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Editorial

Ensuring Smoke-free Schools: a collective responsibility

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Smoking is the number one cause of preventable death in the United States and leads to nearly 6 million annual deaths globally [1]. It is associated with numerous disease conditions including various malignancies, respiratory conditions, and heart disease [2]. Youth are highly susceptible to initiation of smoking because they are at experimental stages of their lives and can easily be influenced by societal norms [3, 4]. It is therefore important to protect them and ensure they can exist in environments free from pro-tobacco influences. Smoking bans have been shown to be effective ways of reducing initiation of smoking and exposure to secondhand smoke [5, 6]. Adoption of antismoking policies has been shown by numerous studies to be associated with lower exposure to second hand smoke (SHS). For example, a study conducted in South Africa in 2010 that assessed exposure to SHS showed that when smoking bans were adopted at work places, the odds of exposure to cigarette smoke among non-smokers decreased by 77% (adjusted odds ratio [aOR]=0.23; 95% CI: 0.09-0.60) [6]. This implies that with adoption alone, exposure to SHS was drastically reduced. However, to be most effective, stringent antismoking policies would need not only to be adopted, but also enforced [5,6,7].

The school is an environment where youths congregate and spend significant segments of each day. It is also a place where students' characters are shaped both by direct and indirect instruction. Because school personnel, including teachers, counselors, nurses, and sport directors, are in direct contact with students for long periods, the onus falls on them to ensure the students can learn in safe environ-

ments. A recent study of middle and high school students across the United States showed that up to one-quarter of students were exposed to SHS while at school [6]. Notably, the study also affirmed that among these students, merely understanding the adverse health effects of smoking was not significant in reducing the SHS exposure. Although it was not clear from this study who smoked the tobacco products that children were exposed to, it shows that there is significant amount of smoking going on at schools. Studies in other countries showed that though knowledge of dangers of tobacco increased with educating students (aOR=1.06; 95% CI:1.04-1.08), there was insignificant change in SHS exposure [5]. However, when the schools had moderate/strongly enforced antismoking policies, there was a lower exposure to SHS (aOR=0.59; 95% CI: 0.45-0.76) [5]. The questions still remain: who are those that smoke at schools and what is being done to stop them?

We assessed data from the Global School Personnel Survey collected from 2005 to 2011. We examined the presence of policies restricting school personnel from smoking on school premises and the level of enforcement of these policies in 40 countries (Table 1). Among the countries sampled, the presence of policies restricting school personnel from smoking ranged from 11.9% to 73.1% in Africa, 31% to 89.6% in Europe, and 16.8% to 75.6% in the Eastern Mediterranean Region. The levels of enforcement of these policies were significantly lower in all of the countries and this could imply that these policies are loosely applied in these schools.

Table 1. Adoption and Enforcement of School Smoking Restrictions among School Personnel.

	Region	Country	Policy against smoking adopted, % (95% CI)	Policy against smoking enforced, % (95% CI)
1	Africa	Congo	73.1 (56.6, 89.6)	28.8 (10.6, 47.0)
2	Africa	Eritrea	41.0 (34.4, 47.5)	37.3 (30.1, 44.4)
3	Africa	Ghana	58.1 (50.1, 66.1)	49.2 (41.3, 57.1)
4	Africa	Malawi	62.2 (48.6, 73.7)	34.5 (23.0, 46.0)
5	Africa	Mauritania	20.0 (13.7, 26.4)	4.7 (2.6, 6.7)
6	Africa	Mauritius	72.4 (66.9, 77.9)	32.7 (25.9, 39.6)
7	Africa	Niger	42.2 (32.1, 52.3)	15.8 (11.8, 20.0)
8	Africa	Rwanda	73.5 (62.2, 84.9)	47.6 (31.9, 63.4)
9	Africa	Senegal	11.9 (6.1, 17.5)	14.1 (9.8, 18.5)
10	Africa	Seychelles	71.5 (60.6, 82.5)	34.2 (25.4, 43.0)
11	Africa	South Africa	34.7 (28.1, 41.4)	24.1 (15.9, 32.2)
12	Africa	Swaziland	48.1 (39.3, 57.0)	31.1 (23.4, 38.7)
13	Africa	Togo	52.4 (41.3, 63.4)	22.2 (15.3, 29.2)
14	Africa	Uganda	64.9 (59.9, 70.0)	42.5 (35.2, 49.8)
15	Eastern Mediterranean	Iran	53.2 (42.4, 64.0)	23.8 (16.9, 30.8)
16	Eastern Mediterranean	Kuwait*	60.9	33.3
17	Eastern Mediterranean	Lebanon	31.7 (22.6, 40.9)	34.5 (24.2, 44.8)
18	Eastern Mediterranean	Morocco	16.8 (12.0, 21.6)	5.8 (3.2, 8.4)
19	Eastern Mediterranean	Oman	69.6 (64.0, 75.2)	35.5 (31.9, 39.1)
20	Eastern Mediterranean	Saudi Arabia	75.6 (69.8, 81.5)	32.6 (26.5, 38.6)
21	Eastern Mediterranean	Sudan	54.3 (40.8, 67.9)	37.2 (26.2, 48.2)
22	Eastern Mediterranean	Syria	43.1 (32.9, 53.3)	21.3 (13.7, 28.8)
23	Eastern Mediterranean	Tunisia*	36.9	7.7
24	Eastern Mediterranean	United Arab Emirates	66.3 (62.8, 69.8)	43.5 (39.9, 47.0)
25	Europe	Bulgaria	89.6 (85.8, 93.3)	34.3 (28.0, 40.6)
26	Europe	Cyprus	31.0 (26.7, 35.2)	18.3 (14.8, 21.7)
27	Europe	Estonia	77.9 (69.4, 86.4)	25.5 (13.3, 37.7)
28	Europe	Georgia	70.2 (62.9, 77.6)	24.9 (13.1, 36.7)
29	Europe	Latvia	76.6 (54.6, 98.7)	30.4 (22.8, 38.0)
30	Europe	Republic of Moldova	50.9 (44.9, 56.9)	22.5 (18.6, 26.5)
31	Europe	Serbia	65.6 (59.2, 72.0)	39.1 (31.0, 47.1)
32	Region of the Americas	Panama	57.3 (51.4, 63.2)	42.4 (36.4, 48.4)
33	South-East Asia	Bangladesh	48.4 (35.9, 61.0)	44.4 (33.1, 55.4)
34	South-East Asia	India	50.6 (45.6, 55.6)	47.5 (43.1, 51.8)
35	South-East Asia	Maldives*	80.4	54.6
36	South-East Asia	Myanmar	84.7 (79.5, 90.0)	60.1 (52.4, 67.8)
37	South-East Asia	Sri Lanka	61.6 (59.0, 64.1)	49.9 (46.5, 53.3)
38	Western Pacific Region	Mongolia	64.8 (57.4, 72.1)	21.2 (17.8, 24.6)
39	Western Pacific Region	Papua New Guinea	63.6 (56.6, 70.7)	27.6 (19.6, 35.6)
40	Western Pacific Region	Tuvalu	72.7 (57.9, 87.6)	31.7 (20.5, 42.8)

CI, Confidence Interval.* Confidence intervals could not be calculated in this country because a complete census was taken

Considering the well-established merits of adopting and enforcing antismoking bans in reducing SHS both within the general population [7] and in schools [5,6], it is bothersome that schools around the world have low adoption of smoking restrictions among personnel and even lower enforcement of these policies. There are several questions that could arise with this situation. A review of 31 studies has earlier hinted that adopting anti-tobacco policy in schools might not be enough to prevent the use of tobacco among youths [8]. Interestingly, merely perceiving that these policies are being enforced [9] could significantly reduce tobacco use just as the actual enforcement does [10]. Could it be that enforcing these bans is the next step? Obviously, enforcing anti-smoking laws in schools might not be as easy as it seems. Lessons could be learnt from the difficulties in enforcing these laws in states in the United States which have carried these out. California for instance was among the first states in the US to enforce anti-smoking laws yet this enforcement has not been fully accomplished [11]. Reasons included ineffective administration, low priority and insufficient funding to enforce the law, and little penalty to the perpetrators [11]. A study conducted amongst high schools in Canada highlighted numerous other factors that could contribute to low enforcement: infrequent reminders of the policy, insufficient involvement of parents and tobacco enforcement officers, easy accessibility and affordability of cigarette among others [12]. To effectively enforce smoking ban among high school personnel, involvement of parents might be the first step as their participation might indirectly place a check on the personnel. Parents could emphasize this during parent teacher meetings, they could report observations from their children on the frequency of these practices, and more importantly could raise alarm to ensure adoption/enforcement of these policies. Parents could also extend these policies to their children by frequently reminding them about the restrictions, making them aware of the associated harsh penalties and more importantly to continually reinforce the adverse health effects to them [13].

Furthermore, smoke-free policies could be better enforced by the senior school officials with frequent reminders to the personnel and students. This could be done during assemblies, class announcements, and letters to the parents [12]. Posting anti-smoking signs ubiquitously on school premises would also help to remind the personnel, regular visits by tobacco enforcement officers to give health talks, and incorporating adverse effects of tobacco into the curriculum could all go a long way in enforcing the policy. Criminalizing tobacco use on school premises [12] and enforcing harsh disciplinary actions on violators could discourage smoking [11]. This is in line with Deterrence law whereby citizenry only comply with laws when the associated price of breaking the law is much higher than conforming to it [14]. Providing adequate funds to recruit and train staffs on how to enforce ban could also better equip school authorities. Placing a ban on selling cig-

arette to minors and making possessing cigarette by minors illegal could greatly reduce tobacco accessibility to the students, while increasing prices of cigarette could all make it more difficult for some personnel inclusive [12]. Finally, as surveys show a low enforcement of smoking restrictions in schools, it is important that governmental agencies worldwide pay more attention to this health hazard and ensure enforcement of these bans among the school students and personnel.

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