

Background

The Government of Pakistan has implemented a ban on smoking in public spaces and requires the display of no-smoking signage in accordance with the “Prohibition of Smoking and Protection of Non-smokers Health Ordinance 2002¹.” Our project aimed to assess compliance with these laws in the East and South districts of Karachi at two different time points: in 2019² and 2022, before and after the smoke-free enforcement activities. Karachi, with an approximate population of 17 million, is Pakistan’s most populous city.

Methods



Step 1: Baseline compliance assessment was conducted in October–November 2019 by the Institute for Global Tobacco Control (IGTC), Johns Hopkins Bloomberg School of Public Health, in partnership with the International Union Against Tuberculosis and Lung Disease and a research team from Gallup Pakistan.



Step 2: The Karachi Administration planned and carried out implementation activities to improve compliance with the smoke-free law. These activities included training officers, distributing no-smoking signage, stricter enforcement of smoke-free policies in public spaces, conducting raids and issuing fines. Large-scale awareness activities, including marches, billboard advertisements and media campaigns, were conducted.



Step 3: Follow-up compliance assessment was conducted in September–October 2022 by IGTC, The Union and Gallup Pakistan. In 2022:

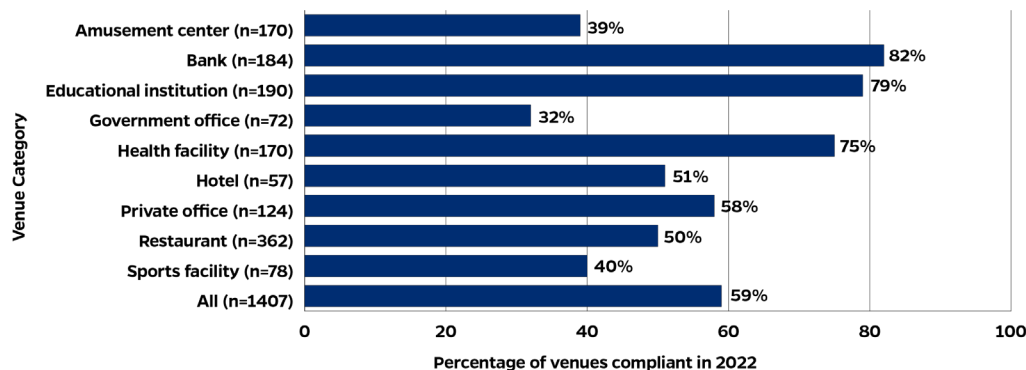
- » Data collectors observed venues sampled in 2019 (or replacements where appropriate). A total of 1,407 venues were visited across the two districts.
- » A standardized observation tool was used for on-ground data collection.
- » Data collectors were expected to spend at least 20 minutes at each venue, visiting specific locations within the venue, and observing instances of “evidence of smoking” (i.e. active smoking, cigarette butts or ashtrays), as well as the presence of no-smoking signage, tobacco advertisements, and on-site sales, among other factors.
- » Compliance in 2022 compared to 2019 was calculated using the Wilcoxon signed-rank test. A venue was considered compliant with the composite indicator assessing “evidence of smoking” if it met the following criteria: no one was observed smoking inside, no cigarette butts were observed inside, and no ashtrays or other instruments used to hold cigarette ash were observed inside.



Between 2019 and 2022, the Karachi Administration took steps to increase compliance with the smoke-free law. The 2022 observations still found “evidence of smoking” (left image), but did find some increased compliance, including smoke-free signage (center and right images).

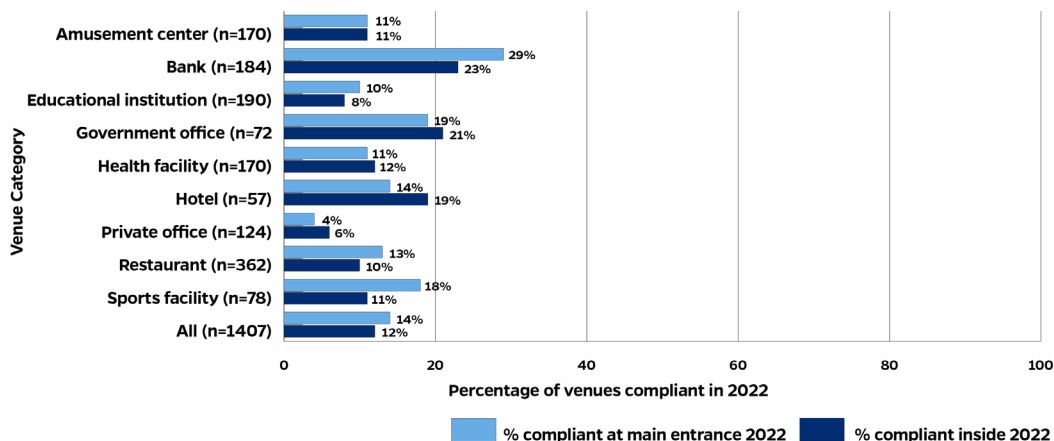
Results: 2022

Percentage of venues compliant with the composite indicator assessing evidence of smoking in 2022



High rates of compliance with the composite indicator were observed among banks (82%), educational institutions (79%) and healthcare facilities (75%). However, less than half of the venues in the categories of amusement centers (39%), government offices (32%) and sports facilities (40%) were compliant.

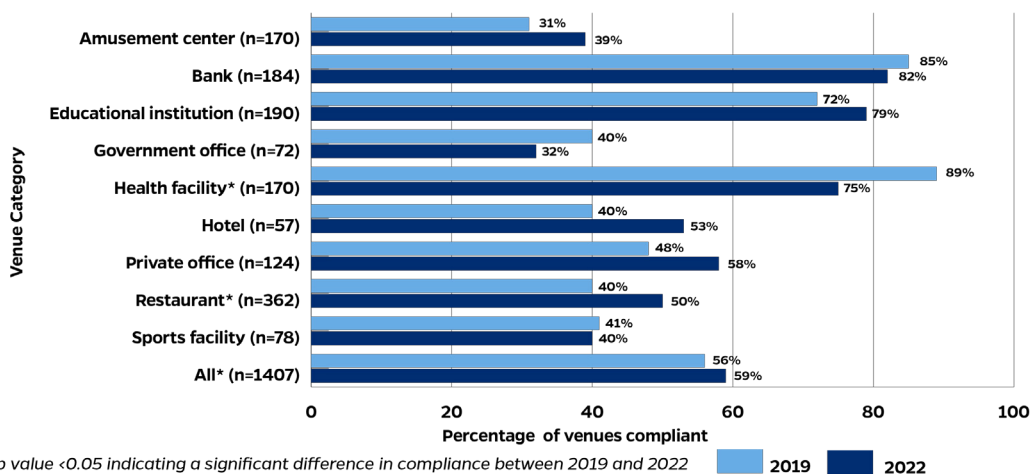
Percentage of venues compliant with no-smoking signage in 2022



Compliance with no-smoking signage at the main entrance was low overall (14%) and in each venue category. Private offices (4%) had the lowest compliance rates, while banks had the highest compliance rates (29%). Similarly, compliance with no-smoking signage inside the venue was also low overall (12%) and across all venue categories, with private offices (6%) and educational institutions (8%) exhibiting the lowest compliance rates. Banks (23%), government offices (21%), and hotels (19%) had the highest compliance rates.

Results: 2019 vs 2022

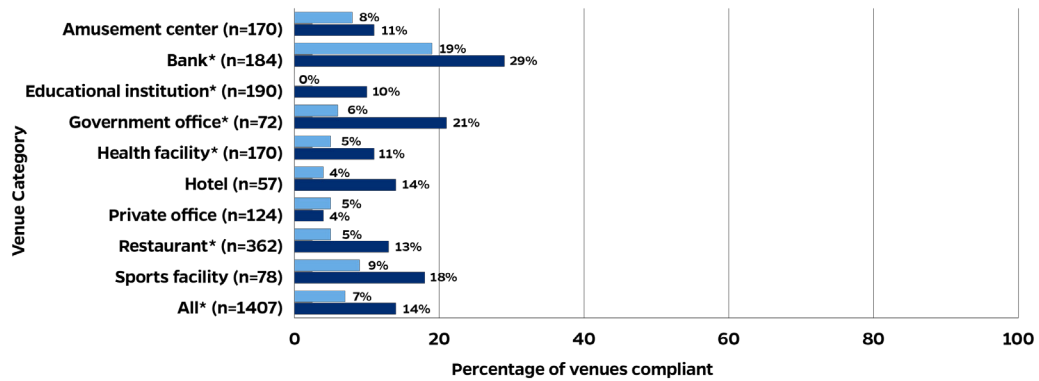
Percentage of venues compliant with the composite indicator assessing evidence of smoking in 2019 vs 2022



*p value <0.05 indicating a significant difference in compliance between 2019 and 2022

There was a significant overall increase in compliance with the composite indicator assessing evidence of smoking between 2019 and 2022. Additionally, a significant increase in compliance was observed in restaurants, while health facilities showed a significant decrease in compliance.

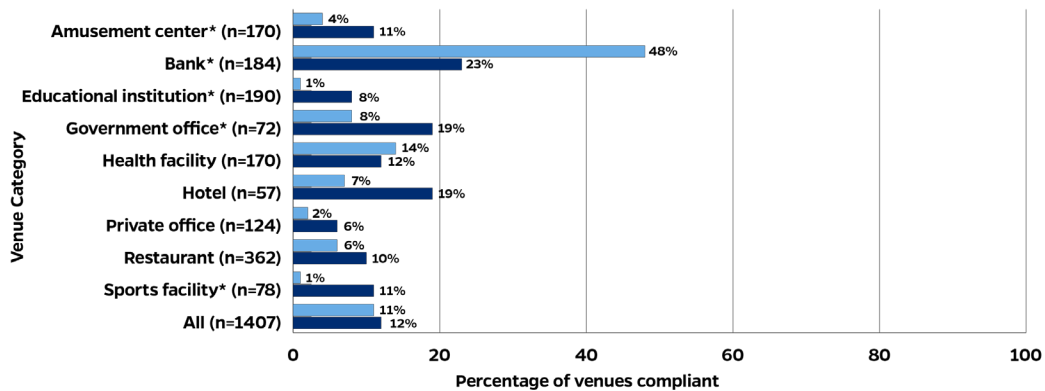
Percentage of venues compliant with no-smoking signage at the main entrance in 2019 vs 2022



*p value <0.05 indicating a significant difference in compliance between 2019 and 2022

Overall, there was a significant increase in no-smoking signage posted at the main entrance across all venues in both districts, although compliance remained very low. A significant increase in compliance was observed in restaurants, health facilities, government offices, educational institutions and banks.

Percentage of venues compliant with no-smoking signage inside the venue in 2019 vs 2022



*p value <0.05 indicating a significant difference in compliance between 2019 and 2022

Significant increases in compliance with posting no-smoking signage inside venues were observed in sports facilities, government offices, educational institutions, and amusement centers. A significant decrease in compliance was observed in banks.

Conclusions

The results of this study demonstrate some progress in achieving 100% smoke-free environments. Compliance with the evidence of smoking indicator increased in restaurants. However, compliance decreased in health facilities. While there was an overall increase in the display of no-smoking signage at main entrances, no change was observed inside venues, and compliance remains very low.

Further measures are needed to improve implementation and increase compliance with the smoke-free law. Enforcement efforts should prioritize health facilities. Strategies including training enforcement officers to incorporate regular monitoring inspections into their daily work can ensure tobacco control efforts are effective and sustainable. Mass awareness campaigns can also enhance the public's knowledge about the smoke-free law and the harms of tobacco. Designated authorities should engage with owners of public spaces to provide guidance on how to create smoke-free venues, understand applicable penalties, and distribute standardized no-smoking signage more widely.

Achieving high compliance with the smoke-free law is crucial in reducing the harmful impact of tobacco use and protecting the public from second-hand smoke.

1. Government of Pakistan. *The Prohibition of Smoking in Enclosed Places and Protection of Non-smokers Health Ordinance, 2002*. Available at <https://www.tobaccocontrol.org/legislation/country/pakistan/laws>
2. Institute for Global Tobacco Control. *Technical Report on the Assessment of Compliance with the Smoke-free Policy in Karachi, Pakistan*. Baltimore, MD: Johns Hopkins Bloomberg School of Public Health; June 2020.