	\$1,580 (\$1,211-\$1,949)	\$1,405 (\$808-\$2,004)
Connecticut	\$109 (\$47-\$170)	\$72 (\$40-\$104)	\$37 (\$7-\$67)	\$563 (\$559-\$567)	\$324 (\$322-\$327)	\$239 (\$237-\$240)	\$145 (\$76-\$215)	\$82 (\$41-\$86)	\$581 (\$35-\$128)	\$1,303 (\$730-\$1,875)	\$721 (\$390-\$773)	\$212 (\$340-\$1,103)	\$1,041 (\$1,413-\$2,828)	\$1,079 (\$793-\$1,289)	\$1,079 (\$620-\$1,538)
Delaware	\$29 (\$12-\$47)	\$21 (\$11-\$31)	\$9 (\$1-\$16)	\$139 (\$138-\$140)	\$94 (\$94-\$95)	\$45 (\$44-\$45)	\$48 (\$27-\$68)	\$25 (\$17-\$33)	\$23 (\$11-\$36)	\$392 (\$229-\$554)	\$215 (\$146-\$284)	\$177 (\$83-\$271)	\$608 (\$407-\$809)	\$354 (\$267-\$442)	\$253 (\$140-\$367)
District of Columbia	\$31 (\$12-\$49)	\$21 (\$11-\$32)	\$9 (\$2-\$17)	\$153 (\$152-\$154)	\$100 (\$99-\$100)	\$53 (\$53-\$54)	\$44 (\$26-\$63)	\$26 (\$17-\$34)	\$19 (\$9-\$29)	\$404 (\$234-\$573)	\$224 (\$150-\$298)	\$180 (\$85-\$275)	\$632 (\$425-\$839)	\$370 (\$276-\$464)	\$261 (\$149-\$374)
Florida	\$511 (\$201-\$821)	\$333 (\$170-\$495)	\$178 (\$30-\$326)	\$2,676 (\$2,662-\$2,691)	\$1,684 (\$1,674-\$1,695)	\$992 (\$988-\$996)	\$909 (\$510-\$1,308)	\$440 (\$296-\$584)	\$469 (\$214-\$724)	\$8,064 (\$4,625-\$11,510)	\$4,184 (\$2,837-\$5,531)	\$3,880 (\$1,788-\$5,979)	\$12,160 (\$7,998-\$16,330)	\$6,641 (\$4,978-\$8,305)	\$5,519 (\$3,021-\$8,025)
Georgia	\$272 (\$113-\$430)	\$200 (\$100-\$299)	\$72 (\$13-\$131)	\$1,335 (\$1,328-\$1,342)	\$914 (\$909-\$919)	\$421 (\$420-\$423)	\$378 (\$222-\$533)	\$214 (\$145-\$284)	\$163 (\$77-\$249)	\$3,723 (\$2,184-\$5,265)	\$2,067 (\$1,403-\$2,730)	\$1,656 (\$781-\$2,535)	\$5,708 (\$3,848-\$7,571)	\$3,395 (\$2,557-\$4,233)	\$2,313 (\$1,291-\$3,338)
Hawaii	\$44 (\$19-\$69)	\$29 (\$16-\$43)	\$15 (\$3-\$27)	\$204 (\$203-\$206)	\$122 (\$121-\$123)	\$83 (\$82-\$83)	\$54 (\$29-\$79)	\$25 (\$16-\$33)	\$30 (\$13-\$46)	\$412 (\$228-\$597)	\$187 (\$125-\$249)	\$225 (\$102-\$348)	\$715 (\$478-\$951)	\$363 (\$278-\$448)	\$351 (\$200-\$503)
Idaho	\$40 (\$18-\$61)	\$29 (\$16-\$42)	\$11 (\$2-\$19)	\$187 (\$186-\$189)	\$123 (\$122-\$124)	\$64 (\$64-\$64)	\$55 (\$30-\$80)	\$28 (\$18-\$39)	\$26 (\$12-\$41)	\$186 (\$201-\$522)	\$175 (\$125-\$247)	\$643 (\$76-\$275)	\$366 (\$434-\$852)	\$277 (\$280-\$452)	\$277 (\$153-\$400)
Illinois	\$394 (\$177-\$611)	\$297 (\$154-\$440)	\$97 (\$22-\$172)	\$2,032 (\$2,022-\$2,043)	\$1,363 (\$1,335-\$1,371)	\$670 (\$667-\$672)	\$483 (\$266-\$699)	\$263 (\$169-\$358)	\$220 (\$97-\$342)	\$5,097 (\$3,172-\$7,023)	\$2,729 (\$1,930-\$3,528)	\$2,369 (\$1,242-\$3,495)	\$8,007 (\$5,637-\$10,376)	\$4,652 (\$3,608-\$5,696)	\$3,355 (\$2,029-\$4,680)
Indiana	\$204 (\$88-\$320)	\$154 (\$76-\$231)	\$50 (\$12-\$89)	\$740 (\$1,027-\$1,037)	\$292 (\$736-\$744)	\$267 (\$291-\$293)	\$267 (\$155-\$379)	\$169 (\$110-\$227)	\$98 (\$44-\$152)	\$2,581 (\$1,662-\$3,500)	\$1,590 (\$1,142-\$2,038)	\$991 (\$519-\$1,462)	\$4,083 (\$2,930-\$5,236)	\$2,653 (\$2,065-\$3,240)	\$1,430 (\$866-\$1,995)
Iowa	\$105 (\$43-\$167)	\$71 (\$35-\$106)	\$34 (\$8-\$61)	\$471 (\$468-\$473)	\$312 (\$310-\$313)	\$159 (\$158-\$160)	\$111 (\$62-\$160)	\$63 (\$41-\$85)	\$48 (\$21-\$75)	\$1,113 (\$697-\$1,529)	\$609 (\$435-\$784)	\$504 (\$262-\$746)	\$1,800 (\$1,271-\$2,330)	\$1,055 (\$821-\$1,288)	\$746 (\$450-\$1,042)
Kansas	\$96 (\$42-\$150)	\$71 (\$36-\$107)	\$25 (\$6-\$43)	\$443 (\$440-\$445)	\$301 (\$299-\$303)	\$142 (\$141-\$142)	\$105 (\$60-\$150)	\$61 (\$40-\$82)	\$44 (\$20-\$69)	\$1,093 (\$697-\$1,489)	\$610 (\$442-\$777)	\$483 (\$255-\$712)	\$1,737 (\$1,239-\$2,235)	\$1,043 (\$817-\$1,268)	\$694 (\$421-\$966)
Kentucky	\$167 (\$72-\$263)	\$126 (\$64-\$188)	\$42 (\$8-\$75)	\$789 (\$785-\$793)	\$556 (\$553-\$559)	\$232 (\$231-\$233)	\$209 (\$124-\$295)	\$128 (\$86-\$170)	\$82 (\$39-\$125)	\$2,171 (\$1,291-\$3,052)	\$1,259 (\$862-\$1,655)	\$913 (\$429-\$1,397)	\$3,337 (\$2,272-\$4,403)	\$2,069 (\$1,565-\$2,572)	\$1,268 (\$707-\$1,831)
Louisiana	\$142 (\$61-\$223)	\$105 (\$54-\$157)	\$36 (\$6-\$66)	\$680 (\$676-\$683)	\$495 (\$492-\$498)	\$185 (\$184-\$185)	\$180 (\$107-\$252)	\$68 (\$76-\$149)	\$112 (\$32-\$103)	\$1,812 (\$1,063-\$2,561)	\$1,120 (\$752-\$1,489)	\$691 (\$311-\$1,072)	\$2,812 (\$1,907-\$3,719)	\$1,833 (\$1,374-\$2,292)	\$980 (\$533-\$1,427)
Maine	\$40 (\$19-\$62)	\$31 (\$17-\$44)	\$10 (\$2-\$18)	\$205 (\$203-\$206)	\$130 (\$129-\$131)	\$75 (\$75-\$75)	\$57 (\$30-\$83)	\$27 (\$17-\$38)	\$29 (\$13-\$46)	\$490 (\$292-\$689)	\$247 (\$171-\$323)	\$243 (\$120-\$366)	\$792 (\$544-\$1,040)	\$435 (\$335-\$535)	\$357 (\$209-\$505)
Maryland	\$182 (\$70-\$294)	\$114 (\$58-\$171)	\$68 (\$12-\$123)	\$900 (\$896-\$905)	\$548 (\$544-\$551)	\$353 (\$351-\$354)	\$261 (\$148-\$375)	\$126 (\$85-\$168)	\$135 (\$63-\$207)	\$2,712 (\$1,551-\$3,875)	\$1,319 (\$898-\$1,741)	\$1,393 (\$653-\$2,135)	\$4,056 (\$2,664-\$5,450)	\$2,108 (\$1,585-\$2,630)	\$1,948 (\$1,079-\$2,820)
Massachusetts	\$219 (\$100-\$338)	\$161 (\$89-\$232)	\$58 (\$11-\$106)	\$1,172 (\$1,164-\$1,181)	\$715 (\$709-\$720)	\$457 (\$455-\$460)	\$299 (\$157-\$441)	\$139 (\$87-\$190)	\$161 (\$70-\$251)	\$2,775 (\$1,597-\$3,954)	\$1,324 (\$907-\$1,741)	\$1,452 (\$690-\$2,213)	\$4,466 (\$3,018-\$5,914)	\$2,338 (\$1,793-\$2,883)	\$2,128 (\$1,226-\$3,030)
Michigan	\$303 (\$137-\$468)	\$243 (\$123-\$363)	\$60 (\$14-\$105)	\$1,607 (\$1,599-\$1,615)	\$1,110 (\$1,104-\$1,116)	\$497 (\$495-\$499)	\$452 (\$257-\$647)	\$261 (\$171-\$350)	\$191 (\$86-\$297)	\$4,035 (\$2,535-\$5,535)	\$2,260 (\$1,612-\$2,908)	\$1,775 (\$923-\$2,627)	\$6,397 (\$4,527-\$8,266)	\$3,874 (\$3,010-\$4,738)	\$2,523 (\$1,518-\$3,528)
Minnesota	\$182 (\$78-\$285)	\$132 (\$67-\$198)	\$50 (\$12-\$88)	\$934 (\$930-\$939)	\$590 (\$586-\$593)	\$344 (\$343-\$346)	\$231 (\$127-\$334)	\$119 (\$77-\$160)	\$112 (\$50-\$174)	\$2,375 (\$1,462-\$3,288)	\$1,171 (\$833-\$1,509)	\$1,204 (\$629-\$1,779)	\$3,722 (\$2,598-\$4,846)	\$2,012 (\$1,563-\$2,460)	\$1,710 (\$1,034-\$2,386)
Mississippi	\$72 (\$30-\$113)	\$53 (\$27-\$78)	\$19 (\$3-\$35)	\$362 (\$360-\$364)	\$267 (\$266-\$269)	\$95 (\$95-\$96)	\$109 (\$66-\$153)	\$70 (\$47-\$92)	\$40 (\$18-\$61)	\$996 (\$591-\$1,402)	\$643 (\$430-\$856)	\$353 (\$161-\$546)	\$1,540 (\$1,047-\$2,033)	\$1,033 (\$769-\$1,296)	\$507 (\$278-\$737)
Missouri	\$200 (\$84-\$316)	\$144 (\$71-\$216)	\$56 (\$13-\$99)	\$968 (\$963-\$972)	\$293 (\$670-\$678)	\$293 (\$292-\$295)	\$254 (\$145-\$363)	\$153 (\$100-\$206)	\$101 (\$45-\$156)	\$2,375 (\$1,508-\$3,242)	\$1,401 (\$999-\$1,804)	\$974 (\$509-\$1,438)	\$3,796 (\$2,699-\$4,893)	\$2,372 (\$1,840-\$2,904)	\$1,424 (\$859-\$1,989)
Montana	\$32 (\$14-\$50)	\$24 (\$13-\$34)	\$9 (\$2-\$15)	\$144 (\$143-\$145)	\$48 (\$48-\$48)	\$42 (\$42-\$42)	\$239 (\$23-\$61)	\$129 (\$15-\$31)	\$59 (\$9-\$30)	\$284 (\$164-\$404)	\$298 (\$106-\$205)	\$298 (\$58-\$200)	\$298 (\$344-\$660)	\$204 (\$229-\$367)	\$204 (\$116-\$293)
Nebraska	\$59 (\$25-\$93)	\$43 (\$21-\$65)	\$16 (\$4-\$28)	\$284 (\$283-\$285)	\$188 (\$187-\$190)	\$96 (\$95-\$96)	\$67 (\$38-\$97)	\$38 (\$25-\$51)	\$30 (\$13-\$46)	\$727 (\$465-\$989)	\$397 (\$288-\$506)	\$330 (\$177-\$483)	\$1,137 (\$810-\$1,464)	\$666 (\$522-\$811)	\$471 (\$289-\$653)
Nevada	\$93 (\$40-\$146)	\$65 (\$35-\$94)	\$28 (\$5-\$51)	\$425 (\$422-\$428)	\$270 (\$268-\$272)	\$155 (\$154-\$156)	\$113 (\$61-\$165)	\$57 (\$36-\$77)	\$56 (\$25-\$87)	\$822 (\$445-\$1,199)	\$405 (\$267-\$543)	\$417 (\$179-\$657)	\$1,453 (\$969-\$1,938)	\$796 (\$606-\$986)	\$657 (\$363-\$952)
New Hampshire	\$46 (\$22-\$71)	\$35 (\$19-\$50)	\$12 (\$2-\$21)	\$240 (\$238-\$242)	\$149 (\$148-\$150)	\$91 (\$90-\$92)	\$59 (\$32-\$86)	\$28 (\$18-\$38)	\$31 (\$14-\$48)	\$560 (\$321-\$800)	\$269 (\$182-\$356)	\$291 (\$138-\$444)	\$906 (\$613-\$1,199)	\$481 (\$368-\$594)	\$425 (\$245-\$605)
New Jersey	\$296	\$215	\$81	\$1,481	\$942	\$539	\$338	\$171	\$166	\$3,445	\$1,757	\$1,687	\$5,559	\$3,085	\$2,474

**Appendix**  
**Cost of Cigarette Smoking Attributable Productivity Losses, U.S., 2018**  
**Shrestha et al.**

	(\$135-\$456)	(\$120-\$309)	(\$15-\$147)	(\$1,470-\$1,492)	(\$935-\$950)	(\$536-\$542)	(\$179-\$496)	(\$108-\$235)	(\$71-\$262)	(\$1,975-\$4,914)	(\$1,195-\$2,319)	(\$780-\$2,595)	(\$3,760-\$7,359)	(\$2,357-\$3,813)	(\$1,402-\$3,546)
New Mexico	\$58	\$42	\$17	\$254	\$164	\$90	\$74	\$38	\$36	\$507	\$276	\$231	\$894	\$520	\$373
	(\$27-\$90)	(\$23-\$60)	(\$4-\$30)	(\$253-\$256)	(\$163-\$166)	(\$89-\$90)	(\$40-\$1,08)	(\$25-\$52)	(\$16-\$56)	(\$297-\$717)	(\$192-\$361)	(\$105-\$356)	(\$617-\$1,171)	(\$402-\$638)	(\$214-\$533)
New York	\$528	\$389	\$139	\$2,755	\$1,705	\$1,050	\$738	\$356	\$382	\$6,323	\$3,054	\$3,270	\$10,344	\$5,504	\$4,840
	(\$245-\$810)	(\$217-\$560)	(\$28-\$250)	(\$2,735-\$2,775)	(\$1,691-\$1,718)	(\$1,044-\$1,057)	(\$392-\$1,085)	(\$225-\$488)	(\$166-\$597)	(\$3,619-\$9,027)	(\$2,069-\$4,038)	(\$1,550-\$4,989)	(\$6,991-\$13,696)	(\$4,203-\$6,804)	(\$2,788-\$6,892)
North Carolina	\$282	\$207	\$75	\$1,438	\$964	\$474	\$442	\$241	\$201	\$4,051	\$2,187	\$1,864	\$6,213	\$3,599	\$2,613
	(\$120-\$444)	(\$106-\$308)	(\$13-\$136)	(\$1,431-\$1,445)	(\$959-\$970)	(\$472-\$476)	(\$255-\$629)	(\$160-\$322)	(\$94-\$307)	(\$2,343-\$5,762)	(\$1,474-\$2,899)	(\$869-\$2,862)	(\$4,148-\$8,280)	(\$2,700-\$4,499)	(\$1,449-\$3,781)
North Dakota	\$29	\$21	\$7	\$127	\$90	\$37	\$29	\$17	\$12	\$280	\$159	\$121	\$465	\$288	\$177
	(\$13-\$45)	(\$11-\$32)	(\$2-\$13)	(\$126-\$128)	(\$90-\$91)	(\$37-\$37)	(\$17-\$42)	(\$11-\$23)	(\$5-\$19)	(\$175-\$385)	(\$112-\$206)	(\$63-\$179)	(\$330-\$599)	(\$223-\$352)	(\$107-\$247)
Ohio	\$411	\$302	\$109	\$2,007	\$1,421	\$587	\$539	\$333	\$206	\$5,090	\$3,076	\$2,014	\$8,047	\$5,131	\$2,915
	(\$175-\$647)	(\$150-\$454)	(\$25-\$193)	(\$1,997-\$2,017)	(\$1,412-\$1,429)	(\$584-\$589)	(\$310-\$769)	(\$218-\$448)	(\$92-\$320)	(\$3,277-\$6,902)	(\$2,217-\$3,935)	(\$1,061-\$2,967)	(\$5,759-\$10,335)	(\$3,997-\$6,266)	(\$1,762-\$4,069)
Oklahoma	\$105	\$75	\$30	\$552	\$382	\$170	\$157	\$91	\$66	\$891	\$1,527	\$635	\$2,341	\$1,439	\$902
	(\$43-\$167)	(\$38-\$112)	(\$6-\$55)	(\$549-\$555)	(\$380-\$385)	(\$169-\$170)	(\$90-\$222)	(\$61-\$121)	(\$31-\$101)	(\$885-\$2,169)	(\$591-\$1,191)	(\$294-\$978)	(\$1,570-\$3,113)	(\$1,070-\$1,809)	(\$500-\$1,305)
Oregon	\$128	\$88	\$40	\$612	\$385	\$227	\$188	\$95	\$93	\$1,249	\$644	\$605	\$2,177	\$1,211	\$966
	(\$55-\$202)	(\$47-\$129)	(\$8-\$73)	(\$608-\$616)	(\$382-\$388)	(\$226-\$228)	(\$102-\$273)	(\$61-\$128)	(\$41-\$145)	(\$703-\$1,796)	(\$434-\$853)	(\$268-\$944)	(\$1,467-\$2,888)	(\$925-\$1,497)	(\$543-\$1,390)
Pennsylvania	\$396	\$300	\$95	\$1,969	\$1,296	\$672	\$502	\$277	\$226	\$4,375	\$2,338	\$2,037	\$7,241	\$4,211	\$3,030
	(\$188-\$604)	(\$168-\$433)	(\$20-\$171)	(\$1,954-\$1,983)	(\$1,286-\$1,307)	(\$668-\$676)	(\$275-\$730)	(\$176-\$377)	(\$98-\$353)	(\$2,555-\$6,194)	(\$1,595-\$3,081)	(\$960-\$3,113)	(\$4,971-\$9,510)	(\$3,225-\$5,197)	(\$1,747-\$4,313)
Rhode Island	\$32	\$22	\$9	\$159	\$95	\$64	\$44	\$22	\$22	\$388	\$185	\$203	\$622	\$324	\$298
	(\$14-\$49)	(\$12-\$33)	(\$2-\$17)	(\$157-\$160)	(\$94-\$96)	(\$63-\$64)	(\$23-\$64)	(\$14-\$29)	(\$10-\$35)	(\$227-\$548)	(\$130-\$240)	(\$97-\$308)	(\$422-\$822)	(\$250-\$397)	(\$172-\$424)
South Carolina	\$161	\$107	\$54	\$752	\$509	\$243	\$206	\$115	\$92	\$2,053	\$1,155	\$898	\$3,173	\$1,886	\$1,287
	(\$64-\$258)	(\$55-\$160)	(\$9-\$98)	(\$748-\$756)	(\$506-\$512)	(\$243-\$244)	(\$120-\$293)	(\$77-\$153)	(\$43-\$141)	(\$1,180-\$2,929)	(\$774-\$1,536)	(\$406-\$1,393)	(\$2,112-\$4,236)	(\$1,411-\$2,360)	(\$700-\$1,876)
South Dakota	\$30	\$23	\$7	\$141	\$99	\$43	\$29	\$17	\$13	\$335	\$190	\$145	\$535	\$327	\$208
	(\$13-\$46)	(\$11-\$34)	(\$2-\$12)	(\$141-\$142)	(\$98-\$99)	(\$43-\$43)	(\$16-\$42)	(\$11-\$22)	(\$6-\$20)	(\$212-\$458)	(\$135-\$244)	(\$77-\$214)	(\$382-\$689)	(\$255-\$400)	(\$127-\$289)
Tennessee	\$206	\$154	\$52	\$1,058	\$756	\$302	\$305	\$191	\$113	\$3,101	\$1,966	\$1,135	\$4,670	\$3,068	\$1,602
	(\$88-\$325)	(\$78-\$230)	(\$9-\$96)	(\$1,052-\$1,064)	(\$751-\$761)	(\$301-\$303)	(\$182-\$427)	(\$129-\$253)	(\$53-\$174)	(\$1,880-\$4,324)	(\$1,359-\$2,573)	(\$521-\$1,750)	(\$3,202-\$6,140)	(\$2,318-\$3,817)	(\$884-\$2,323)
Texas	\$696	\$463	\$232	\$3,616	\$2,372	\$1,244	\$953	\$528	\$425	\$10,314	\$5,671	\$4,643	\$15,579	\$9,034	\$6,545
	(\$284-\$1,107)	(\$240-\$686)	(\$43-\$421)	(\$3,597-\$3,635)	(\$2,358-\$2,386)	(\$1,239-\$1,249)	(\$557-\$1,349)	(\$357-\$699)	(\$200-\$651)	(\$5,898-\$14,739)	(\$3,791-\$7,550)	(\$2,107-\$7,188)	(\$10,336-\$20,831)	(\$6,746-\$11,321)	(\$3,590-\$9,509)
Utah	\$59	\$38	\$21	\$288	\$172	\$116	\$60	\$30	\$30	\$550	\$292	\$258	\$997	\$499	\$459
	(\$26-\$92)	(\$21-\$55)	(\$5-\$37)	(\$286-\$290)	(\$171-\$173)	(\$116-\$117)	(\$34-\$86)	(\$20-\$41)	(\$14-\$45)	(\$292-\$809)	(\$168-\$349)	(\$124-\$460)	(\$638-\$1,277)	(\$379-\$618)	(\$259-\$659)
Vermont	\$17	\$11	\$6	\$86	\$49	\$37	\$24	\$10	\$14	\$198	\$87	\$111	\$326	\$158	\$168
	(\$7-\$27)	(\$6-\$16)	(\$1-\$11)	(\$86-\$87)	(\$49-\$50)	(\$37-\$37)	(\$13-\$36)	(\$6-\$14)	(\$6-\$21)	(\$113-\$284)	(\$60-\$114)	(\$53-\$169)	(\$218-\$434)	(\$121-\$194)	(\$97-\$239)
Virginia	\$265	\$179	\$85	\$1,410	\$923	\$487	\$366	\$192	\$174	\$4,061	\$2,167	\$1,894	\$6,101	\$3,461	\$2,641
	(\$108-\$422)	(\$93-\$266)	(\$15-\$156)	(\$1,402-\$1,417)	(\$917-\$928)	(\$485-\$489)	(\$209-\$522)	(\$128-\$255)	(\$81-\$267)	(\$2,303-\$5,823)	(\$1,432-\$2,902)	(\$871-\$2,921)	(\$4,022-\$8,184)	(\$2,569-\$4,352)	(\$1,452-\$3,833)
Washington	\$201	\$134	\$68	\$1,042	\$598	\$444	\$314	\$138	\$176	\$2,221	\$1,013	\$1,208	\$3,779	\$1,883	\$1,896
	(\$88-\$315)	(\$73-\$194)	(\$15-\$121)	(\$1,035-\$1,049)	(\$593-\$603)	(\$442-\$447)	(\$168-\$460)	(\$90-\$187)	(\$78-\$273)	(\$1,229-\$3,215)	(\$683-\$1,344)	(\$546-\$1,872)	(\$2,520-\$5,039)	(\$1,438-\$2,328)	(\$1,081-\$2,712)
West Virginia	\$55	\$42	\$13	\$265	\$198	\$67	\$89	\$58	\$31	\$703	\$455	\$248	\$1,112	\$753	\$359
	(\$24-\$87)	(\$21-\$63)	(\$2-\$24)	(\$263-\$266)	(\$197-\$199)	(\$66-\$67)	(\$53-\$124)	(\$39-\$77)	(\$14-\$47)	(\$420-\$987)	(\$309-\$601)	(\$112-\$386)	(\$760-\$1,465)	(\$566-\$941)	(\$195-\$524)
Wisconsin	\$163	\$120	\$43	\$840	\$552	\$288	\$227	\$124	\$103	\$2,169	\$1,160	\$1,009	\$3,399	\$1,956	\$1,443
	(\$70-\$256)	(\$60-\$180)	(\$10-\$76)	(\$836-\$844)	(\$549-\$555)	(\$287-\$289)	(\$127-\$328)	(\$80-\$168)	(\$46-\$160)	(\$1,360-\$2,978)	(\$831-\$1,489)	(\$529-\$1,489)	(\$2,392-\$4,406)	(\$1,520-\$2,392)	(\$872-\$2,014)
Wyoming	\$20	\$14	\$6	\$57	\$29	\$25	\$14	\$11	\$11	\$161	\$88	\$73	\$291	\$172	\$119
	(\$9-\$31)	(\$7-\$20)	(\$1-\$11)	(\$85-\$86)	(\$56-\$57)	(\$29-\$29)	(\$14-\$35)	(\$9-\$18)	(\$5-\$17)	(\$91-\$231)	(\$59-\$116)	(\$32-\$114)	(\$199-\$383)	(\$132-\$212)	(\$67-\$171)
All state total	\$9,354	\$6,661	\$2,693	\$46,757	\$30,510	\$16,246	\$12,791	\$6,759	\$6,033	\$116,010	\$61,941	\$54,069	\$184,912	\$105,870	\$79,042
	(\$4,048-\$14,660)	(\$3,508-\$9,813)	(\$540-\$4,847)	(\$46,477-\$47,033)	(\$30,307-\$30,711)	(\$16,170-\$16,323)	(\$7,163-\$18,420)	(\$4,438-\$9,079)	(\$2,725-\$9,340)	(\$67,937-\$164,141)	(\$42,356-\$81,525)	(\$25,581-\$82,616)	(\$125,625-\$244,254)	(\$80,609-\$131,128)	(\$45,016-\$113,126)
<b>State Summary</b>															
Median	\$135	\$99	\$37	\$653	\$458	\$227	\$188	\$106	\$82	\$1,686	\$863	\$708	\$2,697	\$1,580	\$1,021
Min	\$17	\$11	\$6	\$86	\$49	\$29	\$24	\$10	\$11	\$161	\$87	\$73	\$291	\$158	\$119
Max	\$1,004	\$682	\$322	\$4,878	\$2,939	\$1,938	\$1,354	\$594	\$760	\$10,314	\$5,671	\$5,248	\$16,946	\$9,034	\$8,268

*Notes:* Values in parentheses are, 95% prediction intervals, based on 95% CIs of regression-based estimates.

<sup>a</sup>Absenteeism costs attributable to cigarette smoking were computed by multiplying the total missed workdays attributable to cigarette smoking by daily earnings. A negative binomial regression model that controlled for socio-demographic factors, was used with the 2014-2018 National Health Interview Survey (NHIS) data, to estimate the missed workdays attributable to cigarette smoking. Daily earnings were computed by dividing annual earnings, available from the Current Population Survey (CPS) Table Creator, by 250 days.

<sup>b</sup>Presenteeism costs attributable to cigarette smoking were computed by multiplying the total presenteeism days (250 minus work loss days among smokers) by daily earnings. To estimate presenteeism days per employee who smoked cigarettes, we assumed 1.685 percent presenteeism rate for adults who currently smoke cigarettes and 0.66 percent presenteeism rate for adults who formerly smoked cigarettes, compared to those who never smoked cigarettes.<sup>4</sup>

**Appendix**  
**Cost of Cigarette Smoking Attributable Productivity Losses, U.S., 2018**  
**Shrestha et al.**

<sup>c</sup>Home productivity costs attributable to cigarette smoking were computed by multiplying the total number of bed days attributable to cigarette smoking by the dollar value of housework, available from the 2018 Expectancy Data. A negative binomial regression model that controlled for socio-demographic factors, was used with the 2014-2018 NHIS data, to estimate the bed days attributable to cigarette smoking.

<sup>d</sup>Inability to work costs attributable to cigarette smoking were computed by multiplying the total number of adults who smoked cigarettes and were unable to work by annual earnings. A logistic regression model, that controlled for socio-demographic factors, was used with the 2014-2018 NHIS data, to estimate the percent of adults who smoked cigarettes and were unable to work, or the total number of adults who smoked cigarettes and were unable to work.

<sup>e</sup>Total morbidity costs attributable to cigarette smoking were computed as the sum of the absenteeism, presenteeism, household productivity, and inability to work costs.

**Appendix  
Cost of Cigarette Smoking Attributable Productivity Losses, U.S., 2018  
Shrestha et al.**

**Appendix Table 4.** Annual Morbidity-Related Productivity Losses (2018\$) Attributable to Cigarette Smoking Per Adult Who Smoked, U.S. State

State	Absenteeism costs			Presenteeism costs			Household productivity costs			Inability to work costs			Total morbidity costs		
	Currently or Formerly Smoked	Currently Smoke	Formerly Smoked	Currently or Formerly Smoked	Currently Smoke	Formerly Smoked	Currently or Formerly Smoked	Currently Smoke	Formerly Smoked	Currently or Formerly Smoked	Currently Smoke	Formerly Smoked	Currently or Formerly Smoked	Currently Smoke	Formerly Smoked
Alabama	\$85 (\$36-\$134)	\$142 (\$73-\$212)	\$40 (\$7-\$73)	\$413 (\$411-\$415)	\$659 (\$655-\$662)	\$220 (\$219-\$221)	\$126 (\$75-\$178)	\$168 (\$114-\$222)	\$94 (\$44-\$143)	\$1,080 (\$628-\$1,533)	\$1,440 (\$963-\$1,917)	\$798 (\$365-\$1,232)	\$1,704 (\$1,150-\$2,259)	\$2,409 (\$1,805-\$3,013)	\$1,151 (\$635-\$1,669)
Alaska	\$106 (\$48-\$163)	\$182 (\$98-\$266)	\$45 (\$9-\$81)	\$496 (\$492-\$499)	\$765 (\$759-\$771)	\$281 (\$280-\$283)	\$150 (\$86-\$214)	\$189 (\$124-\$254)	\$119 (\$55-\$182)	\$958 (\$549-\$1,368)	\$1,169 (\$778-\$1,559)	\$790 (\$367-\$1,216)	\$1,709 (\$1,175-\$2,244)	\$2,305 (\$1,760-\$2,850)	\$1,235 (\$710-\$1,761)
Arizona	\$95 (\$42-\$148)	\$189 (\$104-\$273)	\$45 (\$9-\$81)	\$432 (\$429-\$435)	\$782 (\$776-\$788)	\$245 (\$243-\$246)	\$128 (\$68-\$188)	\$175 (\$112-\$237)	\$103 (\$45-\$162)	\$819 (\$455-\$1,185)	\$1,196 (\$797-\$1,595)	\$619 (\$273-\$966)	\$1,474 (\$994-\$1,955)	\$2,342 (\$1,790-\$2,894)	\$1,012 (\$570-\$1,455)
Arkansas	\$92 (\$40-\$145)	\$146 (\$74-\$218)	\$41 (\$7-\$75)	\$429 (\$427-\$431)	\$657 (\$653-\$661)	\$214 (\$213-\$215)	\$124 (\$74-\$174)	\$159 (\$109-\$210)	\$91 (\$42-\$139)	\$1,157 (\$701-\$1,613)	\$1,518 (\$1,041-\$1,995)	\$816 (\$380-\$1,253)	\$1,802 (\$1,242-\$2,363)	\$2,480 (\$1,877-\$3,084)	\$1,161 (\$643-\$1,681)
California	\$106 (\$47-\$165)	\$213 (\$118-\$307)	\$51 (\$11-\$92)	\$515 (\$511-\$518)	\$917 (\$910-\$924)	\$309 (\$308-\$311)	\$917 (\$77-\$209)	\$185 (\$120-\$250)	\$121 (\$54-\$188)	\$1,025 (\$552-\$1,499)	\$837 (\$915-\$1,869)	\$789 (\$367-\$1,309)	\$1,789 (\$1,188-\$2,391)	\$2,707 (\$2,063-\$3,350)	\$1,319 (\$740-\$1,900)
Colorado	\$116 (\$52-\$180)	\$225 (\$123-\$327)	\$55 (\$12-\$98)	\$540 (\$536-\$543)	\$923 (\$916-\$930)	\$325 (\$323-\$327)	\$137 (\$75-\$199)	\$180 (\$118-\$243)	\$113 (\$52-\$175)	\$1,030 (\$569-\$1,491)	\$1,356 (\$901-\$1,811)	\$846 (\$383-\$1,311)	\$1,823 (\$1,233-\$2,413)	\$2,684 (\$2,057-\$3,310)	\$1,340 (\$770-\$1,910)
Connecticut	\$104 (\$45-\$162)	\$221 (\$123-\$318)	\$51 (\$10-\$92)	\$536 (\$532-\$540)	\$995 (\$987-\$1,003)	\$330 (\$328-\$332)	\$138 (\$73-\$204)	\$195 (\$125-\$265)	\$113 (\$49-\$177)	\$1,240 (\$695-\$1,785)	\$995 (\$1,197-\$2,370)	\$995 (\$469-\$1,522)	\$2,018 (\$1,345-\$2,692)	\$3,194 (\$2,433-\$3,956)	\$1,489 (\$855-\$2,123)
Delaware	\$96 (\$40-\$153)	\$174 (\$89-\$258)	\$46 (\$8-\$85)	\$456 (\$454-\$459)	\$787 (\$782-\$791)	\$242 (\$241-\$243)	\$158 (\$90-\$225)	\$205 (\$139-\$272)	\$127 (\$59-\$194)	\$1,287 (\$753-\$1,823)	\$1,793 (\$1,217-\$2,370)	\$959 (\$452-\$1,468)	\$1,998 (\$1,337-\$2,659)	\$2,959 (\$2,227-\$3,692)	\$1,374 (\$759-\$1,990)
District of Columbia	\$164 (\$66-\$262)	\$285 (\$141-\$428)	\$84 (\$16-\$151)	\$822 (\$818-\$826)	\$1,338 (\$1,330-\$1,346)	\$478 (\$476-\$480)	\$239 (\$141-\$337)	\$343 (\$231-\$455)	\$170 (\$81-\$259)	\$2,170 (\$1,258-\$3,082)	\$3,008 (\$2,009-\$4,007)	\$1,611 (\$758-\$2,466)	\$3,395 (\$2,283-\$4,508)	\$4,974 (\$3,712-\$6,236)	\$2,342 (\$1,331-\$3,355)
Florida	\$75 (\$30-\$121)	\$142 (\$73-\$211)	\$40 (\$7-\$74)	\$395 (\$393-\$397)	\$717 (\$712-\$721)	\$224 (\$223-\$225)	\$134 (\$75-\$193)	\$187 (\$126-\$249)	\$106 (\$48-\$163)	\$1,189 (\$682-\$1,698)	\$1,780 (\$1,207-\$2,353)	\$876 (\$404-\$1,350)	\$1,794 (\$1,180-\$2,409)	\$2,826 (\$2,118-\$3,534)	\$1,246 (\$682-\$1,812)
Georgia	\$97 (\$40-\$153)	\$165 (\$83-\$247)	\$45 (\$8-\$82)	\$475 (\$472-\$477)	\$754 (\$750-\$759)	\$263 (\$262-\$264)	\$175 (\$79-\$190)	\$102 (\$119-\$234)	\$177 (\$48-\$156)	\$1,323 (\$776-\$1,871)	\$1,706 (\$1,158-\$2,254)	\$1,034 (\$487-\$1,582)	\$2,029 (\$1,368-\$2,691)	\$2,802 (\$2,111-\$3,494)	\$1,444 (\$806-\$2,083)
Hawaii	\$107 (\$45-\$168)	\$207 (\$112-\$302)	\$54 (\$10-\$98)	\$494 (\$490-\$497)	\$858 (\$852-\$865)	\$303 (\$302-\$305)	\$131 (\$70-\$191)	\$173 (\$112-\$233)	\$109 (\$48-\$169)	\$995 (\$549-\$1,441)	\$1,321 (\$884-\$1,757)	\$825 (\$375-\$1,277)	\$1,726 (\$1,155-\$2,297)	\$2,559 (\$1,960-\$3,158)	\$1,291 (\$736-\$1,848)
Idaho	\$84 (\$38-\$130)	\$157 (\$85-\$228)	\$38 (\$8-\$68)	\$397 (\$394-\$400)	\$672 (\$666-\$677)	\$222 (\$221-\$224)	\$116 (\$63-\$169)	\$154 (\$98-\$211)	\$91 (\$40-\$143)	\$766 (\$425-\$1,107)	\$1,014 (\$679-\$1,348)	\$608 (\$264-\$954)	\$1,363 (\$920-\$1,806)	\$1,996 (\$1,529-\$2,464)	\$959 (\$532-\$1,388)
Illinois	\$109 (\$49-\$169)	\$203 (\$105-\$301)	\$45 (\$10-\$79)	\$560 (\$558-\$563)	\$932 (\$926-\$937)	\$310 (\$308-\$311)	\$133 (\$73-\$193)	\$180 (\$116-\$244)	\$102 (\$45-\$158)	\$1,406 (\$875-\$1,937)	\$1,866 (\$1,319-\$2,412)	\$1,095 (\$574-\$1,616)	\$2,208 (\$1,555-\$2,862)	\$3,180 (\$2,466-\$3,894)	\$1,551 (\$938-\$2,164)
Indiana	\$94 (\$40-\$147)	\$151 (\$75-\$227)	\$43 (\$10-\$77)	\$475 (\$473-\$478)	\$726 (\$722-\$730)	\$254 (\$253-\$255)	\$123 (\$71-\$175)	\$166 (\$108-\$223)	\$85 (\$38-\$132)	\$1,189 (\$766-\$1,613)	\$1,559 (\$1,120-\$1,998)	\$861 (\$452-\$1,271)	\$1,882 (\$1,350-\$2,413)	\$2,601 (\$2,025-\$3,177)	\$1,411 (\$753-\$1,735)
Iowa	\$110 (\$45-\$175)	\$183 (\$91-\$274)	\$61 (\$14-\$107)	\$493 (\$490-\$495)	\$804 (\$799-\$809)	\$280 (\$279-\$281)	\$116 (\$65-\$127)	\$162 (\$105-\$219)	\$85 (\$38-\$132)	\$1,166 (\$730-\$1,602)	\$1,573 (\$1,123-\$2,023)	\$888 (\$462-\$1,314)	\$1,885 (\$1,331-\$2,440)	\$2,722 (\$2,118-\$3,325)	\$1,314 (\$793-\$1,835)
Kansas	\$110 (\$48-\$172)	\$197 (\$99-\$295)	\$48 (\$11-\$85)	\$506 (\$504-\$509)	\$831 (\$827-\$836)	\$276 (\$275-\$277)	\$120 (\$68-\$172)	\$168 (\$110-\$225)	\$86 (\$39-\$134)	\$1,250 (\$797-\$1,703)	\$1,683 (\$1,222-\$2,145)	\$944 (\$497-\$1,390)	\$1,986 (\$1,416-\$2,555)	\$2,880 (\$2,257-\$3,502)	\$1,354 (\$822-\$1,886)
Kentucky	\$100 (\$43-\$157)	\$162 (\$83-\$242)	\$46 (\$9-\$84)	\$471 (\$468-\$473)	\$716 (\$712-\$720)	\$258 (\$258-\$259)	\$125 (\$74-\$176)	\$165 (\$110-\$219)	\$91 (\$43-\$139)	\$1,296 (\$770-\$1,822)	\$1,620 (\$1,110-\$2,131)	\$1,015 (\$477-\$1,554)	\$1,991 (\$1,356-\$2,627)	\$2,663 (\$2,015-\$3,311)	\$1,411 (\$786-\$2,036)
Louisiana	\$98 (\$42-\$154)	\$152 (\$78-\$226)	\$48 (\$8-\$88)	\$470 (\$468-\$473)	\$715 (\$711-\$719)	\$246 (\$245-\$247)	\$124 (\$74-\$174)	\$162 (\$110-\$215)	\$90 (\$42-\$137)	\$1,254 (\$736-\$1,773)	\$1,619 (\$1,086-\$2,151)	\$919 (\$414-\$1,425)	\$1,947 (\$1,320-\$2,575)	\$2,648 (\$1,985-\$3,311)	\$1,302 (\$709-\$1,897)
Maine	\$78 (\$36-\$119)	\$164 (\$91-\$237)	\$30 (\$6-\$53)	\$393 (\$390-\$396)	\$700 (\$694-\$706)	\$223 (\$222-\$225)	\$109 (\$58-\$160)	\$148 (\$94-\$202)	\$88 (\$38-\$137)	\$942 (\$560-\$1,323)	\$1,330 (\$922-\$1,738)	\$726 (\$360-\$1,093)	\$1,522 (\$1,045-\$1,999)	\$2,342 (\$1,801-\$2,883)	\$1,067 (\$626-\$1,508)
Maryland	\$114 (\$44-\$184)	\$204 (\$104-\$304)	\$65 (\$11-\$119)	\$562 (\$560-\$565)	\$974 (\$969-\$980)	\$340 (\$338-\$341)	\$163 (\$92-\$234)	\$225 (\$151-\$299)	\$130 (\$60-\$200)	\$1,694 (\$969-\$2,421)	\$2,347 (\$1,597-\$3,097)	\$1,341 (\$629-\$2,055)	\$2,534 (\$1,665-\$3,405)	\$3,750 (\$2,821-\$4,680)	\$1,876 (\$1,039-\$2,715)
Massachusetts	\$109 (\$50-\$168)	\$229 (\$127-\$330)	\$45 (\$8-\$81)	\$583 (\$579-\$587)	\$1,015 (\$1,007-\$1,023)	\$350 (\$348-\$352)	\$149 (\$78-\$219)	\$197 (\$124-\$270)	\$123 (\$54-\$192)	\$1,380 (\$794-\$1,967)	\$1,881 (\$1,289-\$2,473)	\$1,111 (\$528-\$1,694)	\$2,221 (\$1,501-\$2,941)	\$3,322 (\$2,547-\$4,096)	\$1,629 (\$938-\$2,319)
Michigan	\$90 (\$41-\$139)	\$172 (\$87-\$258)	\$30 (\$7-\$54)	\$477 (\$474-\$479)	\$788 (\$784-\$792)	\$253 (\$252-\$254)	\$134 (\$76-\$192)	\$185 (\$121-\$248)	\$98 (\$44-\$152)	\$1,197 (\$752-\$1,642)	\$1,604 (\$1,144-\$2,064)	\$905 (\$471-\$1,339)	\$1,898 (\$1,343-\$2,453)	\$2,750 (\$2,136-\$3,363)	\$1,286 (\$774-\$1,799)
Minnesota	\$106 (\$46-\$167)	\$210 (\$106-\$314)	\$46 (\$11-\$81)	\$546 (\$543-\$549)	\$936 (\$931-\$942)	\$318 (\$317-\$320)	\$135 (\$74-\$195)	\$188 (\$122-\$255)	\$104 (\$47-\$161)	\$1,388 (\$855-\$1,922)	\$1,859 (\$1,323-\$2,396)	\$1,114 (\$582-\$1,645)	\$2,175 (\$1,518-\$2,832)	\$3,194 (\$2,482-\$3,905)	\$1,582 (\$956-\$2,207)
Mississippi	\$77 (\$32-\$121)	\$117 (\$60-\$174)	\$39 (\$7-\$72)	\$388 (\$385-\$390)	\$592 (\$589-\$596)	\$197 (\$196-\$198)	\$117 (\$70-\$164)	\$155 (\$105-\$205)	\$82 (\$38-\$126)	\$1,066 (\$632-\$1,500)	\$730 (\$952-\$1,898)	\$1,647 (\$333-\$1,129)	\$2,289 (\$1,120-\$2,175)	\$2,289 (\$1,706-\$2,873)	\$1,048 (\$574-\$1,524)
Missouri	\$98 (\$41-\$155)	\$159 (\$79-\$240)	\$50 (\$11-\$88)	\$476 (\$474-\$479)	\$746 (\$742-\$750)	\$260 (\$259-\$261)	\$125 (\$71-\$178)	\$169 (\$111-\$228)	\$89 (\$40-\$139)	\$1,169 (\$742-\$1,595)	\$89 (\$1,105-\$1,996)	\$1,169 (\$451-\$1,275)	\$1,868 (\$1,328-\$2,408)	\$2,625 (\$2,036-\$3,214)	\$1,262 (\$761-\$1,762)
Montana	\$90 (\$41-\$139)	\$163 (\$88-\$238)	\$40 (\$8-\$72)	\$404 (\$401-\$407)	\$666 (\$661-\$671)	\$225 (\$224-\$227)	\$118 (\$65-\$171)	\$92 (\$102-\$213)	\$92 (\$41-\$143)	\$796 (\$459-\$1,134)	\$1,075 (\$733-\$1,417)	\$606 (\$272-\$941)	\$1,408 (\$966-\$1,851)	\$2,062 (\$1,584-\$2,540)	\$963 (\$545-\$1,382)
Nebraska	\$106 (\$45-\$167)	\$193 (\$96-\$290)	\$47 (\$11-\$84)	\$511 (\$508-\$514)	\$841 (\$836-\$846)	\$288 (\$287-\$289)	\$121 (\$68-\$174)	\$168 (\$110-\$227)	\$89 (\$40-\$138)	\$1,308 (\$837-\$1,779)	\$1,772 (\$1,287-\$2,257)	\$995 (\$533-\$1,457)	\$2,046 (\$1,458-\$2,634)	\$2,974 (\$2,328-\$3,619)	\$1,419 (\$871-\$1,968)
Nevada	\$99 (\$43-\$156)	\$181 (\$98-\$265)	\$49 (\$9-\$89)	\$454 (\$451-\$457)	\$758 (\$753-\$764)	\$268 (\$266-\$269)	\$121 (\$65-\$176)	\$160 (\$102-\$217)	\$97 (\$43-\$151)	\$877 (\$475-\$1,280)	\$1,136 (\$748-\$1,523)	\$719 (\$308-\$1,131)	\$1,551 (\$1,034-\$2,069)	\$2,235 (\$1,701-\$2,769)	\$1,132 (\$626-\$1,640)



**Appendix  
Cost of Cigarette Smoking Attributable Productivity Losses, U.S., 2018  
Shrestha et al.**

New Hampshire	\$98 (\$46-\$151)	\$212 (\$118-\$305)	\$38 (\$8-\$68)	\$510 (\$507-\$514)	\$911 (\$903-\$918)	\$297 (\$295-\$298)	\$126 (\$68-\$184)	\$172 (\$111-\$233)	\$101 (\$44-\$157)	\$1,190 (\$681-\$1,699)	\$1,642 (\$1,113-\$2,170)	\$949 (\$450-\$1,447)	\$1,924 (\$1,301-\$2,547)	\$2,936 (\$2,246-\$3,627)	\$1,384 (\$797-\$1,970)
New Jersey	\$122 (\$56-\$188)	\$248 (\$139-\$357)	\$52 (\$10-\$95)	\$612 (\$607-\$616)	\$1,089 (\$1,080-\$1,097)	\$347 (\$344-\$349)	\$139 (\$74-\$205)	\$198 (\$125-\$271)	\$107 (\$46-\$168)	\$1,423 (\$816-\$2,030)	\$2,030 (\$1,380-\$2,680)	\$1,085 (\$502-\$1,668)	\$2,296 (\$1,553-\$3,040)	\$3,565 (\$2,724-\$4,405)	\$1,591 (\$902-\$2,280)
New Mexico	\$94 (\$43-\$145)	\$179 (\$98-\$260)	\$43 (\$10-\$76)	\$410 (\$407-\$413)	\$707 (\$701-\$712)	\$232 (\$231-\$233)	\$120 (\$65-\$174)	\$164 (\$106-\$223)	\$93 (\$41-\$145)	\$817 (\$479-\$1,156)	\$1,188 (\$826-\$1,551)	\$595 (\$271-\$919)	\$1,440 (\$994-\$1,887)	\$2,238 (\$1,731-\$2,745)	\$962 (\$552-\$1,373)
New York	\$103 (\$48-\$157)	\$212 (\$119-\$305)	\$42 (\$8-\$75)	\$535 (\$531-\$539)	\$929 (\$922-\$937)	\$317 (\$315-\$319)	\$143 (\$76-\$211)	\$194 (\$123-\$266)	\$115 (\$50-\$180)	\$1,229 (\$703-\$1,754)	\$1,665 (\$1,128-\$2,202)	\$987 (\$468-\$1,506)	\$2,010 (\$1,359-\$2,662)	\$3,001 (\$2,291-\$3,710)	\$1,461 (\$842-\$2,081)
North Carolina	\$85 (\$36-\$134)	\$154 (\$79-\$229)	\$38 (\$7-\$69)	\$435 (\$433-\$437)	\$717 (\$713-\$721)	\$242 (\$241-\$242)	\$134 (\$77-\$190)	\$179 (\$119-\$240)	\$102 (\$48-\$156)	\$1,225 (\$709-\$1,743)	\$1,626 (\$1,097-\$2,156)	\$950 (\$443-\$1,459)	\$1,879 (\$1,255-\$2,504)	\$2,677 (\$2,008-\$3,346)	\$1,332 (\$739-\$1,928)
North Dakota	\$121 (\$53-\$189)	\$201 (\$101-\$300)	\$56 (\$13-\$99)	\$533 (\$530-\$535)	\$844 (\$839-\$849)	\$280 (\$279-\$281)	\$123 (\$70-\$177)	\$162 (\$105-\$219)	\$92 (\$41-\$143)	\$1,175 (\$734-\$1,615)	\$1,489 (\$1,046-\$1,932)	\$920 (\$480-\$1,359)	\$1,951 (\$1,386-\$2,517)	\$2,696 (\$2,092-\$3,300)	\$1,347 (\$813-\$1,881)
Ohio	\$102 (\$44-\$161)	\$167 (\$83-\$251)	\$49 (\$11-\$87)	\$499 (\$497-\$502)	\$785 (\$780-\$789)	\$266 (\$265-\$267)	\$134 (\$77-\$191)	\$184 (\$120-\$248)	\$93 (\$42-\$145)	\$1,266 (\$815-\$1,717)	\$1,699 (\$1,225-\$2,174)	\$912 (\$480-\$1,343)	\$2,002 (\$1,433-\$2,572)	\$2,835 (\$2,208-\$3,461)	\$1,320 (\$798-\$1,842)
Oklahoma	\$83 (\$34-\$131)	\$133 (\$67-\$199)	\$43 (\$8-\$78)	\$435 (\$433-\$437)	\$681 (\$677-\$685)	\$240 (\$239-\$241)	\$124 (\$73-\$175)	\$162 (\$108-\$215)	\$94 (\$44-\$143)	\$1,204 (\$698-\$1,710)	\$1,587 (\$1,052-\$2,121)	\$899 (\$416-\$1,384)	\$1,845 (\$1,237-\$2,454)	\$2,562 (\$1,905-\$3,220)	\$1,276 (\$707-\$1,846)
Oregon	\$96 (\$41-\$150)	\$179 (\$97-\$263)	\$47 (\$9-\$85)	\$456 (\$452-\$459)	\$785 (\$779-\$791)	\$266 (\$265-\$268)	\$140 (\$76-\$203)	\$193 (\$125-\$261)	\$109 (\$48-\$170)	\$930 (\$523-\$1,337)	\$1,312 (\$886-\$1,739)	\$710 (\$314-\$1,106)	\$1,620 (\$1,092-\$2,150)	\$2,470 (\$1,886-\$3,054)	\$1,132 (\$636-\$1,630)
Pennsylvania	\$97 (\$46-\$148)	\$183 (\$102-\$264)	\$39 (\$8-\$70)	\$482 (\$478-\$485)	\$790 (\$783-\$796)	\$275 (\$273-\$277)	\$123 (\$67-\$179)	\$168 (\$107-\$230)	\$92 (\$40-\$144)	\$1,071 (\$625-\$1,516)	\$1,424 (\$972-\$1,877)	\$833 (\$393-\$1,274)	\$1,772 (\$1,217-\$2,328)	\$2,565 (\$1,964-\$3,166)	\$1,240 (\$715-\$1,765)
Rhode Island	\$94 (\$42-\$147)	\$189 (\$104-\$275)	\$43 (\$9-\$77)	\$470 (\$466-\$473)	\$799 (\$792-\$806)	\$291 (\$290-\$293)	\$130 (\$69-\$190)	\$182 (\$116-\$247)	\$102 (\$44-\$159)	\$1,148 (\$672-\$1,625)	\$926 (\$1,096-\$2,024)	\$926 (\$442-\$1,409)	\$1,842 (\$1,250-\$2,435)	\$2,730 (\$2,109-\$3,352)	\$1,362 (\$784-\$1,939)
South Carolina	\$97 (\$39-\$155)	\$155 (\$79-\$231)	\$55 (\$10-\$100)	\$451 (\$449-\$454)	\$736 (\$732-\$740)	\$250 (\$249-\$251)	\$124 (\$72-\$176)	\$166 (\$111-\$221)	\$94 (\$44-\$144)	\$1,232 (\$708-\$1,758)	\$1,671 (\$1,120-\$2,222)	\$921 (\$416-\$1,429)	\$1,904 (\$1,268-\$2,543)	\$2,728 (\$2,042-\$3,415)	\$1,320 (\$718-\$1,924)
South Dakota	\$106 (\$47-\$166)	\$187 (\$95-\$280)	\$44 (\$10-\$79)	\$507 (\$504-\$509)	\$817 (\$813-\$822)	\$270 (\$269-\$271)	\$105 (\$59-\$151)	\$138 (\$89-\$186)	\$80 (\$36-\$125)	\$1,201 (\$759-\$1,642)	\$1,573 (\$1,119-\$2,026)	\$917 (\$485-\$1,350)	\$1,919 (\$1,369-\$2,469)	\$2,715 (\$2,116-\$3,314)	\$1,312 (\$800-\$1,825)
Tennessee	\$92 (\$39-\$145)	\$149 (\$76-\$223)	\$43 (\$8-\$78)	\$470 (\$468-\$473)	\$733 (\$728-\$737)	\$248 (\$247-\$249)	\$136 (\$81-\$190)	\$186 (\$125-\$246)	\$93 (\$43-\$143)	\$1,379 (\$836-\$1,923)	\$1,906 (\$1,318-\$2,495)	\$932 (\$428-\$1,438)	\$2,077 (\$1,424-\$2,731)	\$2,974 (\$2,247-\$3,700)	\$1,317 (\$726-\$1,909)
Texas	\$97 (\$40-\$154)	\$161 (\$83-\$238)	\$54 (\$10-\$98)	\$503 (\$501-\$506)	\$822 (\$817-\$827)	\$290 (\$288-\$291)	\$133 (\$78-\$188)	\$183 (\$124-\$242)	\$99 (\$47-\$151)	\$1,436 (\$821-\$2,052)	\$1,965 (\$1,314-\$2,617)	\$1,081 (\$490-\$1,673)	\$2,169 (\$1,439-\$2,900)	\$3,131 (\$2,338-\$3,924)	\$1,523 (\$835-\$2,213)
Utah	\$111 (\$49-\$173)	\$198 (\$110-\$286)	\$61 (\$14-\$109)	\$539 (\$535-\$542)	\$894 (\$886-\$901)	\$339 (\$337-\$341)	\$112 (\$63-\$160)	\$157 (\$102-\$211)	\$86 (\$41-\$131)	\$1,028 (\$546-\$1,511)	\$1,341 (\$871-\$1,812)	\$851 (\$363-\$1,341)	\$1,788 (\$1,192-\$2,385)	\$2,589 (\$1,970-\$3,209)	\$1,338 (\$755-\$1,923)
Vermont	\$81 (\$35-\$127)	\$167 (\$93-\$242)	\$42 (\$8-\$75)	\$406 (\$403-\$409)	\$737 (\$731-\$743)	\$255 (\$253-\$256)	\$113 (\$59-\$168)	\$156 (\$97-\$216)	\$94 (\$41-\$146)	\$930 (\$529-\$1,332)	\$1,306 (\$898-\$1,713)	\$759 (\$360-\$1,159)	\$1,531 (\$1,025-\$2,036)	\$2,366 (\$1,819-\$2,913)	\$1,149 (\$663-\$1,636)
Virginia	\$110 (\$45-\$176)	\$189 (\$97-\$280)	\$59 (\$10-\$108)	\$588 (\$584-\$591)	\$970 (\$964-\$976)	\$336 (\$335-\$338)	\$152 (\$87-\$218)	\$201 (\$134-\$268)	\$120 (\$56-\$184)	\$1,693 (\$960-\$2,427)	\$2,277 (\$1,505-\$3,049)	\$1,308 (\$601-\$2,018)	\$2,543 (\$1,676-\$3,411)	\$3,636 (\$2,700-\$4,573)	\$1,824 (\$1,003-\$2,647)
Washington	\$98 (\$43-\$154)	\$204 (\$111-\$296)	\$49 (\$11-\$87)	\$508 (\$504-\$511)	\$911 (\$904-\$918)	\$318 (\$316-\$320)	\$153 (\$82-\$224)	\$211 (\$137-\$285)	\$126 (\$56-\$195)	\$1,082 (\$599-\$1,567)	\$1,544 (\$1,041-\$2,048)	\$865 (\$391-\$1,341)	\$1,841 (\$1,228-\$2,456)	\$2,870 (\$2,192-\$3,547)	\$1,358 (\$775-\$1,943)
West Virginia	\$80 (\$34-\$126)	\$120 (\$60-\$179)	\$39 (\$7-\$71)	\$382 (\$380-\$384)	\$559 (\$556-\$562)	\$197 (\$196-\$198)	\$128 (\$77-\$180)	\$164 (\$110-\$218)	\$91 (\$43-\$140)	\$1,016 (\$607-\$1,426)	\$1,286 (\$872-\$1,700)	\$733 (\$330-\$1,139)	\$1,607 (\$1,098-\$2,116)	\$2,129 (\$1,598-\$2,659)	\$1,061 (\$575-\$1,548)
Wisconsin	\$89 (\$38-\$139)	\$170 (\$85-\$255)	\$38 (\$9-\$67)	\$458 (\$455-\$460)	\$781 (\$777-\$786)	\$255 (\$254-\$256)	\$124 (\$69-\$179)	\$176 (\$114-\$238)	\$91 (\$41-\$142)	\$1,182 (\$741-\$1,622)	\$1,642 (\$1,177-\$2,108)	\$893 (\$468-\$1,319)	\$1,852 (\$1,303-\$2,400)	\$2,769 (\$2,152-\$3,386)	\$1,278 (\$772-\$1,783)
Wyoming	\$102 (\$45-\$160)	\$171 (\$92-\$251)	\$53 (\$11-\$94)	\$445 (\$442-\$448)	\$706 (\$701-\$711)	\$258 (\$257-\$260)	\$128 (\$72-\$183)	\$169 (\$110-\$227)	\$98 (\$44-\$152)	\$837 (\$475-\$1,199)	\$1,093 (\$738-\$1,447)	\$653 (\$287-\$1,020)	\$1,512 (\$1,034-\$1,990)	\$2,139 (\$1,641-\$2,636)	\$1,062 (\$599-\$1,527)
<b>State Summary</b>															
Median	\$98	\$179	\$45	\$476	\$785	\$266	\$128	\$173	\$97	\$1,189	\$1,573	\$899	\$1,879	\$2,707	\$1,317
Min	\$75	\$117	\$30	\$382	\$559	\$197	\$105	\$138	\$80	\$766	\$1,014	\$595	\$1,363	\$1,996	\$959
Max	\$164	\$285	\$84	\$822	\$1,338	\$478	\$239	\$343	\$170	\$2,170	\$3,008	\$1,611	\$3,395	\$4,974	\$2,342

*Notes:* Values in parentheses are, 95% prediction intervals, based on 95% CIs of regression-based estimates. The absenteeism, presenteeism, home productivity, inability to work, and total morbidity costs per adults who smoked cigarettes were computed by dividing the total absenteeism, presenteeism, home productivity, inability to work, and morbidity costs by the number of adults who smoked cigarettes.

**Appendix**  
**Cost of Cigarette Smoking Attributable Productivity Losses, U.S., 2018**  
**Shrestha et al.**

**Appendix Table 5.** Annual Morbidity-Related Productivity Losses (2018\$) Attributable to Cigarette Smoking Per Capita Adult Population, U.S. State

State	Absenteeism costs	Presenteeism costs	Home productivity costs	Inability to work costs	Total morbidity costs
Alabama	\$35 (\$15-\$56)	\$172 (\$171-\$173)	\$53 (\$31-\$74)	\$450 (\$262-\$638)	\$710 (\$479-\$941)
Alaska	\$45 (\$20-\$69)	\$210 (\$208-\$211)	\$63 (\$36-\$90)	\$405 (\$232-\$578)	\$723 (\$497-\$949)
Arizona	\$36 (\$16-\$55)	\$162 (\$161-\$163)	\$48 (\$26-\$70)	\$307 (\$171-\$444)	\$553 (\$373-\$733)
Arkansas	\$41 (\$18-\$65)	\$193 (\$192-\$194)	\$56 (\$34-\$78)	\$521 (\$316-\$726)	\$811 (\$559-\$1,064)
California	\$33 (\$15-\$51)	\$160 (\$158-\$161)	\$44 (\$24-\$65)	\$318 (\$171-\$464)	\$554 (\$368-\$741)
Colorado	\$43 (\$19-\$67)	\$200 (\$198-\$201)	\$51 (\$28-\$74)	\$381 (\$210-\$551)	\$674 (\$456-\$892)
Connecticut	\$38 (\$17-\$60)	\$198 (\$197-\$200)	\$51 (\$27-\$76)	\$459 (\$275-\$661)	\$747 (\$498-\$996)
Delaware	\$38 (\$16-\$61)	\$182 (\$181-\$183)	\$63 (\$36-\$90)	\$513 (\$300-\$726)	\$795 (\$532-\$1,059)
District of Columbia	\$53 (\$21-\$85)	\$266 (\$265-\$268)	\$77 (\$46-\$109)	\$702 (\$407-\$998)	\$1,099 (\$739-\$1,459)
Florida	\$30 (\$12-\$48)	\$157 (\$156-\$158)	\$53 (\$30-\$77)	\$472 (\$271-\$674)	\$712 (\$468-\$956)
Georgia	\$34 (\$14-\$54)	\$167 (\$166-\$167)	\$47 (\$28-\$67)	\$464 (\$272-\$657)	\$712 (\$480-\$944)
Hawaii	\$39 (\$17-\$62)	\$183 (\$182-\$184)	\$48 (\$26-\$71)	\$368 (\$203-\$534)	\$639 (\$428-\$851)
Idaho	\$30 (\$14-\$47)	\$143 (\$142-\$144)	\$42 (\$23-\$61)	\$276 (\$153-\$399)	\$490 (\$331-\$650)
Illinois	\$40 (\$18-\$62)	\$206 (\$204-\$207)	\$49 (\$27-\$71)	\$516 (\$321-\$710)	\$810 (\$570-\$1,049)
Indiana	\$40 (\$17-\$62)	\$201 (\$200-\$202)	\$52 (\$30-\$74)	\$503 (\$324-\$683)	\$796 (\$572-\$1,021)
Iowa	\$43 (\$18-\$69)	\$194 (\$193-\$195)	\$46 (\$26-\$66)	\$459 (\$288-\$631)	\$742 (\$524-\$961)
Kansas	\$43 (\$19-\$68)	\$200 (\$199-\$201)	\$47 (\$27-\$68)	\$495 (\$316-\$674)	\$786 (\$561-\$1,012)
Kentucky	\$48 (\$21-\$76)	\$228 (\$227-\$229)	\$61 (\$36-\$85)	\$627 (\$273-\$882)	\$964 (\$656-\$1,272)
Louisiana	\$40 (\$17-\$62)	\$191 (\$190-\$192)	\$50 (\$30-\$71)	\$508 (\$298-\$719)	\$789 (\$535-\$1,044)
Maine	\$37 (\$17-\$57)	\$188 (\$186-\$189)	\$52 (\$28-\$76)	\$449 (\$267-\$631)	\$726 (\$498-\$953)
Maryland	\$39 (\$15-\$63)	\$191 (\$190-\$192)	\$56 (\$31-\$80)	\$576 (\$330-\$824)	\$862 (\$566-\$1,158)
Massachusetts	\$40 (\$18-\$61)	\$212 (\$210-\$213)	\$54 (\$28-\$80)	\$501 (\$288-\$714)	\$807 (\$545-\$1,068)
Michigan	\$39 (\$17-\$60)	\$205 (\$204-\$206)	\$58 (\$33-\$83)	\$515 (\$324-\$707)	\$816 (\$578-\$1,055)
Minnesota	\$42 (\$18-\$66)	\$217 (\$215-\$218)	\$53 (\$30-\$77)	\$551 (\$339-\$762)	\$863 (\$602-\$1,123)
Mississippi	\$31 (\$13-\$50)	\$159 (\$158-\$160)	\$48 (\$29-\$67)	\$437 (\$259-\$615)	\$675 (\$459-\$891)
Missouri	\$42 (\$18-\$66)	\$204 (\$203-\$205)	\$53 (\$30-\$76)	\$500 (\$317-\$682)	\$799 (\$568-\$1,030)
Montana	\$38 (\$17-\$59)	\$172 (\$171-\$173)	\$50 (\$28-\$73)	\$339 (\$195-\$483)	\$600 (\$412-\$789)
Nebraska	\$40 (\$17-\$64)	\$195 (\$194-\$196)	\$46 (\$26-\$66)	\$500 (\$320-\$679)	\$781 (\$557-\$1,006)
Nevada	\$40 (\$17-\$62)	\$181 (\$180-\$183)	\$48 (\$26-\$70)	\$350 (\$190-\$511)	\$619 (\$413-\$826)
New Hampshire	\$42 (\$20-\$64)	\$219 (\$217-\$220)	\$54 (\$29-\$79)	\$510 (\$292-\$727)	\$824 (\$557-\$1,091)
New Jersey	\$42 (\$19-\$66)	\$213 (\$211-\$214)	\$49 (\$26-\$71)	\$495 (\$284-\$706)	\$799 (\$540-\$1,057)
New Mexico	\$36 (\$16-\$56)	\$157 (\$156-\$158)	\$46 (\$25-\$67)	\$314 (\$184-\$443)	\$553 (\$381-\$724)

**Appendix**  
**Cost of Cigarette Smoking Attributable Productivity Losses, U.S., 2018**  
**Shrestha et al.**

New York	\$34 (\$16-\$52)	\$178 (\$177-\$179)	\$48 (\$25-\$70)	\$408 (\$234-\$583)	\$668 (\$542-\$885)
North Carolina	\$35 (\$15-\$55)	\$178 (\$177-\$179)	\$55 (\$31-\$78)	\$501 (\$290-\$713)	\$768 (\$513-\$1,024)
North Dakota	\$49 (\$21-\$77)	\$216 (\$215-\$217)	\$50 (\$28-\$72)	\$476 (\$298-\$655)	\$791 (\$562-\$1,021)
Ohio	\$45 (\$19-\$71)	\$221 (\$219-\$222)	\$59 (\$34-\$84)	\$559 (\$360-\$758)	\$884 (\$633-\$1,136)
Oklahoma	\$35 (\$15-\$56)	\$185 (\$184-\$186)	\$53 (\$31-\$74)	\$511 (\$296-\$726)	\$784 (\$525-\$1,042)
Oregon	\$39 (\$17-\$61)	\$184 (\$183-\$186)	\$57 (\$31-\$82)	\$376 (\$212-\$541)	\$656 (\$442-\$870)
Pennsylvania	\$39 (\$18-\$59)	\$194 (\$192-\$195)	\$49 (\$27-\$72)	\$430 (\$251-\$609)	\$712 (\$489-\$936)
Rhode Island	\$37 (\$17-\$58)	\$186 (\$184-\$187)	\$51 (\$27-\$75)	\$454 (\$266-\$642)	\$728 (\$494-\$963)
South Carolina	\$40 (\$16-\$65)	\$189 (\$188-\$190)	\$52 (\$30-\$74)	\$516 (\$296-\$736)	\$797 (\$531-\$1,064)
South Dakota	\$44 (\$20-\$69)	\$212 (\$210-\$213)	\$44 (\$25-\$63)	\$501 (\$317-\$686)	\$801 (\$572-\$1,031)
Tennessee	\$39 (\$17-\$62)	\$201 (\$200-\$202)	\$58 (\$35-\$81)	\$590 (\$357-\$822)	\$888 (\$609-\$1,167)
Texas	\$33 (\$13-\$52)	\$170 (\$169-\$171)	\$45 (\$26-\$63)	\$484 (\$277-\$692)	\$731 (\$485-\$978)
Utah	\$27 (\$12-\$41)	\$129 (\$128-\$130)	\$27 (\$15-\$38)	\$247 (\$131-\$363)	\$429 (\$286-\$573)
Vermont	\$34 (\$14-\$53)	\$169 (\$167-\$170)	\$47 (\$24-\$70)	\$386 (\$219-\$553)	\$635 (\$426-\$845)
Virginia	\$40 (\$16-\$63)	\$212 (\$211-\$213)	\$55 (\$31-\$78)	\$611 (\$346-\$876)	\$917 (\$605-\$1,231)
Washington	\$34 (\$15-\$54)	\$177 (\$176-\$179)	\$53 (\$29-\$78)	\$378 (\$209-\$547)	\$643 (\$429-\$858)
West Virginia	\$38 (\$16-\$61)	\$183 (\$182-\$184)	\$62 (\$37-\$86)	\$488 (\$291-\$684)	\$771 (\$527-\$1,016)
Wisconsin	\$36 (\$15-\$56)	\$185 (\$184-\$186)	\$50 (\$28-\$72)	\$477 (\$299-\$656)	\$748 (\$527-\$970)
Wyoming	\$44 (\$19-\$69)	\$192 (\$191-\$193)	\$55 (\$31-\$79)	\$361 (\$205-\$517)	\$652 (\$446-\$858)
<b>State Summary</b>					
Median	\$39	\$191	\$51	\$477	\$748
Min	\$27	\$129	\$27	\$247	\$429
Max	\$53	\$266	\$77	\$702	\$1,099

*Notes:* Values in parentheses are, 95% prediction intervals, based on 95% CIs of regression-based estimates. Per capita absenteeism, presenteeism, home productivity, inability to work, and total morbidity costs were computed by dividing the total absenteeism, presenteeism, home productivity, inability to work, and total morbidity costs by total populations aged 18 or older.