

Research brief: Raising the minimum sales age for tobacco to 21 years old

Multnomah County Policy Considerations

8/1/2016

Multnomah County Health Department

Sandra Meucci, Ph.D. and Becky Wright, MPH



I. Context

The minimum age of legal access to tobacco products was set at 18 by the states more than two decades ago in response to federal incentives and is now required by federal law. However, state and local jurisdictions remain free to increase the legal age for tobacco sales. Beginning in 2005 in the City of Needham, Massachusetts jurisdictions began enacting ordinances to raise the minimum legal sales age (MLSA) from 18 to 21. At the end of 2015, the total list included over 100 cities in 8 states¹ and in March of 2016 that list grew to include the city of Chicago and the state of California.

In 2009 Congress directed U.S. Food and Drug Administration (FDA) in the Tobacco Control Act to commission a report on the public health implications of raising the minimum age of legal access to tobacco products. In 2013, as requested by the FDA, the Institute of Medicine (IOM) convened a committee to conduct this study

The study was conducted via extensive literature review on tobacco initiation and statistical modeling and other methods, as appropriate, to predict the likely public health outcomes of raising the minimum age for purchase of tobacco products to 21 years and 25 years. It was also premised on the knowledge that underage tobacco users rely primarily on “social sources” (friends and relatives) to get tobacco.

The IOM's 2015 main findings were threefold:

- 1. Increasing the minimum age of legal access to tobacco products will likely prevent or delay initiation of tobacco use by adolescents and young adults.**
- 2. Although changes in the minimum age of legal access to tobacco products will directly pertain to individuals who are age 18 or older, the largest proportionate reduction in the initiation of tobacco use will likely occur among adolescents of ages 15 to 17 years.**
- 3. The impact on the initiation of tobacco use of raising the minimum age of legal access to tobacco products to 21 will likely be substantially higher than raising it to 19, but the added effect of raising the minimum age beyond age 21 to age 25 will likely be considerably smaller.**

The Institute predicted that there would be a 12% reduction in tobacco use among high school students if the minimum sales age for tobacco is raised to 21.

II. Focused Impact - Reduction of Smoking Rates among High School Students

Since most students do not reach 21 years of age while still enrolled in high school, increasing the legal age of sale would greatly reduce the number of high school students who could purchase tobacco products. Decreasing the number of eligible buyers in high school will help reduce youth smoking by decreasing access to tobacco products during the age when they are most likely to become addicted. Approximately 90% of people report first use of cigarettes before reaching 19 years of ageⁱⁱ.

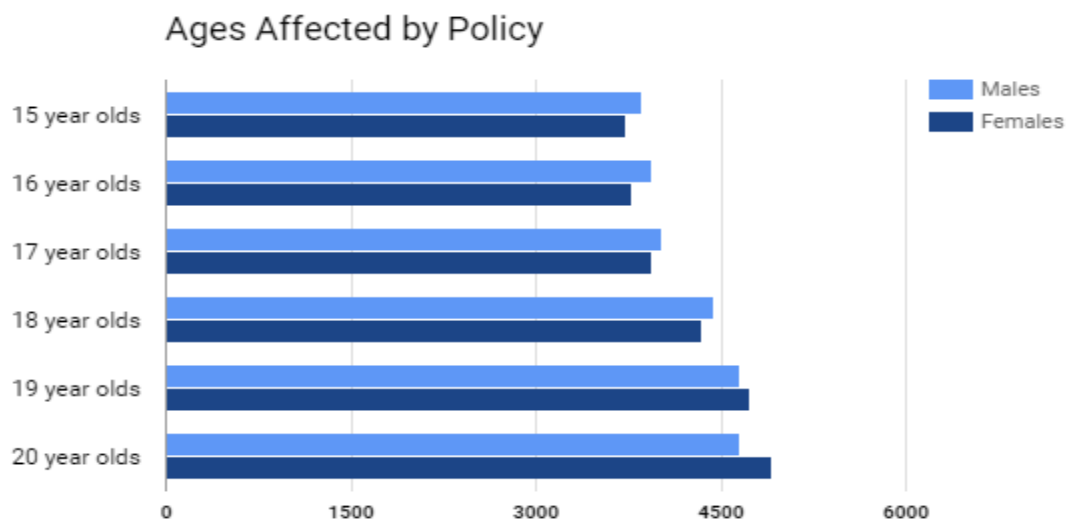
High school-aged youth are an important group, which has experienced relatively small declines in tobacco use rates during the past decade.ⁱⁱⁱ Based on studies showing the effectiveness of youth access laws when they are enforced,^{iv} increasing the MLSA is likely to be particularly effective in reducing tobacco usage among high school-aged youth.

Studies have indicated that older underage youth (i.e., those who are closer to age 18) are more likely to succeed in buying tobacco in stores.^v Further, high school friends and peers of legal age are an important social source of tobacco for underage youth.^{vi} Increasing the MLSA would not only make it more difficult for older youth to buy tobacco, but would reduce the likelihood that a high school student will be of legal age and able to buy tobacco products for other students or underage friends.^{vii}

III. Number of Potentially Affected Youth in Multnomah County

Below are the numbers reflected in the 2010 Census of youth in Multnomah County in the age groups that would be affected by the Tobacco 21 policy.

- ❖ 15 – 20 year olds: 43,630
- ❖ 15 – 17 year olds: 23,258 (those most affected)



Though we do not have racially stratified county level data on youth tobacco burden, we can extrapolate from the age-adjusted data for racial disparities in tobacco use among groups within Multnomah County. We see tobacco use disparities affecting American Indians and African American/Blacks. Tobacco 21 is not a culturally specific policy designed to address racial disparities in tobacco use, but is compatible with policies such as menthol restrictions that are.

Racial Stratification of Tobacco Use in Multnomah County
 (Source: 2014 Multnomah County Report Card on Health Disparities)

	Age –Adjusted % of Current Cigarette Smokers	Disparities Summary
White	20%	Comparison Group
Hispanic/Latino	27%	No Disparity
African American/Black	29.9%	Needs Improvement
Asian/Pacific Islander	12.4%	No Disparity
American Indian	42.2%	Requires Intervention

Percentage of Potentially Affected Youth by Current Tobacco Product Use: The table below shows the smoking status for middle and high school students in Oregon and Multnomah County by products. There is overlap in these categories as students could select all that apply. E-Cigarette use is the highest type of tobacco or vape products used among both 8th and 11th grade cohorts in the county and state.

	8 th Grade %		11 th Grade %	
	Oregon	Multnomah	Oregon	Multnomah
Past 30 Day Use				
Overall Tobacco Use	12.3	9.6	23.7	21.4
E-Cigarettes	9.3	7.2	17.1	16.0
Cigarettes	4.3	2.9	8.8	7.0
Hookah	4.0	4.3	7.5	7.2
Little Cigar or Cigarillo	2.5	2.4	7.8	5.4
Chew (males only)	3.2	1.7	9.12	5.3

(Source: 2015 Oregon Healthy Teens Survey)

IV. Impact in Practice

We don't yet have evaluation data from most jurisdictions where MLSA has been enacted. We do have this data for Needham, Massachusetts, which in 2005 was the first city in the US to enact a law raising the MLSA to 21. As a result, smoking rates for youth decreased in the four years following compared to rates in cities surrounding Needham. From 2006 to 2010, the decrease in 30-day smoking for youth in Needham (from 13% to 7%) was significantly greater than in the comparison communities (from 15% to 12%; $p < .001$). This larger decline was consistent for both genders, Caucasian and non-Caucasian youth, and grades 10, 11 and 12. In contrast, there were no comparable differences for current alcohol use. ^{viii}

The Needham study, however, must be qualified. While the 21 year age restriction may have contributed to this decline, the evaluation results have limitations due to confounding factors that may have also contributed to this decline. For example during the study period a policy was passed to ban pharmacy sales of tobacco. However, given tobacco sales only represent only 1.8% of pharmacies' total sales,^{ix} and we know from our Multnomah County Retail Tobacco Assessment that pharmacies (both in drug stores and grocery

stores) make up 15% of the entire retail tobacco environment^x, pharmacies were likely not a major source of tobacco for youth. Importantly, the Needham study referenced above demonstrated that youth did not migrate to nearby counties (with lower MSLA) to purchase tobacco products.

Also, studies of England's experience when it raised the MSLA for cigarettes from 16 to 18 years of age in late 2007 have shown that this increase was associated with rapid and significant drops in smoking prevalence among 16 and 17 year olds regardless of socioeconomic status, even though *smoking* by this age group was not made illegal.^{xi}

Hawaii is planning a robust evaluation of their law, but due to the recent implementation on January 1, 2017, there is not much to share. However, during their 2016 Synar inspections, there were no successful purchases of cigarettes by youth (18-20)^{xii}. This indicates at least short term reductions in successful minor purchases with the implementation of an increased minimum sales age law.

IV. Policy Considerations

Pre-emption: Oregon state law contains no preemption language regarding youth access to tobacco. This is according to two sources: American Lung Association State Legislative Actions on Tobacco Issues review of pre-emption laws and CDC State Tobacco Activities Tracking and Evaluation System show no provisions of pre-emption on sales to youth in Oregon as of Quarter 3 of 2015. It is still advisable for County counsel to research this further.

Equal Protection: Equal protection challenges to state laws increasing the MSLA for alcohol purchases or consumption have been launched, but unsuccessfully so. Similar laws increasing MSLA for tobacco products likely would be upheld given the government's legitimate interest in protecting public health.^{xiii} There have not been any recorded equal protection challenges to increasing the MSLA for tobacco sales to date^{xiv}.

Tobacco 21 would strengthen our existing Tobacco Retail License (TRL) to reduce youth access. TRL, which provides the necessary infrastructure for enforcement, reduces access in the retail setting, and Tobacco 21, reduces youth access through both the retail setting and social sources.

Tobacco 21 is Consistent with Oregon Marijuana and Alcohol Legal Sales Age Laws: Bringing the minor legal sales age policies into alignment for all three products has benefits to the retailers, consumers and for enforcement.

Impact on Retailers: Research on the impact of raising the tobacco sales age to 21 years on retailers found that it could decrease tobacco retailer and industry sales by approximately 2% but could contribute to a substantial reduction in the prevalence of youths' tobacco use and dependency by limiting access.^{xv}

Elements of Model Legislation: The Preventing Tobacco Addiction Foundation and the Campaign for Tobacco Free Kids support these three principles for sales age of 21 for tobacco. The policy should:

- 1) Include all tobacco and nicotine products, specifically e-cigarettes. The only exceptions would be FDA recognized nicotine replacement products (gum, patch, etc.) intended for cessation.
- 2) Include significant enforcement provisions against illegal sales as research shows that consistent enforcement is of critical importance.
- 3) For states, not include any pre-emption against local authority in more stringent regulation of tobacco or other nicotine product sales, secondhand smoke, or e-cigarette vapor.

The Tobacco Control Legal Consortium's website includes a [Sample Ordinance](#) for Creating a Minimum Legal Sales Age of 21 for Tobacco Products. This organization is also available to provide technical assistance in drafting a Tobacco 21 ordinance, free of charge and can respond to legal questions as they arise.^{xvi}

Common Elements of Existing Tobacco 21 Policies:

The following table is a representative sample of existing ordinances. Some of the common elements are that e-cigarettes are included, but minor in possession penalties are not with the exception of Hawaii. Retailer penalties vary in their specific details but are all strong penalties. These elements coincide with the recommendations of elements of model legislation (cited previously).

Jurisdiction	Ordinance/ Statute	Description of law	Include E-cigs	PUP/MIP Penalties	Retailer Penalties
Hawaii	S.B 1030 SD1 HD2, 28 th Leg (Haw 2015)	Effective January 1, 2016, it shall be unlawful to sell or furnish a tobacco product in any shape or form or an electronic smoking device to a person under 21 years of age; It shall be unlawful for a minor under 21 years of age to purchase any tobacco product an electronic smoking	Yes	\$10 first offense; \$50 any subsequent offense; or 48-72 hours community service	\$500 first offense; \$500-\$2000 any subsequent offense

Jurisdiction	Ordinance/ Statute	Description of law	Include E-cigs	PUP/MIP Penalties	Retailer Penalties
		device.			
Suffolk County, NY	Regulatory Local Laws ch 792 http://legis.suffolkcounty.ny.gov/Resos2014/i1039-14.pdf	Effective January 1, 2015: No person shall sell or offer for sale tobacco products, herbal cigarettes, rolling papers, pipes, e-cigarettes or liquid nicotine within the County of Suffolk to persons under 21 years of age.	Yes	None	\$300-\$1000 first offense; \$500-\$1500 any subsequent offense
Dover, MA	Smoking: Sale of Tobacco and Nicotine Delivery Products (May 2013) http://ecode360.com/10428043	Effective November 2013: No person shall sell or give tobacco products or nicotine delivery products to any person under the age of 21 years	Yes	None	First Warning for first offense; \$100 second offense; \$200 third offense; \$300 fourth or subsequent offense. Also may include license suspension or revocation.
New York City , NY	Local Laws No 094 (Nov 19, 2013) http://www.cattco.org/files/downloads/health/adolescent_tobacco_us_e_prevention_act_atupa_nys_phl_article_13-f.pdf	Effective May 18, 2014: Any person is prohibited from selling or offering to sell cigarettes, tobacco products, or electronic cigarettes to individuals under the age of 21.	Yes	None	Up to \$1000 first offense; Up to \$2000 for any subsequent offense. 2 nd violation may also result in revocation of cigarette retail dealer license.
Kansas City, KS	Ordinance 0-65-15 https://www.municode.com/library/ks/wyandott	Effective Nov 26, 2015: It is unlawful for any person to sell to any person under the age of 21 any cigarettes, electronic cigarettes, or tobacco products.	Yes	None	Minimum fine of \$200

Jurisdiction	Ordinance/ Statute	Description of law	Include E-cigs	PUP/MIP Penalties	Retailer Penalties
	e_county_-_unified_government/codes/code_of_ordinances				

Minors in Possession Provisions: These provisions are part of existing legal tobacco sales laws with minors being defined as 18 years of age or younger. These provisions are also called purchase use and possession (PUP) laws that include penalties for minors.

- 41 states and the District of Columbia prohibit the purchase or attempted purchase of tobacco products by minors. 28 states also prohibit this for electronic cigarettes and related products.
- 37 states and the District of Columbia prohibit minors from possessing and/or using tobacco products. 25 states also prohibit this for electronic cigarettes and related products.

Penalties for violation of the above laws often include a fine and/or alternative penalties like performing community service, attending smoking education/cessation programs and/or suspension of a driver's license or learner's permit. Oregon's PUP laws include suspension of existing licenses or delay of learner's permit based upon having incurred 2 or more tobacco Minor in Possession citations specifically for misrepresentation of age at point of purchase. While Oregon does not track number of MIP citations, within the past three years of recorded data, there have been only 13 such violation enforcements (5 in 2012, 5 in 2013 and 3 in 2014 as of November).^{xvii}

In our review of jurisdictions with ordinances to increase the MLSA to 21, only Hawaii's ordinance specifies penalties associated with minors in possession- up to \$50 fine or 72 hours of community service. These penalties were included as a compromise that was necessary to pass the bill^{xviii}.

The American Lung Association and Tobacco Control Legal Consortium position is that penalizing children has not been proven to be an effective technique to reduce underage tobacco usage. In fact, penalties on minors may adversely affect existing programs that are proven to be effective and are required, such as retailer compliance checks utilizing young people.^{xix}

Tobacco Control Legal Consortium proposes policies that only increase the age for legal sales to 21, while leaving existing legal possession or use laws at age 18. A potential benefit of this approach is that it could help in the transition for those tobacco users who would be made newly underage but nonetheless are addicted—while they could no longer legally buy tobacco products, at least they would not be subject to civil and/or criminal liability for using or possessing tobacco products.

Cost Effectiveness: One independent research study on the cost effectiveness of raising the MLSA to 21^{xx} is based on the population of California. To inform the ongoing debate over this policy option in California, this research provides an evaluation of the cost effectiveness of increasing the state's legal smoking age to 21. The main finding was that the policy would generate no net costs, and would in fact save the state and its inhabitants a total of \$24 billion over the next 50 years with a gain of 1.47 million Quality Adjusted Life Years (QALYs) compared to leaving the MLSA at 18.

Support for Raising Minimum Age to 21: There appears to be broad support for this policy both locally and nationally. The Oregon Health Authority's Multnomah County Tobacco Opinion Poll 2014 was conducted among registered voters and showed strong support for comprehensive tobacco retail licensure. The top three policies supported by Multnomah County residents were: tobacco retail licensure requirement (71%); limiting proximity of tobacco retailers to schools (70%); and raising minimum legal age to buy tobacco to 21 (65%).^{xxi} In a randomized national study in 2013, 70.3% of adults supported raising the minimum legal sales age to 21, with even stronger support among African Americans (80%).^{xxii}

V. Conclusions

There are some limitations on the research reviewed for this policy brief. Specifically, there is a lack of available evaluation data from most of the jurisdictions that passed policies raising the MLSA of tobacco to 21, to show the effectiveness on decreasing youth use of tobacco. Only the Needham study in the United States and a study from jurisdictions in England are available, and both document the relationship of the policy to negative trends in youth smoking prevalence. Other jurisdictions in the US have not yet collected data on this, primarily due to the fact that the policies have not been in place long enough to have been evaluated. Evaluation data from New York's is being collected and is expected to be published in July of 2016. Hawaii is also planning evaluation of their law once it is implemented (after January 2016). Still, the numerical modeling data from the Institute of Medicine Study projecting a

12% drop in youth tobacco use based on raising the MSLA to 21, is from one of the most credible sources available.

Tobacco use continues to be the number one preventable cause of death and nicotine addiction afflicts most tobacco users before the age of 18^{xxiii}. In this context, it makes good sense to craft and implement public health policies that reduce the number of youth with access to these addictive products.

Additionally, the recent passage of a Tobacco Retail License Ordinance in Multnomah County, once the rules are fully articulated and codified, provides the mechanism to adequately enforce a change in the legal sales age of tobacco. This timing provides an efficiency of implementation of these two policies.

While legitimate concerns have been raised by advocacy organizations regarding prohibitions on minors possessing tobacco products, our review revealed that only one of the 100 cities with policies raising the MSLA included "minors in possession" provisions in their Tobacco 21 ordinances. The focus of most of the policies enacted is on retailers as responsible business owners and therefore the parties who are subject to enforcement penalties.

Finally, while we have found research documenting popular support for this policy initiative, the available studies and reports on raising the MSLA do not include a comprehensive stakeholder analysis. Therefore, continued research should be compiled as it becomes available in order to best identify opportunities for education and support for all affected communities.

Appendix

Below are examples from some jurisdictions that have set the minimum legal age for the sale and/or purchase of tobacco products at 19 or 21 years of age.^{xxiv}

Jurisdiction	Ordinance/Statute	Selected excerpts from text of law
Hawaii	S.B 1030 SD1 HD2, 28 th Leg (Haw 2015)	<p>Section 3. Tobacco products and electronic smoking devices; persons under 21 years of age: 1). Effective January 1, 2016, it shall be unlawful to sell or furnish a tobacco product in any shape or form or an electronic smoking device to a person under 21 years of age; 2). Signs using the statement, "<i>The sale of tobacco products or electronic smoking devices to persons under 21 is prohibited,</i>" shall be posted on or near vending machine in letters at least ½" high and at or near point of sale of any other location where tobacco products or electronic smoking devices are sold in letters at least ½" high; 3). It shall be unlawful for a person under twenty-one years of age to purchase any tobacco product or electronic smoking device, as those terms are defined in subsection (5). This provision does not apply if a person under the age of eighteen, with parental authorization, is participating in a controlled purchase as part of a law enforcement activity or a study authorized by the department of health under the supervision of law enforcement to determine the level of incidence of tobacco or electronic smoking devices sales to minors. (4) Any person who violates subsection (1) or (2), or both, shall be fined \$500 for the first offense. Any subsequent offenses shall subject the person to a fine not less than \$500 nor more than \$2,000. Any person under twenty-one years of age who violates subsection (3) shall be fined \$10 for the first offense. Any subsequent offense shall subject the violator to a fine of \$50, no part of which shall be suspended, or the person shall be required to perform not less than forty-eight hours nor more than seventy-two hours of community services during hours when the person is not employed and is not attending school.</p>
Suffolk	Regulatory Local	§792-3 (A)(2) Prohibitions; posting of sign; proof-of-

Jurisdiction	Ordinance/Statute	Selected excerpts from text of law
County, NY	Laws ch 792	<p>age Sale of tobacco products or herbal cigarettes in such places, other than by a vending machine, shall be made only to an individual who demonstrates, through a valid driver's license or non driver's identification card issued by the Commissioner of Motor Vehicles, the federal government, any United States territory, commonwealth or possession, the District of Columbia, a state government within the United States or a provincial government of the dominion of Canada, or a valid passport issued by the United States government or any other country, or an identification card issued by the Armed Forces of the United States, that the individual is at least 21 years of age. Such identification need not be required of any individual who reasonably appears to be at least 27 years of age; provided, however, that such appearance shall not constitute a defense in any proceeding alleging the sale of a tobacco product or herbal cigarettes to an individual under 21 years of age. §792-9 Sales restrictions No person shall sell or offer for sale e-cigarettes or liquid nicotine within the County of Suffolk to persons under 21 years of age.</p> <p>http://legis.suffolkcountyny.gov/Resos2014/i1039-14.pdf</p>
Brookline, MA	Article 8.83 Tobacco Control (2013)	<p>§ 8.23.5 Sales to Minors – No person, firm, corporation, establishment, or agency shall sell tobacco products to a minor. § 8.23.2(d). Minor – A person under nineteen years of age</p>
Dover, MA	Smoking: Sale of Tobacco and Nicotine Delivery Products	<p>§ 220-6 Retail sale of tobacco products. B. No person shall sell tobacco products or nicotine delivery products to any person under the age of 21 years or, not being his/her parent or guardian, give tobacco products or nicotine delivery products to any person under the age of 21.</p> <p>http://ecode360.com/10428043</p>
New York City , NY	Local Laws No 094 (Nov 19, 2013)	<p>§ 17-706 Sale of cigarettes, tobacco products, or electronic cigarettes to minors and young adults prohibited. a. Any person operating a place of business wherein cigarettes, tobacco products, or electronic cigarettes are sold or offered for sale is prohibited from selling such cigarettes, tobacco</p>

Jurisdiction	Ordinance/Statute	Selected excerpts from text of law
		<p>products, or electronic cigarettes to individuals under twenty-one years of age. Sale of cigarettes, tobacco products, or electronic cigarettes in such places, shall be made only to an individual who demonstrates, through a driver's license or other photographic identification card issued by a government entity or educational institution, that the individual is at least twenty-one years of age. Such identification need not be required of any individual who reasonably appears to be at least thirty years of age, provided, however, that such appearance shall not constitute a defense in any proceeding alleging the sale of cigarettes, tobacco products, or electronic cigarettes to an individual under twenty-one years of age.</p>
New Jersey	NJ Stat. Ann. § 2A:170-51.4	<p>Sale, distribution of tobacco, electronic smoking device to persons under age 19; prohibited; civil penalties. 1. a. No person, either directly or indirectly by an agent or employee, or by a vending machine owned by the person or located in the person's establishment, shall sell, offer for sale, distribute for commercial purpose at no cost or minimal cost or with coupons or rebate offers, give or furnish, to a person under 19 years of age: (1) any cigarettes made of tobacco or of any other matter or substance which can be smoked, or any cigarette paper or tobacco in any form, including smokeless tobacco; or (2) any electronic smoking device that can be used to deliver nicotine or other substances to the person inhaling from the device, including, but not limited to, an electronic cigarette, cigar, cigarillo, or pipe, or any cartridge or other component of the device or related product.</p>

ⁱ Campaign for Tobacco Free Kids. (2015) Fact sheet: States and localities that have raised the minimum legal sale age for tobacco products to 21. Retrieved from http://www.tobaccofreekids.org/content/what_we_do/state_local_issues/sales_21/states_localities_MLSA_21.pdf

ⁱⁱ Institute of Medicine. Report brief: Public health implications of raising the minimum age of legal access to tobacco products. March 2015. Retrieved at https://iom.nationalacademies.org/~media/Files/Report%20Files/2015/TobaccoMinAge/tobacco_minimum_age_report_brief.pdf

-
- ⁱⁱⁱ Press Release, Nat'l Inst. of Health, Cigarettes and Alcohol Use at Historic Low Among Teens, (Dec. 14, 2011) (discussing 2011 Monitoring the Future survey results), available at https://www.drugabuse.gov/sites/default/files/nr121411_0.pdf.
- ^{iv} Joseph DiFranza, Judith Savageai, Kenneth Fletcher, Enforcement of Underage Sales Laws as a Predictor of Daily Smoking Among Adolescents - A National Study, 9 BMC PUB. HEALTH, 2009.
- ^v Joseph DiFranza et al., Youth Access to Tobacco: The Effects of Age, Gender, Vending Machine Locks, and "It's The Law" Programs, 86 American Journal of Public Health 221 (Feb. 1996).
- ^{vi} Joseph DiFranza & Mardia Coleman, Sources of Tobacco for Youths in Communities with Strong Enforcement of Youth Access Laws, 10 *Tobacco Control* 323, 327 (Dec. 2001). See also LORNA SCHMIDT, CAMPAIGN FOR TOBACCO-FREE KIDS, WHERE DO YOUTH GET THEIR CIGARETTES? (January, 2013),) <http://www.tobaccofreekids.org/research/factsheets/pdf/0073.pdf>.
- ^{vii} Joseph DiFranza & Mardia Coleman, Sources of Tobacco for Youths in Communities with Strong Enforcement of Youth Access Laws, 10 *Tobacco Control* 323, 327 (Dec. 2001).
- ^{viii} S Kessel Schneider, SL Burka, K Dash, JP Winickoff, L O'Donnell. Community reductions in youth smoking after raising the minimum tobacco sales age to 21. *Tobacco Control*. 2015 Jun 12. pii: tobaccocontrol-2014-052207. doi: 10.1136/tobaccocontrol-2014-052207.
- ^{ix} Center for Public Health Systems Science. Regulating Pharmacy Tobacco Sales: Massachusetts Innovative Point-of-Sale Policies: Case Study #2. Brown School at Washington University in St. Louis, March 2014. Retrieved from http://cphss.wustl.edu/Products/Documents/POS_MA_CaseStudy_Final_electronic.pdf?cm_mid=3214600&cm_cr_mid={1c4fb96f-d8d6-df11-b47f-00155d01644f}&cm_medium=email
- ^x Craig Mosbaek. Multnomah County Health Department's *The Selling of Tobacco in Multnomah County*, June 2015.
- ^{xi} Christopher Millett et al., Increasing the Age for the Legal Purchase of Tobacco in England: Impacts on Socio-Economic Disparities in Youth Smoking, 66 THORAX 862 (Oct. 2011); and Jennifer Fidler & Robert West, *Changes in Smoking Prevalence in 16-17-Year-Old versus Older Adults Following a Rise in Legal Age of Sale: Findings From an English Population Study*, 105 ADDICTION 1984 (Nov. 2010).
- ^{xii} Kathleen Koga, personal communication, April 2016.
- ^{xiii} Tobacco Control Legal Consortium Tips for Raising the Minimum Legal Sales Age.
- ^{xiv} J. Lester, Public Health Law Center, personal communication, December 1, 2015
- ^{xv} Jonathan P. Winickoff, Lester Hartman, Minghua L. Chen, Mark Gottlieb, Emara Nabi-Burza, and Joseph R. DiFranza. Retail Impact of Raising Tobacco Sales Age to 21 Years. *American Journal of Public Health*: November 2014, Vol. 104, No. 11, pp. e18-e21.
- ^{xvi} Contact Joelle Lester, Staff Attorney, to arrange: Joelle.Lester@wmitchell.edu or 651-695-7603.
- ^{xvii} Jeff Ruscoe, personal communication, November 2015.
- ^{xviii} Kathleen Koga, personal communication, December 2015.

^{xix} American Lung Association, *2010 State Legislated Actions on Tobacco Issues Overview Data* (2013): <http://www.lungusa2.org/slati/slatiOverview.php>.

^{xx} S Ahmad. The Cost Effectiveness of Raising the Legal Age of Smoking in California (*Medical Decision Making* 2005;25:330–340)

^{xxi} Oregon Health Authority Multnomah County Tobacco Opinion Poll 2014: Assessing Popular Support for Policies in the Tobacco Retail Environment.

^{xxii} Jonathan Winickoff; Robert McMillen, Susanne Tanski, Karen Wilson, Mark Gottlieb, and Rob Crane. Public Support for Raising the Age of Sale for Tobacco to 21 in the United States. *Tobacco Control*, first published online 20 February 2015; doi:0.1136/tobaccocontrol-2014-052126.

^{xxiii} U.S. Department of Health and Human Services. [The Health Consequences of Smoking—50 Years of Progress: A Report of the Surgeon General](#). Atlanta: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2014

^{xxiv} For additional examples of jurisdictions that have raised the minimum legal sales age for tobacco products, see the Institute of Medicine report, *supra* note 5, Appendix A (State and Local Laws on the Minimum Age of Legal Access to Tobacco Products).