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Smoke-Free Parks:

A comprehensive review of the policy considerations underlying state and municipal smoke-free parks laws

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Smoke-free parks policies have increased in popularity over the last decade. As of January, 2014, more than 900 municipalities in the U.S have enacted smoke-free parks policies. Several dozen additional municipalities are currently weighing policy options regarding smoke-free parks. Notwithstanding the current trend, some demographic disparities exist among communities adopting smoke-free parks policies. As public health organizations work to address the disproportionate impact of tobacco use on economically underdeveloped communities and other vulnerable populations, such as youth, it will be more important than ever to enact health policies supported by data. The paper examines the justifications for smoke-free park policies, specifically: (1) the individual health impact of exposure to outdoor tobacco smoke; (2) the environmental impact of tobacco litter; and (3) the public health impact of reinforcing smoke-free environments as a social norm. The paper also identifies some of the arguments used most frequently in opposition to such ordinances. Finally, this paper presents some of the leading policy considerations for communities contemplating the adoption of smoke-free parks.

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I. INTRODUCTION

Exactly 50 years ago, the U.S. Surgeon General first reported that “[c]igarette smoking is a health hazard of significant importance in the United States to warrant appropriate remedial action.”¹ In the years that followed, researchers developed a robust body of evidence on the dangers of smoking and exposure to secondhand smoke. Policymakers began to take remedial action. Initially, legislation focused on establishing clean indoor air spaces. Starting with early clean indoor air laws passed by municipalities in the 1970s, tobacco control advocates ensured that air in offices, restaurants and bars, government facilities, hospitals, sporting areas, and even casinos, would be free of the toxins and cancer-causing agents found in secondhand smoke. Today, approximately 4,000 municipalities have laws that restrict where smoking is allowed.² Furthermore, more than 1,000 municipalities, along with 36 states, the District of Columbia, American Samoa, the Northern Mariana Islands, Puerto Rico, the U.S. Virgin Islands, and at least 92 countries have enacted 100 percent comprehensive smoke-free workplace laws, inclusive of restaurants and bars.³ It is estimated that 81 percent of the U.S. population live in states or communities with clean air laws in place.⁴

The global smoke-free movement is now shifting its efforts to ensure safe outdoor air. Regulations providing outdoor smoke-free areas have doubled since 2008, with approximately 2,600 policies currently in place.⁵ Of particular interest to public health advocates and policymakers are areas frequented by youth, such as parks, beaches, playgrounds, and plazas. Youth-targeted interventions are critical because of the link between youth and smoking: nine out of ten smokers start before the age of eighteen.⁶ Likewise, for children, even brief exposure to secondhand smoke can trigger asthma attacks and can cause wheezing and coughing.⁷

As of January, 2014, more than 900 municipalities, as well as the State of Oklahoma and Commonwealth of Puerto Rico, have made their parks smoke-free.⁸ Among these 900 municipalities are some of the U.S.’s major metropolitan areas, including, Atlanta, GA; Austin, TX; Boston, MA; Miami/Dade County, FL; New York, NY; Philadelphia, PA; Salt Lake City, UT; San Francisco, CA; and Seattle, WA. Related, nearly 200 municipalities have passed smoke-free beach laws.⁹ The popularity of these policies with policymakers, while increasing, has not been uniform. Recent studies have identified large coverage gaps in outdoor tobacco policies.¹⁰ According to a 2014 Ohio State University study, smoke-free park policies exist primarily in young, urban, educated, and liberal-voting communities.¹⁰ In the future, there will be heightened pressure for smoke-free parks in a more diverse range of locations. In August, 2013, it was estimated that around 90 municipalities were exploring smoke-free park policy options.⁵

Smoke-free parks policies have been endorsed by the Centers for Disease Control and Prevention (CDC) as an effective means of youth tobacco prevention. In its annual publication, *Best Practices for Comprehensive Tobacco Control Programs*, the CDC lists parks and beaches as targeted areas for community-led environmental change (along with more traditional targets of tobacco control initiatives, like workplaces, schools, and tobacco retailers).¹¹ This endorsement is echoed in the CDC’s guide,

Protecting Your Children From Tobacco Use, which lists “ban[ning] smoking in public places – such as . . . parks” as one local policy option that has been shown to “work best” to prevent youth tobacco use.¹²

As public health organizations work to address the disproportionate impact of tobacco use on economically underdeveloped communities and other vulnerable populations, it will be more important than ever to enact health policies supported by data. Evidence supporting smoke-free parks policies generally falls into three broad categories: (1) individual health impact to nonsmokers; (2) environmental impact of tobacco litter; and (3) public health impact of reinforcing smoke-free as a social norm. As an expansion of smoke-free parks policies is likely to occur, it is the goal of this paper to provide public health officials, tobacco control advocates, and other stakeholders with a review of the available studies from these three categories, as well as a number of policy considerations and lessons learned based on previous cities’ smoke-free parks initiatives. Many of the evidence and policy considerations outlined in this paper could also be applied to smoke-free beaches, playgrounds, and plazas; however, for the purposes of this paper, the focus will center on parks.

II. INDIVIDUAL HEALTH CONCERNS

When it comes to individual health concerns cited in support of smoke-free park policies, proponents often cite the general, well-known harms of exposure to secondhand smoke and the ongoing research into the effects of secondhand smoke in outdoor environments. This section outlines many of the leading studies in these areas and identifies some of the acknowledged evidentiary gaps.

It is important to note that this section only outlines the outdoor tobacco smoke studies that are most directly applicable to a smoke-free parks policy argument. Several studies have examined smoke levels in high-density outdoor environments, such as restaurant and bar patios and the entranceways to office buildings.ⁱ These studies, while involving outdoor tobacco smoke, are more appropriate for support of smoke-free workplace policies than smoke-free park policies. While evidence exists as to the dangers of exposure to secondhand smoke, proponents are advised to exercise caution not to overreach when amassing studies on outdoor tobacco smoke or to overstate the conclusions of the directly applicable studies.

ⁱ See, e.g., Licht, et al. (2013). Secondhand smoke exposure levels in outdoor hospitality venues: a quantitative and qualitative review of the research literature. *Tob Control*. 22(3):172-9; St Helen G, et al. (2012). Exposure to secondhand smoke outside of a bar and a restaurant and tobacco exposure biomarkers in nonsmokers. *Environ Health Perspect*. 120(7):1010-6; Cameron M, et al. (2009). Secondhand smoke exposure (PM2.5) in outdoor dining areas and its correlates. *Tob Control*. 19(1):19-23; Hall JC, et al. (2009). Assessment of Exposure to Secondhand Smoke at Outdoor Bars and Family Restaurants in Athens, Georgia, Using Salivary Cotinine. *Journal of Environmental and Occupational Hygiene*. 6(11): 698-704.

a. **Secondhand Smoke – Generally**

- In 2006, the U.S. Surgeon General published a comprehensive report examining the health effects of involuntary exposure to tobacco smoke. The major conclusion of the report was that “[t]here is no risk-free level of exposure to secondhand smoke.”¹³ That applies to both indoor and outdoor exposure to secondhand smoke. Among the report’s relevant conclusions:
 - Secondhand smoke causes disease and premature death in children who do not smoke;
 - Children exposed to secondhand smoke are at higher risk for sudden infant death syndrome (SIDS), acute respiratory infections, ear problems, and more severe asthma; and
 - Exposure to secondhand smoke has immediate effects on the cardiovascular system, causes heart disease, and causes lung cancer.
- Secondhand smoke contains more than 7,000 chemicals, including approximately 70 known human carcinogens (cancer-causing agents).⁷ In addition, secondhand smoke contains dozens of chemicals identified as outdoor air pollutants or hazardous air pollutants, dozens of chemicals restricted as hazardous waste, and nearly 200 more substances found to be toxic.¹⁴ Chemicals present in secondhand smoke include, formaldehyde, benzene, vinyl chloride, arsenic, ammonia, and hydrogen cyanide.¹³
- In 2006, the California Air Resources Board identified environmental tobacco smoke (ETS), or secondhand smoke, as a toxic air contaminant.¹⁵ ETS is now formally identified as an airborne toxic substance that may cause and/or contribute to death or serious illness. By identifying ETS as a *toxic air contaminant*, the Air Resources Board placed secondhand smoke in the same category as the most toxic automotive and industrial air pollutants, for which there is no safe level of exposure.¹⁵ According to the report, “nicotine concentrations in several different outdoor environments were comparable to those found in smokers’ homes.”¹⁵

b. **Outdoor Tobacco Smoke**

- In 2007, a Stanford University study on outdoor secondhand smoke exposure found that “a non-smoker sitting a few feet downwind from a smoldering cigarette is likely to be exposed to substantial levels of contaminated air for brief periods of time.”¹⁶ The air pollution levels within a few feet of outdoor smokers were, in fact, comparable to indoor levels that the researchers had measured in a previous study of homes and bars.¹⁶ According to the study, “[a] nonsmoker who is 1 or 2 feet away from a single burning cigarette can easily inhale pollution that is 10 times greater, on average, than background ‘clean’ levels...However, with multiple smokers present, the average levels could be 20, 30, or 50+ times greater than background.”¹⁷ The researchers noted that based on their findings, “a child in close proximity to adult smokers at a backyard party . . . could receive substantial exposure to secondhand smoke.”¹⁶ While the study found that outdoor smoke levels within a few feet of a smoker can be as high outdoors as indoors, the study noted that outdoor tobacco smoke dissipated quickly once combustion ended. In addition, the study showed that once you move six feet away from the smoker,

exposure to secondhand smoke is significantly reduced. The lead author of the study recently stated that it is still “up in the air” whether outdoor secondhand smoke presents a long-term health issue for those exposed.⁵

- In a 2005 study of outdoor tobacco smoke conducted at University of Maryland at Baltimore, researchers found that outdoor tobacco smoke levels did not reach acceptable background levels for either fine particles or carcinogens until the recipient was about 23 feet from the source of the secondhand smoke.¹⁸
- A 2013 South Korean study on outdoor tobacco smoke found that ambient particulate matter from a single lit cigarette was detectable in outdoor air as far as 30 feet from the smoking source. Levels of particulate matter at 30 feet were still able to reach levels nearly three times higher than the threshold set by the U.S. National Ambient Air Quality Standard. Within three feet of the cigarette, the particulate matter was able to reach a peak 93 times higher than the threshold.¹⁹

III. ENVIRONMENTAL CONCERNS

Environmental concerns are another frequent reason cited for enacting smoke-free parks policies. Cigarette butts are the most littered item in the U.S. and the world. Litter is a blight on streets, sidewalks, and green spaces. Clean-up costs associated with discarded tobacco products can be staggeringly large. Studies also demonstrate the potential for environmental contamination. Policies establishing smoke-free outdoor spaces can reduce tobacco litter in those environments.

a. Litter

- Cigarette butts are the single most littered item both in the U.S. and across the globe.²⁰ In the U.S., approximately 250 billion cigarette butts are littered every year.²¹ This accounts for, on average, 22-36 percent of all visible litter.²² Worldwide, more than 4.5 trillion cigarette butts are littered annually.²³
- More than half of all cigarettes smoked end up being littered. Based on surveys of smokers, the overall littering rate for cigarette butts is estimated at 65 percent.²⁴ However, tobacco control advocates cite that, at least in the context of beaches, smoke-free laws could help reduce littered butts by 45 percent.²⁵
- Discarded cigarettes can be a major cause of fires, especially in arid environments. In support of a smoke-free parks ordinance in Austin, TX, the Austin Fire Department reported that 9 out of 10 roadside fires and 25 percent of all wildfires were caused by littered cigarettes.²⁶
- Cigarette butts are photodegradable, not biodegradable.²⁷ Contemporary cigarette filters are not made of organic materials like cotton or wool, but a synthetic material called cellulose acetate.²⁷ Biodegradable materials can be consumed by microorganisms and reverted to naturally occurring compounds. Cellulose acetate is photodegradable, meaning ultraviolet light

eventually breaks it into smaller pieces, but it cannot decompose.²⁸ Cellulose acetate can linger in the environment for 10 to 15 years before it finally photodegrades.²⁸

- Cigarette butts discarded in a park have the possibility of polluting the environment either by being littered directly into a local water source, or indirectly by washing into drains that flow into rivers, lakes, or oceans. An estimated 80 percent of littered cigarette butts in the U.S. end up in waterways.²⁹ Cigarette butts are the single most collected item in beach cleanups each year.²⁸ Countless data has been collected on cigarette litter in waterways at the local level. For example, at a single three hour beach clean-up even in Chicago in 2006, volunteers removed approximately 5,600 cigarettes from North Avenue Beach.³⁰ Likewise, in Illinois tobacco products and packaging comprise approximately 41 percent of marine litter.³¹
- While not much economic analysis of tobacco product litter has been conducted at the local level, the limited studies available suggest that tobacco product litter can result in exorbitant clean-up costs for a large community. A 2009 audit by the City of San Francisco found that the city spends \$6,098,969 annually to clean up cigarette litter.³² One Big Ten university estimates its tobacco product litter clean-up costs to be around \$150,000 per year.³³

b. **Heavy Metal Contamination**

- Tobacco product litter has the potential to contaminate the environment, particularly aquatic environments. At least two studies have identified tobacco product litter as a point source for metal contamination.^{28, 34, 35} In certain circumstances, littered cigarette butts have been shown to leach out heavily metals (including, aluminum, barium, cadmium, chromium, copper, iron, lead, manganese, nickel, strontium, titanium, and zinc), as well as polycyclic aromatic hydrocarbons, and other chemicals such as nicotine and ethylphenol. According to one study, the leaching of metals from cigarette butts, “may increase the risk of acute harm to local organisms.”³⁴
- A 2009 study from Japan on the environmental impact of tobacco waste littered on roadsides concluded that load potentials of heavy metals and polyaromatic hydrocarbons from littered cigarette butts, “indicate that [tobacco product] waste has a harmful influence on the environment.”³⁵

IV. **SOCIAL NORMS**

The final major argument supporting smoke-free park policies is that they help establish and reinforce smoke-free environments as a social norm, and further discourages smoking among children and adults (i.e. kids don’t grow up seeing smoking behaviors). Beginning in the mid-1970s, youth attitudes towards tobacco became increasingly negative. These negative attitudes toward tobacco have correlated to acknowledgement by policymakers that tobacco products carry a “great risk,” which in turn lead to resulting policy and legal measures.³⁶ Since the social effect of tobacco control measures began to be

studied in the early 1980's, it has been hypothesized that "[s]ocial norms have an interactive relationship with policy change."³⁶ If true, then prohibiting smoking in parks and other outdoor public spaces could serve to de-normalize smoking. When youth see adults smoking in public places, they may associate smoking with acceptable behavior and have an increased risk to copy the behavior themselves. The increased prevalence of smoke-free places will, therefore, arguably result in fewer opportunities for youth to start smoking to begin with. This section briefly outlines what is currently understood about social norms as they relate to smoke-free environments:

- The notion of positive community role modeling of non-smoking behaviors is hardly a new concept. It has been well established that adolescents who live with non-smoking parents or who work in non-smoking places of employment are less likely to become smokers themselves.³⁷ In addition, studies have found that youths living in communities with strong smoke-free restaurant laws are less than half as likely to become established smokers than youth living in municipalities with weak smoke-free restaurant laws.³⁸
- While there are relatively few studies that link normalization of smoking to the proliferation of smoke-free policies, the limited studies suggest that youth observation of smoking in public is associated with the perception that smoking is socially acceptable.³⁹ Therefore, policies that result in reduced visibility of smoking in public will also reduce the perceived acceptability of smoking by youth in those locations.³⁹ The CDC notes that tobacco control policies are effective because they "change the environment" to encourage and support tobacco-free lifestyles.⁴⁰
- Implementing policies that encourage smoke-free living, such as smoke-free outdoor spaces, can also help to support smokers in their efforts to quit. Some studies have concluded that smoking bans in public places motivate smokers to quit at higher rates than in environments where smoking is permitted.³⁶ According to the CDC, smoking cessation has increased as public smoke-free policies have become more prevalent.⁴¹ Among youth smokers, studies suggest that de-normalizing social images of smoking can also help sustain successful quit attempts.⁴²
- While "social norms" support numerous successful public health initiatives, their application to tobacco control has been criticized for the shortage of empirical evidence indicating a causal relationship between trends in social norms towards smoking and shifts in smoking behaviors.³⁶ Nevertheless, as a Robert Wood Johnson Foundation report on social norms and smoking noted, "[i]nstituting even an unpopular policy may decrease a risky health behavior and eventually alter social norms and attitudes."³⁶ A prime example of this theory at work is the success of mandatory seat belt laws.³⁶

V. SUMMARY OF OPPOSITION ARGUMENTS

Arguments against smoke-free parks generally fall into three broad categories: (1) the policies are supported by insufficient health evidence; (2) the policies are anti-smoker, not anti-smoking; and (3) the

policies are a further expansion of the so-called “nanny state.”ⁱⁱ Critics caution that “trust of [public health policymakers] is threatened when the case for interventions depends on weak evidence and involved degrees of dissimulation,” as they claim has been the case with smoke-free parks policies.⁴³

Critics argue that some frequently cited studies on outdoor tobacco smoke are inapplicable to sparse areas like parks. They also state that the studies that are applicable do not necessarily support the broader conclusion that exposure to outdoor tobacco smoke results in long-term negative health consequences. There is concern that policymakers cite unsupported health claims as justification for passing unstated policy objectives centering on social norms. Critics also argue that with so many smoke-free policies, smokers are finding it challenging to find a place where they can legally smoke. Finally, regarding the libertarian “nanny state” argument, critics state that smoke-free parks are yet another example of big government telling legal adults what they can and cannot do to their own body.

Health evidence regarding exposure to outdoor tobacco smoke is not as fully developed as the evidence on the health effects of indoor exposure to secondhand smoke. Nevertheless, many organizations, including the CDC, view even limited exposure to the toxins and carcinogens in secondhand smoke as enough of a threat to merit a policy solution. Over 900 municipalities in the U.S. have also weighed this evidence in favor of regulation. In addition, while social norms may not be a popular *political* argument in favor of smoke-free parks policies, for public health experts, the evidence in favor of establishing smoke-free environments as a social norm is alone enough of a justification for enacting such policies. Lastly, from a public health perspective, pursuing tobacco control policies is not a matter of identifying where adults can smoke, but is a matter of reducing societal negative health outcomes. This is a society of many laws designed to protect innocents that would otherwise be exposed to life threatening activities. For example, DUI laws, while protective of the driver, are designed to protect other vehicles and pedestrians that would be put at risk by an intoxicated motorist. Smoke-free parks policies, while they can support smokers in their quit attempts, are designed to protect the health of non-smokers, primarily children.

VI. BEST PRACTICES

Policymakers considering the adoption of a smoke-free parks policy should weigh carefully all the policy considerations involved with such a policy. As outlined below, policymakers should clearly identify the objectives served by the policy, reinforce the need for the policy with local data, demonstrate that the policy can be adequately enforced, and enact the policy through the proper vehicle. Arguably the

ⁱⁱ See, e.g., Doyle K. (February 18, 2014). Smoke-free park policies slow to catch on: study. Reuters. Retrieved from: <http://www.reuters.com/article/2014/02/18/us-smoke-free-idUSBREA1H23P20140218>; Bayer R, Bachynski KE. (2013). Banning Smoking In Parks And On Beaches: Science, Policy, And The Politics Of Denormalization [Analysis & Commentary]. *Health Affairs*. 32, 7: 1291-1298; Chapman S. (2008). Should smoking in outdoor public spaced be banned? No. *BMJ*. 337:a2804.

biggest key to enforcement and public support is adequate notice and signage. This list of considerations is by no means exhaustive, but represents several of the leading “lessons learned” from communities with smoke-free parks, as well as established tobacco control “best practices.”

a. Enumerating the Official Policy Objectives

At the outset, proponents of smoke-free parks policies should articulate clearly the official objectives of the policy. For example, Philadelphia, identified the following objectives: (1) protecting against secondhand smoke; (2) support a normative message that smoking is harmful; (3) motivating smokers to quit; and (4) mitigating tobacco-related sanitation costs.⁴⁴ As mentioned above, some have criticized smoke-free parks initiatives for using inadequately-backed health claims as a ‘front’ for a primary objective of reinforcing social norms. Openly and accurately enumerating the official objectives of the policy, including establishing smoke-free environments as a social norm, can help mitigate this criticism.

The policy objectives will obviously also depend on local needs. Interestingly, Boston cited changing social acceptance of marijuana as one of the primary motivators for its smoke-free parks policy. With the decriminalization of marijuana and pending legalization of medical marijuana, policymakers had received frequent complaints of marijuana use in Boston Common, even around playgrounds.^{45, 46, 47} Other communities, primarily in the southwest, have cited fire prevention as a primary objective for smoke-free parks policies.⁴⁸

b. Utilizing Local Data

To the greatest extent possible, smoke-free policies should be supported by local data. Local data could include information on local youth and adult smoking rates, cessation success rates, average local blood cotinine levels (metabolized nicotine), local tobacco litter data, parks sanitation costs, park usage data, and data on cigarette-caused wildfires.

The New York City Department of Parks & Recreation, for example, cited the following statistics to demonstrate the need for reducing outdoor exposure to secondhand smoke: “New Yorkers are exposed to secondhand smoke at higher rates than the national average . . . 57% of New Yorkers who do not smoke have elevated levels of cotinine in their blood compared to 45% of non-smokers nationally . . . Non-smokers in New York City have more cotinine in their bodies even though [New York City has] strong indoor smoking laws.”⁴⁹

In addition, numerous region-specific surveys have been conducted showing public support for smoke-free parks policies. For example, a 2012 survey commissioned by Respiratory Health Association revealed that nearly 60 percent of Chicagoans reported being bothered by secondhand smoke in parks and that almost 60 percent of Chicagoans would support a smoke-

free parks policy (only 37 percent opposed such a policy). Likewise, a University of Minnesota survey found that 70 percent of adults in Minnesota support tobacco-free park and recreation areas. Surprisingly, the survey also found that 28 percent of smokers supported tobacco-free parks and recreation areas.⁵⁰ Surveys such as these can help gauge local support for such policies, uncover particular areas of need, and can let policymakers show that they are acting in the interests of their constituents.

c. **Determining the Scope of the Policy**

Among cities that have enacted smoke-free parks policies, the scope of the policies has varied. Many cities enact comprehensive ordinances covering their entire park system. Some cities have, conversely, chosen to identify specific smoke-free zones. Areas covered in such policies have included parks, park buildings, beaches, playgrounds, plazas, pools, sports venues and playing fields, trailheads, and other parks-operated facilities. Other cities, such as Seattle, prohibit smoking within a certain distance (25 feet) of other park patrons.⁵¹

Another key consideration is whether or not to carve out exemptions to the policy, such as an exemption for private use of the park. Many cities, including New York, have made no exemptions for such events. Los Angeles, meanwhile, created two exemptions to its smoke-free parks policy. The first is for actors during a permitted production or by models during a photo shoot; the second is for contract-operated facilities, in designated areas, at the discretion of the director, in consultation with the operators of the facilities.⁵² Arguments against exemptions include smoke-free policy uniformity, park district brand consistency, and ease of enforcement.

Policies also vary in defining what qualifies as “smoking.” As mentioned above, Boston’s ordinance covers marijuana smoking, but it *uniquely* also covers electronic cigarette use.⁵³ Arguments for inclusion of electronic cigarettes in a smoke-free parks policy would, for the time being, have to rest solely on social norms and ease of enforcement, but as electronic cigarette use continues to rise, policymakers should consider including the devices in their policies’ definition of “smoking.”ⁱⁱⁱ Regardless of what activities are included in the policy, public health officials should be sure to work with city law departments to ensure that the most accurate definitions are including in any proposed ordinance.

ⁱⁱⁱ For a discussion of the health and policy concerns surround e-cigarettes, see, Fraley T, et al. (2013). E-Cigarettes and Youth: An examination of the public health and policy concerns over increased rates of youth use and exposure to e-cigarettes. *Respiratory Health Association Tobacco White Paper Series*. Available at: <http://www.lungchicago.org/library-white-paper-series/>.

d. Defining the Enforcement Mechanisms

Most cities with smoke-free parks policies in place have reported very few enforcement issues. New York City's Park Department website states that its ordinance is largely self-enforced,⁴⁹ though park rangers did issue 212 violations in the first year of the ordinance.⁵⁴ A 2008 survey of municipal officials in California communities with smoke-free parks indicated that 80 percent of communities did not have any problems with compliance.⁵⁵ 70 percent of surveyed officials also indicated that their respective community's smoke-free park policy was well received by the public.⁵⁵

Nevertheless, as the scope of the policy is framed, it is important for policymakers to consider the policy's enforcement mechanism. Limited research shows such policies to be largely self-enforcing, however, an official enforcement mechanism, even if just a contingency, will still need to be in place. Options from other cities include local police, park rangers/staff, park volunteers, or some combination of the above.

Another important consideration is whether the policy will be enforced with fines and if so, the size of the fines. In Boston, the fines are \$250 per offense and the ordinance is enforced by the Boston Police Department.⁵³ In Atlanta and Austin, fines can range up to \$1,000 and \$2,000, respectively, and can be classified as misdemeanors.^{48, 56} San Francisco assesses fines ranging from \$100 to \$500 depending on whether it is an initial or repeat offense. In New York City, the fines are \$50 and are enforced by NYC Park Rangers.⁴⁹ As an alternative to monetary fines, Seattle opts to ban violators from park premises for 24 hours.⁵¹

e. Evaluating the Legislative Vehicles for the Policy

Municipalities may have a choice of vehicles for enacting a smoke-free parks policy. It is important that policymakers understand the different options because, depending upon the rules of the municipality in question, not all options may be available. First, and most common, would be through the creation of legislation to be enacted by a full city council vote. This is the route that New York City, Boston, Atlanta, and Austin (among many others) took in adopting their respective smoke-free parks policies. The second route would be via promulgation of an agency rule or regulation. For example, when Chicago passed its smoke-free beaches policy in 2007, the policy simply had to be adopted by the Chicago Park District Board of Commissioners after a public comment period.⁵⁷ Finally, it may be possible to enact a smoke-free parks policy by way of an executive order signed by the mayor. This is the route that was taken to adopt the smoke-free parks policy in Philadelphia.⁴⁴

Each of the routes has its own benefits and drawbacks, among which are the varying degrees of speed, political accountability, agency involvement, ability to repeal, and publicity.^{iv} These factors deserve full analysis and consideration before proceeding with any policy initiative. It is worth emphasizing now, however, that an agency's ability to promulgate rules is dependent on the authority granted to it by that agency's controlling statute. In October, 2013, a smoke-free state parks policy in New York supported by Governor Cuomo was permanently blocked in court because the New York (State) Office of Parks, Recreation & Historic Preservation exceeded its rulemaking authority.⁵⁸

f. Coordinating Signage and Public Notices

Clear, comprehensive signage will help reinforce the ordinance and ensure high rates of compliance. A survey of municipal officials in California cities with smoke-free parks indicated that signage was the key aspect to the success of their respective enforcement efforts.⁵⁵ With strategic signage, California cities were able to create "gentle reminders" of their smoke-free policies that members of the public could point to if they saw someone smoking. Signage should incorporate clear non-smoking logos, the ordinance number, the penalty (if applicable), and the phone number of the enforcing agency.

In addition, for a smoke-free parks policy to be truly self-enforcing, ample public notice needs to be published both on and in-advance of the effective date. Notice could be through signage, informational handouts, newsletters and other print media. In New York City and Philadelphia, temporary posters were posted at the entrances to city parks and palm cards explaining the policy were distributed to violators in lieu of citations and fines.⁴⁴

g. Publicizing Policy Successes

Sharing your community's story can provide great support and important lessons for other communities considering policies for smoke-free outdoor spaces. Public health officials should consider recapping their policy process with a case study or white paper on best practices. Capture the stories of those affected by the policy change and the data demonstrating the benefit to the local government and to the community members. Such projects could include personal accounts parks users and staff of the health changes that resulted from the policy, documentation of enforcement efforts, and post-enactment audits of tobacco litter and sanitation costs.

^{iv} These factors were all given consideration in Philadelphia before opting for the executive order route. For an excellent discussion the benefits and drawbacks to these policy routes, including a risk-analysis table, see Leung R, et al. (2013). Instituting a Smoke-Free Policy for City Recreation Centers and Playgrounds, Philadelphia, Pennsylvania, 2010. *Preventing Chronic Disease* 10:120294. Available at: http://www.cdc.gov/pcd/issues/2013/12_0294.htm.

Some cities have documented the positive results from their smoke-free parks policies. In New York City, the Parks and Recreation Department estimates based on observational studies that the ordinance reduced smoking in parks by two-thirds and reduced cigarette litter on beaches and playgrounds also by two-thirds.⁵⁹ Likewise, in Minnesota, a survey of local park directors in communities with smoke-free parks reported that 88 percent of communities did not see a change in park usage, 71 percent saw less smoking in parks, and 58 percent reported having cleaner parks.⁵⁰ The continuing availability of these studies will help demonstrate to policymakers that these policies can effectuate positive social change.

VII. CONCLUSION

The smoke-free parks movement is gaining momentum as communities work to solve smoking-relating health disparities. Parks are designed to provide clean, safe, and pleasant environments in which citizens – especially children – can relax or be at play. Smoke-free parks policies ensure that youth are breathing clean air and not being exposed to negative health behaviors while enjoying city green space. While less is known about the long term health effects of exposure to outdoor tobacco smoke than is known about prolonged exposure to secondhand smoke indoors, justifications for smoke-free parks policies still abound. More than 900 communities in the U.S., including many major cities, have already weighed the evidence and moved in favor of enacting smoke-free park policies. Based on the municipalities that have already enacted smoke-free parks policies, there are a few notable policy considerations that public health officials and policymakers should be mindful of, including accurately stating policy objectives, not overstating the evidence, creating strong definitions and enforcement mechanisms, providing abundant public notice, and publicizing successful policies.

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