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E-Cigarettes Poised to Save Medicaid Billions

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E lectronic cigarettes (e-cigs) have only been around since 2006, yet their potential to dramatically reduce the damaging health impacts of traditional cigarettes has garnered significant attention and credibility. Numerous scientific studies show that e-cigs not only reduce the harm from smoking, but can also be a part of the successful path to smoking cessation.

The term "e-cig" is misleading because there is no tobacco in an e-cig, unlike a traditional, combustible cigarette. The e-cig uses a batterypowered vaporizer to deliver nicotine via a propylene-glycol solution—which is why "smoking" an e-cig is called "vaping." The vapor is inhaled like a smoke from a cigarette, but does not contain the carcinogens found in tobacco smoke.

Unlike traditional nicotine replacement therapy (NRT), such as gum or patches, e-cigs mimic the physical routine of smoking a cigarette. As such, e-cigs fulfill both the chemical need for nicotine and physical stimuli of smoking. This powerful combination has led to the increasing demand for e-cigs—8.2% use among nondaily smokers and 6.2% use among daily smokers in 2011.¹

The game-changing potential for dramatic harm reduction by current smokers using e-cigs will flow directly into lower healthcare costs dealing with the morbidity and mortality stemming from smoking combustible cigarettes. These benefits will particularly impact the Medicaid system where the prevalence of cigarette smoking is twice that of the general public (51% versus 21%, respectively).

Based on the findings of a rigorous and comprehensive study on the impact of cigarette smoking on Medicaid spending, the potential savings of e-cig adoption, and the resulting tobacco smoking cessation and harm reduction, could have been up to \$48 billion in Fiscal Year (FY) 2012.² This savings is 87% higher than all state cigarette tax collections and tobacco settlement collections (\$24.4 billion) collected in that same year.

Unfortunately, the tantalizing benefits stemming from e-cigs may not come to fruition if artificial barriers slow their adoption among current smokers. These threats range from the Food and Drug Administration regulating e-cigs as a pharmaceutical to states extending their cigarette tax to e-cigs. To be sure, e-cigs are still a new product and should be closely monitored for longterm health effects. However, given the longterm fiscal challenges facing Medicaid, the prospect of large e-cigs cost savings is worth a noninterventionist approach until hard evidence proves otherwise.

Prevalence of Smoking in the **Medicaid Population**

According to the Centers for Disease Control and Prevention, in 2011, 21.2% of Americans smoked combustible cigarettes. However, as shown in Table 1, the smoking rate varies considerably across states with the top three states being Kentucky (29%), West Virginia (28.6%), and Arkansas (27%) and the three lowest states being Utah (11.8%), California (13.7%), and New Jersey (16.8%).³

Additionally, the smoking rate varies dramatically by income level. Nearly 28% of people living below the poverty line smoke while 17% of people living at or above the poverty line smoke.⁴

As a consequence, the level of smoking prevalence among Medicaid recipients is more than twice that of the general public, 51% versus 21%, respectively. However, this too varies considerably across states with the top three states being New Hampshire (80%), Montana (70%), and Pennsylvania (70%) and the three lowest states being Mississippi (35%), New Jersey (36%), and South Carolina (41%).⁵

In absolute terms, the U.S. Medicaid system includes 36 million smokers out of a total Medicaid enrollment of over 68 million. As such, this places much of the health burden and related financial cost of smoking on the Medicaid system which strains the system and takes away scarce resources from the truly needy.

Economic Benefit of Smoking Cessation and Harm Reduction

Smoking creates large negative externalities due to adverse health impacts. Table 2 shows the results of a comprehensive study that quantified the two major costs of smoking in 2009 lost productivity and healthcare costs.⁶

Lost productivity occurs when a person dies prematurely due to smoking or misses time

from work due to smoking. This cost the economy \$185 billion in lost output in 2009.



Table 1 **Smokers Represent Significantly Larger Proportion of** Medicaid Recipients than General Population 2011

	Percent Smokers		Medicaid	Number of
State	Medicaid	General	Enrollment	Smokers on
		Population		Medicaid
United States	51%	21.2% (median)	68,372,045	36,461,209
Alabama	52%	24.3%	938,313	487,923
Alaska	68%	22.9%	135,059	91,840
Arizona	49%	19.2%	1,989,470	974,840
Arkansas	54%	27.0%	777,833	420,030
California	45%	13.7%	11,500,583	5,175,262
Colorado	61%	18.3%	733,347	447,342
Connecticut	49%	17.1%	729,294	357,354
Delaware	58%	21.7%	223,225	129,471
Florida	46%	19.3%	3,829,173	1,761,420
Georgia	42%	21.2%	1,925,269	808,613
Hawaii	62%	16.8%	313,629	194,450
Idaho	62%	17.2%	409,456	253,863
Illinois	58%	20.9%	2,900,614	1,682,356
Indiana	68%	25.6%	1,208,207	821,581
Iowa	61%	20.4%	544,620	332,218
Kansas	54%	22.0%	363,755	196,428
Kentucky	65%	29.0%	1,065,840	692,796
Louisiana	43%	25.7%	1,293,869	556,364
Maine	63%	22.8%	327,524	206,340
Maryland	51%	19.1%	1,003,548	511,809
Massachusetts	53%	18.2%	1,504,611	797,444
Michigan	64%	23.3%	2,265,277	1,449,777
Minnesota	54%	19.1%	989,600	534,384
Mississippi	35%	26.0%	775,314	271,360
Missouri	66%	25.0%	1,126,505	743,493
Montana	70%	22.1%	136,442	95,509
Nebraska	64%	20.0%	284,000	181,760
Nevada	62%	22.9%	363.357	225,281
New Hampshire	80%	19.4%	152,182	121.746
New Jersev	36%	16.8%	1.304.257	469.533
New Mexico	50%	21.5%	571.621	285.811
New York	54%	18.1%	5 421 232	2 927 465
North Carolina	63%	21.8%	1.892 541	1.192.301
North Dakota	63%	21.0%	85 09/	53 609
Ohio	65%	25.1%	2.526.533	1.642 246
Oklahoma	58%	26.1%	852 603	494 510
Oregon	67%	19.7%	690 364	462 544
Pennsylvania	70%	22 4%	2 443 909	1 710 736
Rhode Island	/ 18%	20.0%	2,443,509	106 100
South Carolina	40 /0	20.0 /0 22.10/	078 722	401.200
South Dalcata	41%	23.1%	124 709	401,280
Topposso	69% E00/	23.0%	1.766.267	93,011
Tennessee	58%	23.0%	1,488,267	863,195
1exas	43%	19.2%	4,996,318	2,148,417
Utah	54%	11.8%	366,271	197,786
Vermont	67%	19.1%	184,088	123,339
Virginia	58%	20.9%	1,016,419	589,523
Washington	67%	17.5%	1,371,987	919,231
West Virginia	67%	28.6%	411,218	275,516
Wisconsin	63%	20.9%	1,292,799	814,463
Wyoming	62%	23.0%	76,372	47,351
District of Columbia	51%	20.8%	235,665	120,189

Source: Centers for Disease Control and Prevention, Centers for Medicare and Medicaid Services, and State Budget Solutions

Smokers incur higher healthcare costs when those individuals require medical services such as ambulatory care, hospital care, prescriptions, and neonatal care for conditions caused by smoking. This cost the economy \$116 billion in extra medical treatments.

Overall, in 2009 alone, the negative externalities of smoking cost the U.S. economy \$301 billion in lost productivity and higher healthcare costs. Not surprisingly, these costs were centered in high population states such as California (\$26.9 billion), New York (\$20.6 billion), and Texas (\$20.4 billion).

Literature Review On E-cig Impact On Harm Reduction Through Reduced Toxic Exposure and Smoking Cessation

E-cigs have only been around since 2006, yet their potential to dramatically reduce the damaging health impacts of traditional combustible cigarettes has garnered significant attention and credibility. Numerous scientific studies are showing that e-cigs not only reduce the harm from smoking, but is also a successful path to smoking cessation.

In perhaps the most comprehensive e-cig literature review to date, Neil Benowitz et al. (2014) identified eighty-one studies with original data and evidence from which to judge e-cig effectiveness for harm reduction.⁷ They concluded:

"Allowing EC (electronic cigarettes) to compete with cigarettes in the market-place might decrease smoking-related morbidity and mortality. Regulating EC as strictly as cigarettes, or even more strictly as some regulators propose, is not warranted on current evidence. Health professionals may consider advising smokers unable or unwilling to quit through other routes to switch to EC as a safer alternative to smoking and a possible pathway to complete cessation of nicotine use."

There are two ways that e-cigs benefit current smokers. First, there is harm reduction for the smoker by removing exposure to the toxicity



Table 2 Comprehensive Costs of Smoking (Billions of Dollars)

2009					
Lost Productivity			Healthcare	Total	
State	Premature	Workplace	Total	Costs	Smoking
	Death	Workplace	Total	0000	Costs
United States	117.1	67.5	184.6	116.4	301.0
Alabama	2.7	1.2	3.9	1.7	5.6
Alaska	0.2	0.2	0.4	0.3	0.7
Arizona	1.9	1.3	3.2	1.9	5.1
Arkansas	1.7	0.7	2.4	1.1	3.4
California	9.6	5.7	15.2	11.6	26.9
Colorado	1.3	1.2	2.5	1.6	4.1
Connecticut	1.2	0.7	1.8	1.7	3.6
Delaware	0.4	0.2	0.6	0.4	1.1
District of Columbia	0.3	0.1	0.4	0.5	0.9
Florida	7.9	4.4	12.3	7.3	19.6
Georgia	3.7	2.4	6.2	2.9	9.0
Hawaii	0.4	0.2	0.7	0.4	1.1
Idaho	0.4	0.3	0.7	0.4	1.1
Illinois	5.0	2.9	7.9	4.8	12.7
Indiana	3.0	2.1	5.1	2.6	7.7
Iowa	1.2	0.7	1.9	1.1	3.0
Kansas	1.0	0.6	1.6	1.0	2.6
Kentucky	2.6	1.3	3.9	1.8	5.7
Louisiana	2.4	0.9	3.3	1.8	5.1
Maine	0.6	0.3	0.9	0.7	1.6
Maryland	2.1	1.3	3.4	2.2	5.6
Massachusetts	2.2	1.3	3.4	3.7	7.1
Michigan	4.5	2.4	7.0	4.0	11.0
Minnesota	1.5	1.5	3.0	2.3	5.4
Mississippi	1.8	0.7	2.4	1.0	3.5
Missouri	3.0	1.5	4.5	2.7	7.2
Montana	0.3	0.2	0.6	0.4	0.9
Nebraska	0.6	0.5	1.1	0.7	1.8
Nevada	1.1	0.7	1.7	0.9	2.6
New Hampshire	0.5	0.3	0.8	0.6	1.4
New Jersey	2.9	1.8	4.7	3.6	8.3
New Mexico	0.5	0.4	0.9	0.6	1.5
New York	6.9	3.9	10.8	9.8	20.6
North Carolina	4.1	2.2	6.3	3.4	9.7
North Dakota	0.2	0.2	0.4	0.3	0.7
Ohio	5.7	2.9	8.6	5.2	13.9
Oklahoma	2.1	0.9	3.0	1.3	4.3
Oregon	1.3	0.8	2.1	1.3	3.4
Pennsylvania	5.4	3.2	8.5	5.7	14.2
Rhode Island	0.4	0.2	0.7	0.6	1.3
South Carolina	2.3	1.0	3.3	1.6	4.9
South Dakota	0.3	0.2	0.5	0.3	0.8
Tennessee	3.6	1.7	5.3	2.6	7.9
Texas	7.9	4.9	12.8	7.6	20.4
Utah	0.4	0.3	0.7	0.4	1.1
Vermont	0.2	0.1	0.4	0.3	0.7
Virginia	2.9	2.0	4.8	2.7	7.5
Washington	2.1	1.3	3.4	2.4	5.7
West Virginia	1.1	0.5	1.6	0.9	2.5
Wisconsin	2.0	1.4	3.4	2.4	5.8
Wyoming	0.2	0.2	0.4	0.2	0.6
Source: See Endnete	6 and State	Pudget Col	utions		

associated with the thousands of compounds, many carcinogenic, found in the burning of tobacco and the resulting smoke. Second, smoking cessation efforts by the smoker are enhanced by simultaneously fulfilling both the chemical need for nicotine and physical stimuli of smoking.

In the last few years the academic literature has exploded with articles on these two topics. The following is a selection of some of the most recent studies and their conclusions.

Reduced Toxic Exposure

Igor Burstyn (2014) concludes, "Current state of knowledge about chemistry of liquids and aerosols associated with electronic cigarettes indicates that there is no evidence that vaping produces inhalable exposures to contaminants of the aerosol that would warrant health concerns by the standards that are used to ensure safety of workplaces . . . Exposures of bystanders are likely to be orders of magnitude less, and thus pose no apparent concern."⁸

Neal Benowitz, et al. (2013) concludes, "The vapour generated from e-cigarettes contains potentially toxic compounds. However, the levels of potentially toxic compounds in e-cigarette vapour are 9–450-fold lower than those in the smoke from conventional cigarettes, and in many cases comparable with the trace amounts present in pharmaceutical preparation. Our findings support the idea that substituting tobacco cigarettes with electronic cigarettes may substantially reduce exposure to tobaccospecific toxicants. The use of e-cigarettes as a harm reduction strategy among cigarette smokers who are unable to quit, warrants further study."⁹

Kostantinos E Farsalinos et al. (2014) concludes, "Although acute smoking inhalation caused a delay in LV (Left Ventricular) myocardial relaxation in smokers, electronic cigarette use was found to have no such immediate effects in daily users of the device. This short-term beneficial profile of electronic cigarettes compared to smoking, although not conclusive about its overall health-effects as a tobacco harm reduc-



tion product, provides the first evidence about the cardiovascular effects of this device."¹⁰

Smoking Cessation

Emma Beard et al. (2014) concludes, "Among smokers who have attempted to stop without professional support, those who use ecigarettes are more likely to report continued abstinence than those who used a licensed NRT [Nicotine Replacement Therapy] product bought over-the-counter or no aid to cessation. This difference persists after adjusting for a range of smoker characteristics such as nicotine dependence."¹¹

Christopher Bullen et al. (2013) concludes, "Ecigarettes, with or without nicotine, were modestly effective at helping smokers to quit, with similar achievement of abstinence as with nicotine patches, and few adverse events . . . Furthermore, because they have far greater reach and higher acceptability among smokers than NRT [Nicotine Replacement Therapy], and seem to have no greater risk of adverse effects, e-cigarettes also have potential for improving population health."¹²

Pasquale Caponnetto et al. (2013) concludes, "The results of this study demonstrate that ecigarettes hold promise in serving as a means for reducing the number of cigarettes smoked, and can lead to enduring tobacco abstinence as has also been shown with the use of FDAapproved smoking cessation medication. In view of the fact that subjects in this study had no immediate intention of quitting, the reported overall abstinence rate of 8.7% at 52-weeks was remarkable."¹³

Konstantinos E. Farsalinos et al. (2013) concludes, "Participants in this study used liquids with high levels of nicotine in order to achieve complete smoking abstinence. They reported few side effects, which were mostly temporary; no subject reported any sustained adverse health implications or needed medical treatment. Several of the side effects may not be attributed to nicotine. In addition, almost every vaper reported significant benefits from switching to the EC [e-cigarette]. These observations are consistent with findings of Internet surveys and are supported by studies showing that nicotine is not cytotoxic, is not classified as a carcinogen, and has minimal effects on the initiation or propagation of atherosclerosis . . . Public health authorities should consider this and other studies that ECs are used as longterm substitutes to smoking by motivated exsmokers and should adjust their regulatory decisions in a way that would not restrict the availability of nicotine-containing liquids for this population."¹⁴

Potential E-cig Medicaid Cost Savings

To date, the academic literature strongly suggests that e-cigs hold the promise of dramatic harm reduction for smokers simply by switching from combustible tobacco cigarettes to ecigs. This harm reduction is due to both its positive impact on smoking cessation and reduced exposure to toxic compounds in cigarette smoke.

As a result, we can expect the healthcare costs of smoking to decline over time as the adoption of e-cigs by smokers continues to grow. Additionally, we can expect greater rates of adoption as e-cigs continue to evolve and improve based on market feedback—a dynamic that has never existed with other nicotine replacement therapies.

As discussed earlier, the potential savings to the economy are very large. In terms of healthcare alone, most of that cost is currently borne by the Medicaid system where the prevalence of cigarette smoking is twice that of the general public, 51% versus 21%, respectively. So what are the potential healthcare savings to Medicaid?

Brian S. Armour et al. (2009) created an impressive economic model to estimate how much smoking costs Medicaid based on data from the Medical Expenditure Panel Survey and the Behavioral Risk Factor Surveillance System.¹⁵

Overall, their model ". . . included 16,201 adults with weighting variables that allowed us to generate state representative estimates of the



l able 3					
Smoking Costs on Medicaid by State					
(Millions of Dollars)					
Fiscal Year 2012					
		Smoking Costs as			
State	Medicaid	Percent of Medicaid	Smoking Costs		
	Spending	Spending	on Medicaid		
United States	415,154	11%	45,667		
Alabama	5,027	9%	452		
Alaska	1,348	15%	202		
Arizona	7,905	18%	1,423		
Arkansas	4,160	11%	458		
California	50,165	11%	5,518		
Colorado	4,724	17%	803		
Connecticut	6,759	7%	473		
Delaware	1,485	10%	148		
District of Columbia	2,111	11%	232		
Florida	17,907	11%	1,970		
Georgia	8,526	10%	853		
Hawaii	1,493	11%	164		
Idaho	1,452	14%	203		
Illinois	13,393	11%	1,473		
Indiana	7,486	15%	1,123		
Iowa	3,495	10%	350		
Kansas	2,667	12%	320		
Kentucky	5,702	12%	684		
Louisiana	7,358	12%	883		
Maine	2,413	14%	338		
Maryland	7,687	12%	922		
Massachusetts	12,926	11%	1,422		
Michigan	12,460	13%	1,620		
Minnesota	8,894	11%	978		
Mississippi	4,466	9%	402		
Missouri	8,727	14%	1,222		
Montana	973	15%	146		
Nebraska	1,722	15%	258		
Nevada	1,739	11%	191		
New Hampshire	1,187	15%	178		
New Jersey	10,389	6% 10%	623		
New Mexico	3,430	12%	412		
New York	53,306	11%	5,864		
North Carolina	12,282	11%	1,351		
	744	12%	89		
Ohio	16,352	13%	2,126		
Oklanoma	4,642	12%	557		
Oregon Deregon	4,587	15%	688		
Pennsylvania Dhodo Joland	20,393	11%	2,243		
South Carolina	1,000	0 /0	522		
South Dalcata	4,040	11 %	120		
Tennessoo	8 700	10%	068		
Toyac	0,170	1170	2 111		
Itab	20,280	11%	3,111		
Vormont	1,903	14 %	200		
Virginia	6.004	13%	203		
v irginia Washington	7 540	11%	1 261		
West Virginia	2 790	10%	1,301		
Wisconsin	7,004	1170	007 022		
Wyoming	528	15%	923		
Note: States do not a	um to Total	10 /0	00		
Source: See Endnote 15 and State Budget Solutions					

adult, noninstitutionalized Medicaid population."

The study concluded that 11% of all Medicaid expenditures can be attributed to smoking. Additionally, among the states these costs ranged from a high of 18% (Arizona and Washington) to a low of 6% (New Jersey).

This study uses their percentage of Medicaid spending due to smoking and applies it to the latest year of available state-by-state Medicaid spending. As shown in Table 3, in FY 2012, smoking cost the Medicaid system \$45.7 billion. Of course, the largest states bear the brunt of these costs such as New York (\$5.9 billion), California (\$5.5 billion), and Texas (\$3.1 billion).

To put this potential savings to Medicaid into perspective, in FY 2012, state governments and the District of Columbia combined collected \$24.4 billion in cigarette excise taxes and tobacco settlement payments. As shown in Table 4, the potential Medicaid savings exceeds cigarette excise tax collections and tobacco settlement payments by 87%.

However, this varies greatly by state with high ratios in the South Carolina (435%), Missouri (409%), and New Mexico (260%), Arizona (238%), and California (238%) and low ratios in New Jersey (-39%), New Hampshire (-31%), Rhode Island (-17%), Connecticut (-13%), and Hawaii (-4%). Overall, 45 states and D.C. stand to gain more from potential Medicaid savings than through lost cigarette tax collections and tobacco settlement payments.

Note that many of the five states with negative ratios are distorted because excise tax collections are based on where the initial sale occurred and not where the cigarettes were ultimately consumed. This can vary greatly because of cigarette smuggling and cross-border shopping created by state-level differentials in cigarette excise taxes.¹⁶

For instance, New Hampshire has long been a source for out-of-state cigarette purchase from shoppers living in Massachusetts, Maine, and Vermont because of its lower cigarette excise



Table 4 Smoking Costs on Medicaid Exceeds State Cigarette Tax Collections and Tobacco Settlement Payments (Millions of Dollars) Fiscal Year 2012

Fiscal Year 2012					
	State	Tobacco		Smoking Costs on	
	Cigarette Tax	Settlement	Smoking	Medicaid as a Percent of	
State	Collections	Payments	Costs on	State Cigarette Tax	
	(a)	(b)	Medicaid	Collections and Tobacco	
XI 10 10 1	15.00 (F 100		Settlement Payments	
United States	17,226	7,190	45,667	87%	
Alabama	126	94	452	106%	
Alaska	67	30	202	108%	
Arizona	319	101	1,423	238%	
Arkansas	247	51	458	54%	
California	896	736	5,518	238%	
Colorado	203	91	803	173%	
Connecticut	418	124	473	-13%	
Delaware	121	27	148	1%	
District of Columbia	36	38	232	214%	
Florida	381	365	1,970	164%	
Georgia	227	141	853	132%	
Hawan	122	49	164	-4%	
Idaho	48	25	203	177%	
Illinois	606	274	1,473	67%	
Indiana	465	130	1,123	89%	
lowa	225	66	350	20%	
Kansas	104	58	320	98%	
Kentucky	277	102	684	81%	
Louisiana	133	141	883	222%	
Maine	140	51	338	11%	
Maryland	411	146	922	66%	
Massachusetts	574	254	1,422	72%	
Michigan	965	256	1,620	33%	
Minnesota	422	167	978	66%	
Mississippi	157	110	402	50%	
Mastera	105	135	1,222	409%	
Montana	67	30	140	24%	
Neurada	102	38	200	249/	
Nevaua	215	40	171	34 /0	
New Iamon	702	43	622	-51 /6	
New Movico	792	201	412	-39%	
New Wexico	1 632	728	5 864	147%	
North Carolina	295	141	1 251	210%	
North Dakota	295	32	89	/10%	
Ohio	843	295	2 126	87%	
Oklahoma	293	77	557	50%	
Oregon	256	79	688	106%	
Pennsylvania	1 119	337	2 243	54%	
Rhode Island	1,117	47	1/8	-17%	
South Carolina	26	73	533	435%	
South Dakota	60	24	120	430 %	
Tennessee	279	139	968	131%	
Texas	1,470	475	3.111	60%	
Utah	124	36	266	66%	
Vermont	80	35	203	77%	
Virginia	192	117	760	145%	
Washington	471	151	1,361	119%	
West Virginia	110	64	307	77%	
Wisconsin	653	131	923	18%	
Wyoming	26	19	85	90%	
	-				

(a) Includes all forms of tobacco taxes.

(b) Includes Master Settlement Agreement and individual state payments. Source: Department of Commerce: Census Bureau, Internal Revenue Service, and State Budget Solutions tax. As such, the ratio is too high for Massachusetts, Maine, and Vermont and too low for New Hampshire. The same applies to New Jersey and Connecticut vis-à-vis New York and, more specifically, New York City, which levies its own cigarette tax on top of the state tax.

Hawaii is an exception due to its physical isolation which creates monopoly rents. Rhode Island levies a very high cigarette excise tax, but not relatively high enough compared to neighboring Connecticut and Massachusetts to drive a lot of cross-border shopping.

Other Potential E-cig Cost Savings

Another area of cost savings from greater e-cig adoption is the reduction in smoke and fire dangers in subsidized and public housing. According to a recent study, smoking imposes three major costs:

- 1. Increased healthcare costs from exposure to second hand smoke within and between housing units.
- 2. Increased renovation costs of smokingpermitted housing units.
- 3. Fires attributed to cigarettes.

As shown in Table 5, the study estimates that smoking imposes a nationwide cost of nearly \$500 million.¹⁷ The top three states facing the greatest expenses are New York (\$125 million), California (\$72 million), and Texas (\$24 million) while the top three states with the lowest expenses are Wyoming (\$0.6 million), Idaho (\$0.8 million), and Montana (\$1 million).

Applying Cigarette Taxes to E-cigs?

Many policymakers around the country have suggested applying the existing cigarette tax, wholly or in part, to e-cigs. This is bad public policy and is based on a fundamental misunderstanding of the cigarette tax.

The cigarette tax is what economists call a "Pigovian Tax" which is designed to mitigate



Table 5			
Smoking Costs on			
Subsidized and	Public		
Housing			
nousing			
(Millions of Do	ollars)		
2012			
<u></u>	Smoking		
State	Costs		
United States	496.8		
New York	124.7		
California	72.4		
Texas	28.3		
Massachusetts	24.0		
Florida	23.2		
Ohio	21.7		
Pennsylvania	17.7		
New Jersey	15.8		
Louisiana	14.4		
North Carolina	13.9		
Illinois	13.3		
Tennessee	12.9		
Michigan	12.8		
Alabama	12.4		
Georgia	11.6		
Connecticut	10.7		
Missouri	9.4		
Indiana	8.3		
Virginia	7.8		
Mississippi	7.2		
Kentucky	7.1		
Minnesota	7.1		
South Carolina	7.0		
Maryland	7.0		
Arkansas	6.8		
Oklahoma	6.8		
Wisconsin	6.5		
Washington	5.0		
Arizona	4.9		
Colorado	4.5		
West Virginia	4.3		
Oregon	4.3		
Maine	4.2		
Rhode Island	4.0		
Hawaii	3.8		
Iowa	3.8		
New Mexico	3.0		
Kansas	2.9		
Nebraska	2.1		
Nevada	1.9		
Vermont	1.9		
New Hampshire	1.9		
Utah	1.4		
Delaware	1.3		
North Dakota	1.2		
South Dakota	1.1		
Montana	1.0		
Idaho	0.8		
Wyoming	0.6		
Alaska	N.A.		
District of Columbia	N.A.		
Source: See Endnote	17 and		
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negative externalities of certain actions. Cigarette smoking creates many negative externalities such as harmful health consequences to the user or to those in near proximity (second-hand smoke).

As detailed in this study, the negative externalities associated with traditional smoking are all but eliminated by e-cigs. Without evidence of actual negative externalities, applying the existing cigarette tax to e-cigs is simply bad public policy.

Conclusion

Policymakers have long sought to reduce the economic damage due to the negative health impact of smoking. They have used tactics ranging from cigarette excise taxes to subsidizing nicotine replacement therapies. To be sure, smoking prevalence has fallen over time, but there is more that can be done, especially given the fact that so much of the healthcare burden of smoking falls on the already strained Medicaid system.

As with any innovation, no one could have predicted the sudden arrival into the marketplace of the e-cig in 2006. Since e-cigs fulfill both the chemical need for nicotine and physical stimuli of smoking the demand for e-cigs has grown dramatically. The promise of a relatively safe way to smoke has the potential to yield enormous healthcare savings. The most current academic research verifies the harm reduction potential of e-cigs.

As shown in this study, the potential savings to Medicaid significantly exceeds the state revenue raised from the cigarette excise tax and tobacco settlement payments by 87%. As such, the rational policy decision is to adopt a noninterventionist stance toward the evolution and adoption of the e-cig until hard evidence proves otherwise. While cigarette tax collections will fall as a result, Medicaid spending will fall even faster. This is a win-win for policymakers and taxpayers.



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