

## COMPLIANCE WITH THE SMOKE-FREE TOBACCO LEGISLATION IN 12 CITIES IN TURKEY: OBSERVATIONS OF SMOKING, ASHTRAYS, CIGARETTE BUTTS, AND SMOKING SIGNS IN INDOOR AND OUTDOOR PUBLIC PLACES

### OBJECTIVE

Assessing the level of compliance of smoke-free legislation is key to reduce secondhand smoke exposure. In a previous report, we provided the level of compliance with the smoke-free tobacco legislation in Turkey, which was enacted in 2008 and extended to hospitality venues in July 2009.

In the current report, we provide additional information on the presence of smoking, ashtrays, cigarette butts, and “No Smoking” signs in both indoor and outdoor areas by venue type and city size. The study was conducted between December 2012 and July 2013 to measure compliance with legislation in various public buildings. Researchers observed a total of 4,395 indoor locations and 1,610 outdoor locations in 12 cities in Turkey.

### METHODS

We implemented the smoke-free compliance guide<sup>1</sup> in 12 cities, one city in each of the European Union NUTS (Nomenclature of Units for Territorial Statistics) Turkish regions, including Istanbul, Western Marmara, Aegean, Eastern Marmara, Western Anatolia, Mediterranean, Middle Anatolia, Western Black Sea, Eastern Black Sea, Northeastern Anatolia, Middleeastern Anatolia and Southeastern Anatolia. In each city, the Turkish Institute of Statistics identified 10 central sampling points using a random sampling strategy. We visited universities, schools, hospitals, government buildings, shopping malls, and hospitality venues (restaurants, traditional coffee houses, cafes, and bars/nightclubs) closest to each central sampling point using a standardized protocol. Fieldworkers also conducted observations during taxi rides taken to and from study venues.

The fieldwork was conducted during December 2012 and January 2013 in Istanbul, February 2013 in Ankara and Izmir, and between May and July 2013 in Adana, Balikesir, Bursa, Erzurum, Gaziantep, Kayseri, Samsun, Trabzon, and Van. An authorization letter from the Ministry of Education, obtained through the Ministry of Health, facilitated access to schools. Indoor and outdoor areas were observed to compare compliance in areas covered and not covered by the law. Hospitals were visited both before 3 pm on weekdays, and after 7 pm or on weekends. Restaurants and bars/nightclubs were visited both before and after midnight. Because there were no differences in the results for hospitals before 3 pm and after 7 pm, and in bars/nightclubs before and after midnight, we only present the results before 3 pm and before midnight for hospital and bars/nightclubs, respectively. In each venue, we observed main entrances, stairwells, bathrooms, dining areas, waiting areas, and others. Fieldworkers used checklists to collect information on the number of smokers and the presence of ashtrays, cigarette butts, “No Smoking” signs, signage visibility, fines or penalty on the signs, and cigarette sales.

### RESULTS

We observed a total of 898 venues, 4,395 indoor locations (mean 5 locations/venue), and 39,936 people (mean 44 persons/venue). In Istanbul, Ankara, and Izmir, we observed 404 venues, 1,988 indoor locations, and 20,120 people. In the nine smaller cities, we observed 494 venues, 2,407 indoor locations, and 19,816 people. In an earlier report (available online at [www.globaltobaccocontrol.org/resources](http://www.globaltobaccocontrol.org/resources)), we focused on overall compliance with the smoke-free legislation defined as the absence of smoking in any indoor public place.

In this report, we present the findings on the presence of smoking, ashtrays and cigarette butts, in both indoor and outdoor areas by venue type (37 universities, 134 schools, 135 government buildings, 52 malls, 89 hospitals, 171 restaurants, 67 cafes, 120 coffee houses and 79 bars/nightclubs). We show the results comparing the three larger cities (Istanbul, Ankara and Izmir) with the nine smaller cities (Adana, Balikesir, Bursa, Erzurum, Gaziantep, Kayseri, Samsun, Trabzon, and Van). We also discuss the presence of “No Smoking” signs indoors, whether the signs were adequately visible, and whether the signs included information on fines or penalties for non-compliance. For non-hospitality venues

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<sup>1</sup> Available at <http://globaltobaccocontrol.org/smokefreecompliance>.

(universities, schools, hospitals, government buildings, and shopping malls) we compared indoor dining areas with all other indoor areas.

### Indoors Observations

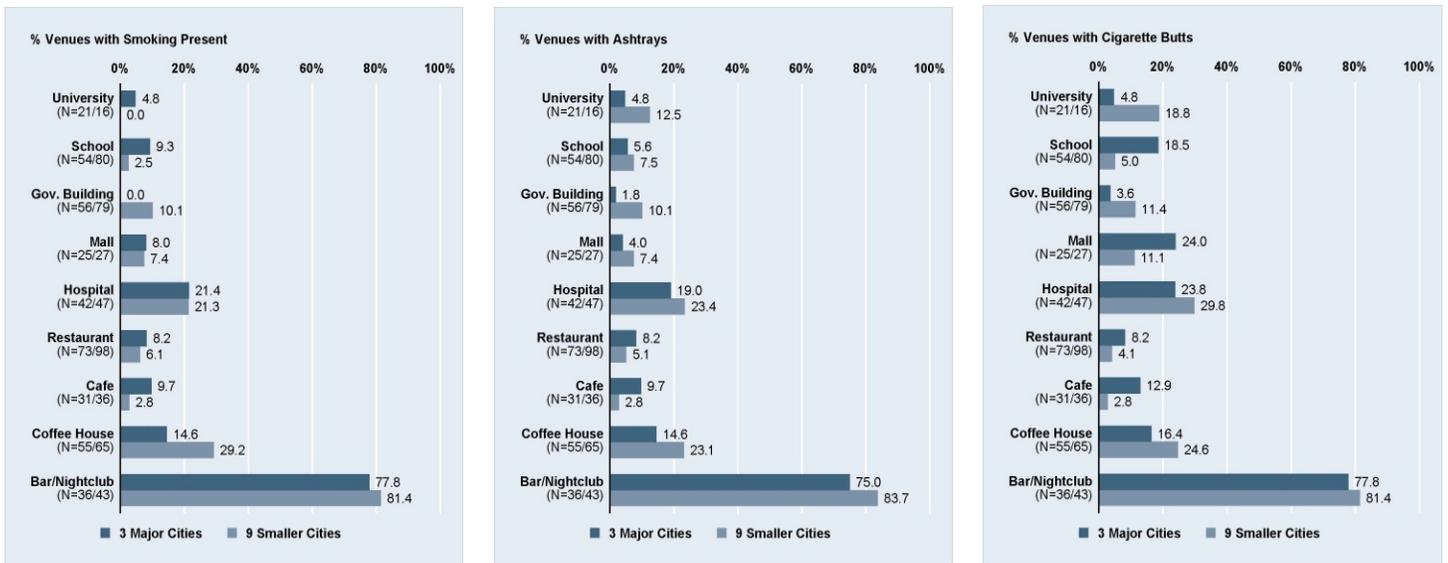
There were large differences in the percentages for presence of smoking, ashtrays and cigarette butts observed indoors by venue type, with no major differences by city size (the three larger cities compared with the nine smaller cities) (Figure 1). There were also marked differences in the percentages for presence of smoking, ashtrays and cigarette butts in dining areas compared to non-dining areas in government buildings and hospitals (Figure 2).

**Presence of smoking.** The presence of smoking observed indoors ranged overall from 2.7% in universities to 79.7% in bars/nightclubs. Figure 1 shows the results by size of city. In government buildings, smoking was observed more often in the smaller cities compared with the larger cities (10.1% vs. 0%, Fisher's exact p-value 0.02). In the other venues, the differences by city size were not statistically significant. Indoor dining areas were observed in 34 of the universities, 73 of the schools, 23 of the government buildings, 35 of the malls and 79 of the hospitals (Figure 2). Smoking was present more often in the dining areas compared with all other indoor areas in government buildings (21.7% vs. 2.2%, p-value <0.001) and hospitals (22.8% vs. 1.1%, p-value <0.001). In universities, schools, and malls the differences between dining and non-dining areas were not statistically significant. In schools, the presence of smoking in non-dining areas was observed at main entrances inside, bathrooms, a fire escape and a staff room. In malls, smoking in non-dining areas was observed in the main entrance inside, a hallway/walkway, a bathroom and a parking area.

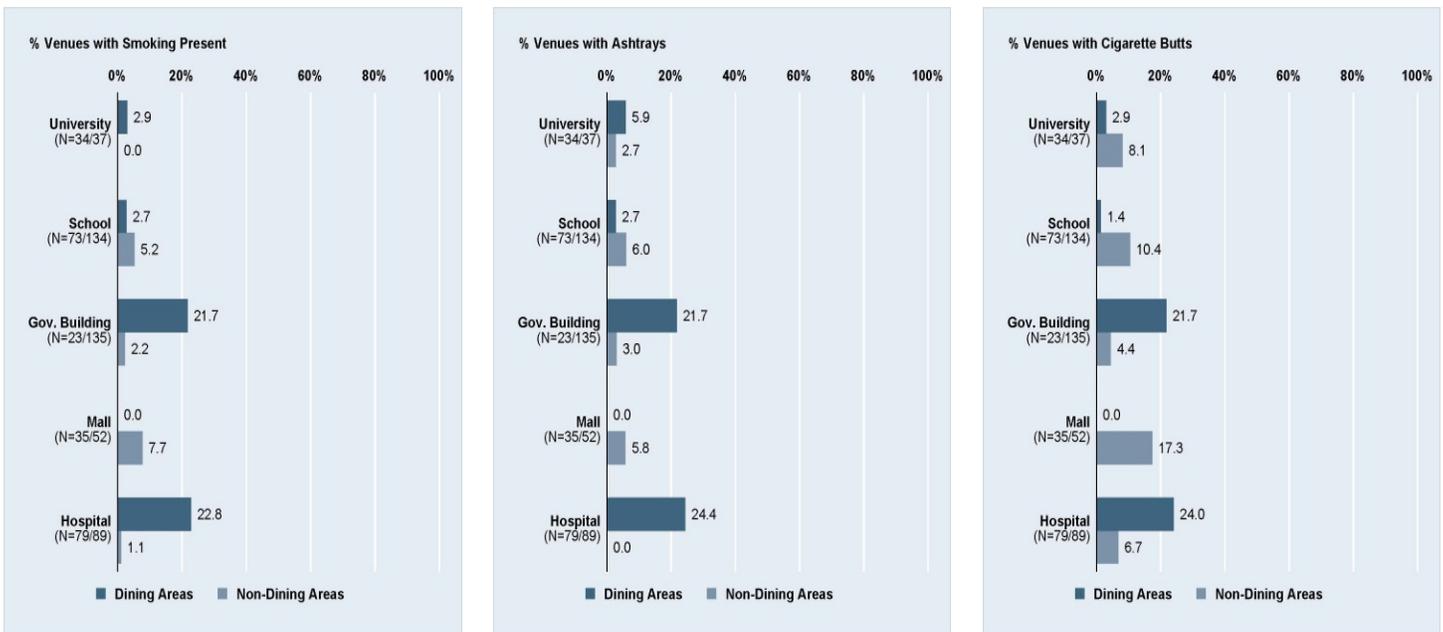
**Presence of ashtrays.** There were also large differences in the presence of ashtrays observed indoors by venue type, ranging overall from 5.8% in malls to 79.7% in bars/nightclubs. Other venue types with relatively high overall percentages of ashtrays indoors included hospitals (21.3%), although all of the ashtrays observed in the hospitals were located in dining areas (Figure 2), and traditional coffee houses (19.2%). None of the differences by city size were statistically significant.

**Presence of cigarette butts.** The presence of cigarette butts generally mirrored the presence of smoking and ashtrays, but mostly with a higher percentage than those two variables. Cigarette butts were commonly found on the floor. There were no statistically significant differences in the presence of cigarette butts by city size, except for more cigarette butts in schools in the three major cities compared with the nine smaller cities (18.5% vs. 5%, p-value 0.01) (Figure 1).

**Figure 1.** Presence of smoking, ashtrays and cigarette butts in indoor public places in 12 cities in Turkey



**Figure 2.** Presence of smoking, ashtrays and cigarette butts in indoor dining areas vs. indoor non-dining areas in universities, schools, government buildings, malls and hospitals in 12 cities in Turkey

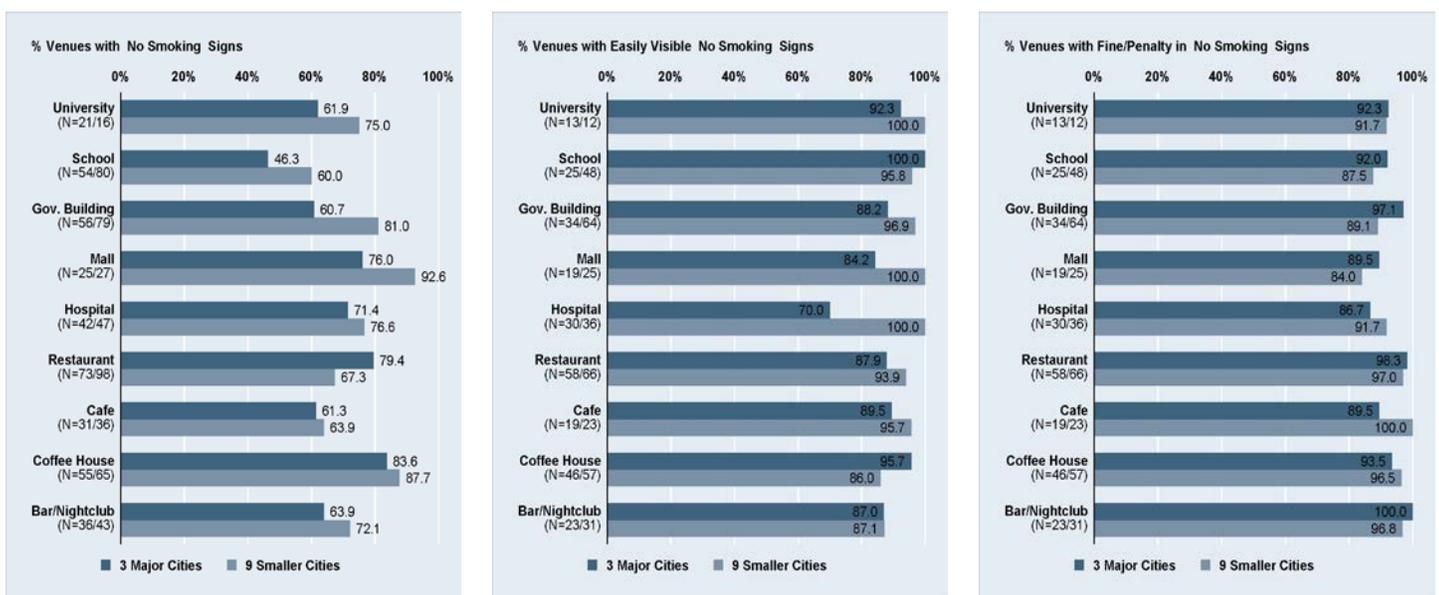


**Presence of “No Smoking” signs.** Overall, the level of compliance with the presence of “No Smoking” signs was low, ranging from 54.5% in schools to 85.8% in coffee houses. There were no statistically significant differences in the presence of “No Smoking” signs by city size, except in government buildings (81% in smaller cities vs. 60.7% in larger cities, p-value 0.009). The presence of “No Smoking” signs was significantly higher in non-dining areas compared with dining areas in schools (51.5% vs. 17.8%, p-value <0.001), government buildings (71.1% vs. 30.4%, p-value <0.001), and malls (82.7% vs. 45.7%, p-value <0.001), (Figure 4). Other differences were not statistically significant.

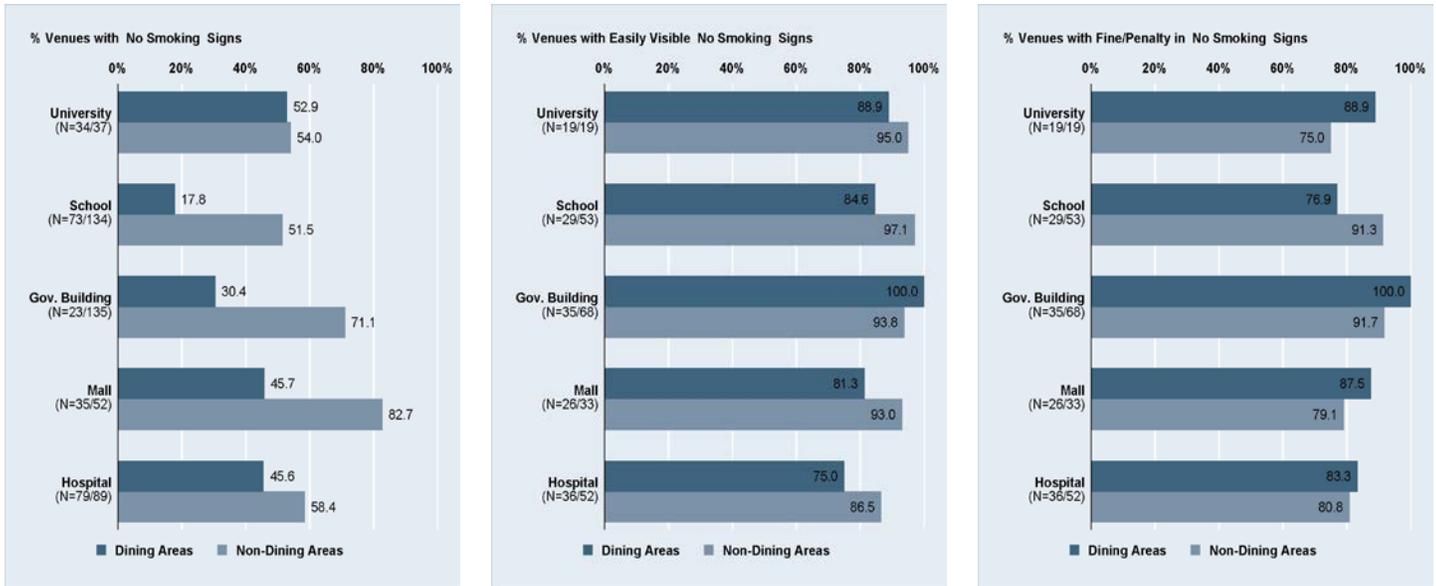
**Adequate signage visibility.** For available signs, the level of visibility of the “No Smoking” signs was adequate in most venues, overall ranging from 86.4% in hospitals to 97.3% in schools. Figure 3 shows results by size of city; there were no statistically significant differences.

**Inclusion of fines or penalty warnings on signage.** Most signs included the presence of fines, ranging overall from 86.4% in malls to 98.1% in bars and nightclubs.

**Figure 3.** Presence of “No Smoking” signs, adequate signage visibility and inclusion of fine/penalty signs in indoor public places in 12 cities in Turkey



**Figure 4.** Presence of “No Smoking” signs, adequate signage visibility and inclusion of fine/penalty signs in indoor dining areas vs. all other indoor areas in universities, schools, government buildings, malls and hospitals in 12 cities in Turkey



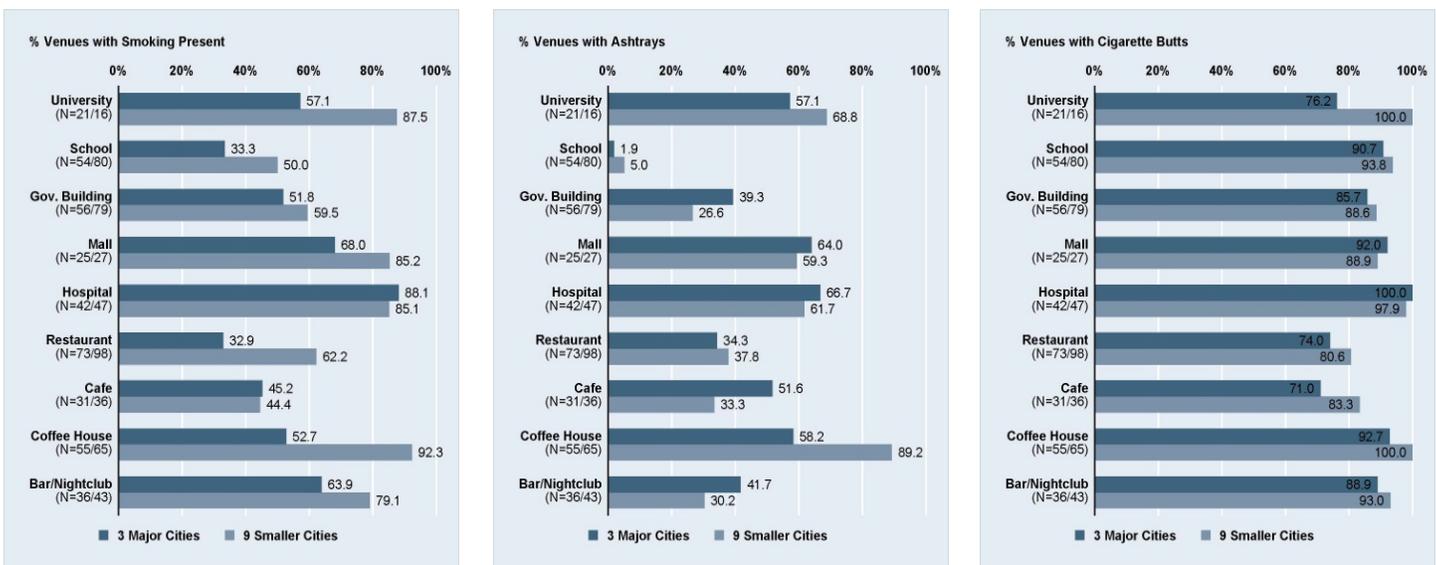
### Outdoors Observations

**Presence of smoking.** The presence of smoking outdoors ranged overall from 43.3% in schools to 86.5% in hospitals. Smoking was present in outdoor areas more often in the smaller cities, with differences observed in restaurants (62.2% vs. 32.9%, p-value <0.001) and coffee houses (92.3% vs. 52.7%, p-value <0.001) (Figure 5). For other venues, the differences were not statistically significant.

**Presence of ashtrays.** The presence of ashtrays ranged overall from 3.7% in schools to 75% in coffee houses. Ashtrays were observed in outdoor areas more often in the smaller cities compared with the larger cities at coffee houses (89.2% vs. 58.2%, p-value <0.001). Differences were not statistically significant for other types of venues.

**Presence of cigarette butts.** The presence of cigarette butts at outdoor areas was very high, ranging from 77.6% in cafes to 98.9% in hospitals. The percentages were similar across all venue types in all cities overall, with the exception of 100% of universities in the smaller cities compared with 76.2% in the larger cities (p-value 0.04), and 100% of coffee houses in the smaller cities vs. 92.7% in the larger cities (p-value 0.03) (Figure 5). The high percentage of cigarette butts in outdoor areas compared with lower percentages for the presence of outdoor ashtrays indicates that cigarettes were found predominantly on the ground.

**Figure 5.** Presence of smoking, ashtrays and cigarette butts in outdoor public places in 12 cities in Turkey.



## LIMITATIONS

Fieldworkers were unable to observe areas in government buildings, hospitals, and universities that are inaccessible to the public. Compliance in these areas remains unknown.

## CONCLUSIONS

- We observed smoking in indoor areas in all types of venues evaluated, although percentages were relatively low in universities, schools, government buildings, malls, restaurants, cafes, and non-dining areas in hospitals (<10%). Smoking was common in traditional coffee houses and dining areas in hospitals (21-50%) and very common in bars and nightclubs (>50%).
- We observed cigarette butts in indoor areas in all types of venues evaluated, but their presence was relatively low in government buildings, restaurants, cafes and non-dining areas in hospitals (<10%), moderate in universities, schools, malls and traditional coffee houses (10-20%), common in dining areas in hospitals (21-50%) and very common in bars and nightclubs (>50%).
- We found ashtrays in indoor areas in all types of venues evaluated, but their presence was relatively low in universities, schools, government buildings, malls, restaurants, cafes and non-dining areas in hospitals (<10%). The presence of ashtrays was moderate in traditional coffee houses (10-20%), common in dining areas in hospitals (21-50%) and very common in bars and nightclubs (>50%).
- “No Smoking” signs were observed in indoor areas in all types of venues evaluated, although the overall presence of signs was <75% in universities, schools, government buildings, hospitals, restaurants, cafes, and bars and nightclubs and <50% in dining areas of schools, government buildings, malls and hospitals.
- When “No Smoking” signs were observed in indoor areas, the visibility of the signage was very high in universities and schools (>95%), high in government buildings, malls, restaurants, cafes and traditional coffee houses (>90%), but lower in hospitals and bars/nightclubs (<90%).
- The inclusion of fines or penalties in signage was generally very high in all types of hospitality venues (>95%), high in universities and government buildings (>90%), but lower in schools, malls and hospitals.
- The presence of smoking and cigarette butts at outdoor public places was common in all venues. The high presence of cigarette butts in many venues highlights an important environmental problem.
- Overall, there were no major differences between the larger and smaller cities indoors, except for the presence of smoking in government buildings, with better compliance in the three larger cities despite a lower presence of smoking signs. Outdoors, the presence of smoking, ashtrays and cigarette butts was more common in smaller cities for most types of venues.

## NEXT STEPS

The study findings highlight the need to improve the implementation of the smoke-free legislation in Turkey. Specifically, there is urgent need to enforce the law in hospitality venues, especially bars/nightclubs and traditional coffee houses, and in locations within universities, schools, government buildings, malls and hospitals where smoking was observed, especially dining areas. An additional report will present the results of measurement of particulate matter of <math><2.5\ \mu\text{m}</math> and air nicotine concentrations, also collected during the initial phase of the study. During the next phase of the study, key informant interviews will be conducted with persons who are responsible for some of the public places that we have monitored through observation (e.g., owner, manager, director) and employees of hospitality venues that we observed during the first phase of the study. In addition, in-depth interviews will be conducted with high-level government and public health officials, and focus groups will be conducted with venue inspectors to gather additional information about compliance with and enforcement of the smoke-free legislation in Turkey.

## STUDY TEAM

The study was conducted as a collaboration between investigators at the Johns Hopkins Bloomberg School of Public Health (Ana Navas-Acien, Joanna Cohen, Jolie Susan, Katherine Moon, Jonathan Pollak, and Hoda Magid), Kadir Has University (Asli Carkoglu), Hacettepe University (Mutlu Hayran) and Izmir Dokuz Eylul School of Medicine (Gül Ergor). Additional advice was provided by Toker Ergüder and Kristina Mauer-Stender (WHO), Banu Ayer and Bekir Kaplan (Turkish Ministry of Health) and the Bloomberg Initiative to Reduce Tobacco Use (Kelly Larson). A company specializing in clinical, social and epidemiological research, OMEGA CRO, conducted the fieldwork.