



Prison smoking bans in the United States: current policy, impact and obstacle

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Abstract: Smoking is the leading preventable risk factor of mortality in the United States. The threat of smoking is severer in prisons. Compared with the general US population, prisoners have a higher prevalence of smoking, as well as a higher smoking-related mortality. Nowadays, smoking bans have been enacted in 49 states' federal correctional facilities, including 100% smoke-free and tobacco-free indoors and outdoors on all grounds (20 states), 100% smoke-free indoors and outdoors on all grounds (1 state), 100% smoke-free and tobacco-free indoors (16 states), and 100% smoke-free indoors (12 states). After implementation, a mortality reduction has been achieved, especially for cancers and respiratory diseases. In addition, a more comprehensive restriction (e.g., smoking and tobacco bans indoors and outdoors) and a longer implementation contribute to a higher reduction of mortality. However, some obstacles should not be ignored, such as the high relapse rate of smoking after release, existence of smoking in smoking-free prisons, nicotine dependence and nicotine withdrawal symptoms led by the bans, potentially high prevalence of mental illnesses among prisoners who also smoke, etc. Given the impact and obstacle of the current smoking bans, the author recommends that: (I) smoking bans should be kept enacting according to the mortality reduction after implementation; (II) more restrictive bans should be considered across the U.S. States, such as smoking-free insides and outsides on the ground; (III) further efforts should be made for reducing the high relapse rate of smoking after release; (IV) other implementations combining with smoking bans should be considered for smoking inmates with mental illnesses.

Keywords: Smoking bans; prison; the United States

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Introduction

Smoking is the leading preventable risk factor of mortality in the United States, with an estimated 467,000 deaths each year, nearly one in five deaths in the US adults (females: 219,000 deaths; males: 248,000 deaths) (1). According to the latest update, in 2014–2015 the prevalence of the US adults who ever used tobacco products ranged from 27.0% (Utah) to 55.4% (Wyoming); the prevalence of the current use of tobacco products ranged from 10.2% (California) to 27.7% (Wyoming) (2). Smoking is a threat not just for smokers themselves, but also for the people who are around them

due to the second-hand smoking exposure (3).

The smoking situation among prisoners is severer. In prisons, the prevalence of smoking is nearly 70%, far higher than the prevalence in the US general population (4). Compared with the general population, the incarcerated people have higher risks for a number of smoking-related chronic diseases (5). Also, they have a higher mortality (6,7). According to the last updated statistics, the age-adjusted, smoking-related mortality among inmates was 360 per 100,000 in the United States (general US population: 248 per 100,000) (8). In addition, a three times higher mortality rate was found in inmates with mental illness (9),

the disease associated with smoking (10).

Current policy

For smoking in prison, related controls have been implemented. From 2001 to 2011, the number of states with any smoking bans increased from 25 to 48 (8). Nowadays, smoking bans have been enacted in 49 states' federal correctional facilities (11). Specifically, these bans include four types: 100% smoke-free and tobacco-free indoors and outdoors on all grounds (20 states), 100% smoke-free indoors and outdoors on all grounds (1 state), 100% smoke-free and tobacco-free indoors (16 states), and 100% smoke-free indoors (12 states).

Impact

The effect of the smoking bans has been evaluated, according to the data reported by the Bureau of Justice Statistics (8). Compared to the years without the smoking bans, the smoking-related mortality had a nine-percent reduction during the years with the smoking bans (mortality rate before *vs.* after the bans: 128.9 *vs.* 110.4 per 100,000). In addition, the mortality reduction was more effective when the smoking bans were implemented longer (0–4 years: 4%; 4–9 years: 7%; ≥9 years: 11%). Furthermore, a comprehensive restriction, including smoking and tobacco bans indoors and outdoors, contributed to a lower smoking-related mortality. After nine or over nine years' implementation, the ban achieved a mortality reduction of 19% and 34%, respectively, for cancers and pulmonary diseases (8).

The effect of the smoking ban on mortality reduction is also effective for the inmates with mental illnesses. Tobacco usage has been significantly reduced and eliminated in the facilities of the New Jersey Department of Corrections from 2005 to 2014 (9). In this period, the mortality reduction among the inmates with mental illnesses was significantly correlated with the reduction of the tobacco products. The ban achieved 48% of the mortality reduction after implementation (mortality rate before *vs.* after the ban: 676 *vs.* 353 per 100,000 population) (9).

In addition to the mortality reduction, the smoking bans also improve the air quality in prisons (12–15). This could reduce the exposure to the second-hand smoking, beneficial not just for the inmates (including smokers and non-smokers), but also for the prison officers and other staff. Theoretically, the bans may eliminate the initiation of

smoking among originally non-smoking inmates.

Obstacles

For the smoking bans, obstacles should not be ignored. First, the relapse rate of smoking is high after release. Studies showed that the prevalence of current smokers was more than 73% among former inmates from prisons with smoking bans (16–18). Second, even though the correctional facilities have enacted the smoking bans, some inmates are still able to smoke. According to one study investigating 146 former prisoners who had to quit smoking due to the smoking bans, 12% of them reported they smoked in prison (17). Third, the smoking bans may lead to nicotine dependence and nicotine withdrawal symptoms (18). According to the above obstacles, the smoking bans may not successfully achieve a long-term smoking cessation.

Fourth, quitting smoking may be challenging in prisoners with a mental illness. According to the newest statistics, the smoking prevalence among individuals with severe mental illness (35.8%) is over two times higher than in the US general population (15.5%) (10). In addition, compared to the general population, the prevalence of mental illnesses among prisoners is higher (19). In the facilitates of the Iowa Department of Corrections, a study found 48% of 8,574 prisoners had mental illness; among them, 29% were diagnosed with a serious mental illness (20). Given the above data, the author assumes that the prevalence of smoking among inmates who have mental illness is higher than the prevalence of smoking among the general population in prisons. With mental illness, quitting smoking may be challenging.

Recommendation

- (I) Smoking bans should be kept enacting in prisons. This recommendation is supported by a population-level study in the United States. After implementation, smoking bans achieved a 9% mortality reduction (8). Also, a longer implementation can achieve a higher mortality reduction. For example, a 9- or over 9-year implementation achieved a mortality reduction of 11% from all smoking related causes, 19% from cancers, and 34% from pulmonary diseases (8).
- (II) More restrictive bans, such as smoking-free insides and outsides on the ground, deserve a nationwide implementation across the U.S. States. This

recommendation is also supported by the same study: with a more comprehensive smoking restriction, a higher rate of mortality reduction was achieved (8).

- (III) Further efforts should be made for reducing the high relapse rate (over 73%) of smoking after release (16-18). A smoking cessation program based on pharmacological and behavioral strategies, as well as related postrelease services could be considered.
- (IV) Due to a high relation of smoking and mental illness (10), as well as the high prevalence rate (nearly 30%) of severe mental illness in prisons (20), other implementations combining with smoking bans should be considered, such as medical services for mental illnesses.

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aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

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