The status of tobacco control in the Eastern Mediterranean Region: progress in the implementation of the MPOWER measures.

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Abstract

Background: The World Health Organization (WHO) MPOWER measures are a set of highly effective tobacco control measures drawn from the WHO Framework Convention on Tobacco Control (FCTC), designed to help countries reduce the prevalence of tobacco use. The WHO Report on the Global Tobacco Epidemic is published biennially to monitor global implementation of these measures.

Aims: This review aimed to critically assess the status of MPOWER implementation in the Eastern Mediterranean Region.

Methods: Data were collected for WHO Reports on the Global Tobacco Epidemic, focusing on the most recent 2019 edition. Regional population coverage figures were calculated using this data and population figures for the countries of the Region.

Results: Between 2007 and 2018, for any MPOWER measure, there were 29 cases of countries progressing to the highest level of achievement; 23 cases of countries progressing to the intermediate levels from the lowest level; 12 cases of countries falling from the highest level; and 18 cases of countries falling to the lowest level. 57.7% of people are covered at the highest level for the monitoring measure; 63.7% for the smoke-free policies measure; 67% for the cessation measure; 60.7% for the taxation measure.

Conclusions: Countries must work comprehensively to improve tobacco control. Regional priorities should include lifting more people out of lowest level coverage for the health warnings and mass media measures, increasing taxation on tobacco products and improving access to cessation services.

Keywords: tobacco, smoking, tobacco control, noncommunicable diseases, MPOWER

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Introduction

In May 2013 the World Health Assembly of the World Health Organization (WHO) adopted and approved a set of voluntary targets for the control of non-communicable diseases (NCDs). All countries have shown commitments to these targets, which include a 30% relative reduction in tobacco use by the year 2025 (1). The importance of this target is further emphasized by the Sustainable Development Goals (SDGs) and, in particular, SDG3a on strengthening the implementation of the WHO Framework Convention on Tobacco Control (FCTC). In 2018, this commitment was reinforced by the introduction of WHO 13th General Programme of Work, which aims for a 25% relative reduction in the prevalence of current tobacco use among persons aged 15 years and above by 2023 (2). Member States of the Eastern Mediterranean Region (EMR) have pledged to achieve this target and to work towards scaling up national policy implementation based on the WHO FCTC, the MPOWER package (3) and the NCD best buys (4).

This review examines the current status of implementation of the MPOWER measures in the countries of the Region and the resulting regional population coverage for these measures. It considers how policies have changed in EMR Member States over time and considers these results in relation to tobacco trend reports published in 2015 and 2018.

Methods

Data for MPOWER achievement at the country level were taken from the relevant published editions of the biennial WHO Report on the Global Tobacco Epidemic (hereafter, the Report). It was first published in 2008 and most recently in 2019. Each Report publishes data from the previous year. For the 2019 Report (5), data on the implementation of the MPOWER measures were correct as of 31 December 2018 (with two exceptions: taxation (31 July 2018) and mass-media campaigns (30 June 2018).

Regional population coverage figures were calculated with an exactly similar method to the global coverage figures presented in the 2019 Report (6). 2018 population
The regional prevalence data and trend projections included in this paper come from the 1st and 2nd editions of the WHO Global Report on Trends in the Prevalence of Tobacco Smoking (8,9). These reports include trend lines for each country that summarize smoking prevalence between 2000 and 2015 and project trends to 2025. This allows regional and global prevalence projections to be calculated (this is done in detail in the 2nd edition of the report). It should be noted that there are substantial gaps in the data used in these reports, especially for the 1st edition. Some countries have not completed a relevant smoking prevalence survey in over a decade.

### MPOWER achievement at the country level

The Report contains data on the seven MPOWER measures: Monitor tobacco use and prevention policies (Monitoring); Protect people from tobacco smoke (Smoke-free Policies); Offering cessation services to tobacco users (Cessation); Warning the public about the dangers of tobacco (through health warnings and mass media campaigns) (Health Warnings, Mass Media); Enforce bans on advertising, promotion and sponsorship (Advertising Bans); and, Raise taxes on tobacco products (Taxation). Each measure corresponds to one or more articles of the WHO FCTC. The aim is to provide countries with a set of effective measures to reduce the demand for tobacco products. For each measure there are several possible levels of achievement, as outlined in Table 2. Full details can be found in the 2019 Report (6).

Table 3 outlines the number of countries performing at the highest level, the intermediate levels (amounting to two levels) and the lowest level in 2007 and 2018. Overall, between 2007 and 2018, the number of countries performing at the highest level increased for each measure apart from Monitoring (that had less stringent criteria for highest achievement in 2007). Over the same period, the number of countries performing at the lowest level decreased for all measures apart from Monitoring. However, as in 2007, most countries remain at the intermediate level, having partially implemented the MPOWER measures. In 2018, more countries performed at the intermediate levels than at the lowest level or the highest level for each measure.

Between 2007 and 2018 (for Mass Media, 2010 is considered instead of 2007 since this measure was not included in the MPOWER package in the 2008 Report), there were 29 cases of countries moving up to the highest level of achievement for an MPOWER measure (from any lower level), including seven cases of countries moving up to the highest level from the lowest level. There were 23 cases of countries moving up to the intermediate levels from the lowest level.

Between 2016 and 2018, 8 out of the 22 countries in the Region moved up to a higher level for at least one of the MPOWER demand reduction measures (i.e., the five POWER measures – all the measures apart from Monitoring) (10). On the other hand, even compared to 2016 there have been five cases of countries getting worse with respect to the POWER measures (10). Two of these decreases occurred for the Islamic Republic of Iran,
Table 2  Summary of criteria for achievement for each level for each MPOWER measure

| M: Monitoring | Highest level | Recent, representative and periodic data for both adults and youth. |
|---------------|---------------|------------------------------------------------------------------|
|               | Intermediate levels | High-intermediate: recent and representative data for both adults and youth. Low-intermediate: recent and representative data for either adults and youth. |
|               | Lowest level | No known data or no recent data or data that are not both recent and representative. |
| P: Protection from second-hand smoke | Highest level | All public places completely smoke-free (or at least 90% of the population covered by complete subnational smoke-free legislation). |
|               | Intermediate levels | High-intermediate: Six to seven types of public place completely smoke-free. Low-intermediate: Three to five types of public place completely smoke-free. |
|               | Lowest level | Complete absence of ban, or up to two types of public place completely smoke-free. |
| O: Offer cessation support | Highest level | National quit line and both nicotine replacement therapy (NRT) and some cessation services cost-covered. |
|               | Intermediate levels | High-intermediate: NRT and/or some cessation services (at least one of which is cost-covered). Low-intermediate: NRT and/or some cessation series (neither cost-covered). |
|               | Lowest level | None |
| W: Graphic Health Warnings | Highest level | Large warnings with all appropriate characteristics. |
|               | Intermediate levels | High-intermediate: Medium size warnings with all appropriate characteristics or large warnings missing some appropriate characteristics. Low-intermediate: Medium size missing some or many appropriate characteristics or large warnings missing many appropriate characteristics. |
|               | Lowest level | No warnings or small warnings |
| W: Mass media campaigns | Highest level | National campaign conducted with at least seven appropriate characteristics including airing on television and/or radio. |
|               | Intermediate levels | High-intermediate: National campaign conducted with five to six appropriate characteristics, or with seven characteristics excluding airing on television and/or radio. Low-intermediate: National campaign conducted with one to four appropriate characteristics. |
|               | Lowest level | No recent national campaign conducted with a duration of at least three weeks. |
| E: Enforce bans on advertising, promotion and sponsorship | Highest level | Ban on all forms of direct and indirect advertising (or at least 90% of the population covered by subnational legislation completely banning tobacco advertising, promotion and sponsorship). |
|               | Intermediate levels | High-intermediate: Ban on national television, radio and print media as well as on some but not all other forms of direct and/or indirect advertising. Low-intermediate: Ban on national television, radio and print media only. |
|               | Lowest level | Complete absence of ban, or ban that does not cover national television, radio and print media. |
| R: Raise taxes on tobacco products | Highest level | ≥75% of retail price of the most popular brand of cigarettes is tax. |
|               | Intermediate levels | High-intermediate: ≥50% and < 75% of retail price is tax. Low-intermediate: ≥ 25% and <50% of retail price is tax. |
|               | Lowest level | <25% of retail price is tax. |

Table 3  Number of countries performing at each level for each MPOWER measure

| MPOWER Measures | **Highest level** | **Intermediate levels** | **Lowest levels** |
|-----------------|------------------|------------------------|------------------|
|                 | 2007  | 2018  | 2007  | 2018  | 2007  | 2018  |
| M               | 10    | 6     | 9     | 13    | 3     | 3     |
| P               | 1     | 7     | 13    | 8     | 8     | 7     |
| O               | 0     | 3     | 17    | 17    | 5     | 2     |
| W GHW           | 0     | 5     | 14    | 10    | 8     | 7     |
| W MM            | 3*    | 4     | 8*    | 8     | 11*   | 10    |
| E               | 8     | 10    | 11    | 11    | 3     | 1     |
| R               | 0     | 3     | 11    | 12    | 11    | 7     |

*Achievement for the mass media warnings measure is from 2010 instead of 2007.*
which dropped to the lowest level for Taxation and from the highest level for Cessation.

In terms of compliance with legislation, of the countries given a compliance score for the ‘Smoke-free Policies’ in the 2019 Report (6), 10 countries, including 6 out of the 7 countries performing at the highest level (Afghanistan, Egypt, Lebanon, Libya, Pakistan and the West Bank and Gaza Strip), were given a score of 3/10 or lower (10). Only two countries were given a score of 8/10 or higher (labelled ‘high compliance’) for this measure. Of the countries given a compliance score for the advertising bans measure, 10 countries were given a score of 8/10 or higher and 9 were given a score between 3/10 and 7/10 (labelled ‘moderate compliance’).

Regional population coverage

Implementation of the MPOWER measures at the country level translates into degrees of coverage of the regional population. For each MPOWER measure, Table 1 presents the population coverage at the highest level, the intermediate levels and the lowest level. Three measures (Monitoring, Smoke-free Policies and Health Warnings) are each adopted at the highest level for over half of the total population of the Region. For both Smoke-free Policies and Health Warnings, over 60% of people are covered at the highest level.

However, large proportions of the population of the Region are not covered by the warnings measure (beyond the lowest level), with over 30% of people in the Region not covered by anti-tobacco mass media campaigns in their country. Despite a relatively high proportion of people being covered at the highest level by health warnings on cigarette packs, over 22% of people still live in countries where such warnings are either absent or very small. Similarly, for Taxation, over a quarter of people are not covered (beyond the lowest level), while 16% of people are covered at the highest level for this measure.

Figure 1 shows that highest level coverage for the MPOWER measures has improved for 4 out of the 7 measures since 2016, including some large percentage increases. Most notably the number of people covered at the highest level by health warnings on cigarette packs increased by over 135% between 2016 (25.7%) and 2018 (60.7%). The number of people covered at the highest level by the taxation measure increased by 677% from very low coverage (2.1%) in 2016 to higher coverage (16.1%) in 2018.

There was a large percentage decrease in the number of people covered at the highest level for Cessation. In 2018, just over 50% fewer people had access to the comprehensive tobacco dependence treatment afforded by adoption of this measure at the highest level. The proportion of the population covered at the highest level for Monitoring dropped slightly, from 58.4% in 2016 to 57.7% in 2018.

Several of the changes in population coverage from 2016 to 2018 can be attributed to particular countries with large populations adopting legislation in line with one or more of the MPOWER measures. For instance, the large increase in the percentage of people covered at the highest level by graphic health warnings on cigarette packs was due to Pakistan, with a population of over 212 million, and Saudi Arabia, with a population of close to 34 million, adopting legislation to reach the highest level for this measure. The even larger percentage increase in the number of people covered by adequate taxation policy is due to Egypt implementing a tax increase on cigarette packs, taking it above 75% of retail price as tax threshold. The 50% fall in the number of people in the Region covered by comprehensive cessation services is in part

Figure 1 MPOWER coverage at the highest level: 2016, 2018
due to the Islamic Republic of Iran reducing the cessation services it provides, and thus no longer performing at the highest level for this measure.

In comparing regional and global coverage at the highest level (11), a far higher proportion of the Region’s population is protected by comprehensive smoke-free policies (63.6%) than the estimated proportion of the global population covered by such policies (22%). Regional coverage at the highest level is also significantly higher than global coverage at that level for Health Warnings (regional: 60.7%; global: 52%), Mass Media (regional: 37.4%; global: 24%), Advertising Bans (regional: 29.4%; global: 18%) and Monitoring (regional: 57.7%; global: 38%).

Coverage at the highest level at the regional level is significantly lower than at the global level for Cessation (regional: 6.7%; global: 32%). In addition, lack of coverage (beyond the lowest level) is much higher in the Region than globally for Mass Media (regional: 33.5%; global: around 19%) (12).

The tobacco prevalence trend in the Eastern Mediterranean Region

WHO issued reports on trends in the prevalence of tobacco smoking in 2015 (8) and in 2018 (9) (a third report was issued in December 2019). Both reports projected that the EMR will not achieve its 30% relative prevalence reduction target (12.6%) by the year 2025. In fact, the prevalence of tobacco use in the EMR was projected to increase in both reports. Despite this, there is a notable difference in the projections. The 2015 report projected a prevalence increase of 5 percentage points from 2010 to 2025, while in the 2018 report the projected increase was of less than 1 percentage point (Figure 2). This is due to some large decreases in the projected 2025 prevalence for several countries (Bahrain, Lebanon, Oman, Pakistan and Saudi Arabia) between the two reports (8,9). With respect to the change in the regional prevalence projection between the two trend reports, the most important decrease was for Pakistan (whose population amounts to just over 30% of the Region), where the projected 2025 male prevalence dropped from 45.1% in the 2015 report to 35.1% in the 2018 report.

Discussion

The difference between the 2015 and 2018 trend reports indicates improvement in tobacco control efforts in the Region. This accords with the figures for both policy developments at the country level and population coverage at the regional level. For both we see widespread improvement, as outlined in the analysis above.

However, the change in projected prevalence should not only be attributed to improvements in tobacco control policy. Tobacco and other NCD risk-factor surveillance has also drastically improved, with the implementation of several Global Adult Tobacco Survey, Global Youth Tobacco Survey and Stepwise Surveillance of NCD Risk Factor programmes in various countries. When the 2015 trend report was issued only 8 countries in the Region had sufficient data on smoking prevalence for adults to calculate their projected prevalence up to 2025 (8). By 2018, 14 countries of the Region had sufficient data for this projection (9).

Despite these improvements in both demand-reduction policy measures and monitoring, the EMR is the only WHO region for which smoking prevalence was projected to increase by 2025 in the 2018 trend report (9). Several issues can be identified to explain this (13).

First, many countries are stagnating at an intermediate level. Performance at this level is not effective for prevalence reduction (14). Highest level implementation is required. This intermediate coverage is coupled with large proportions of the Region’s population that are...
covered at the lowest level, especially for Health Warnings and Taxation.

Second, many countries are not maintaining positive policy implementation and upward progress. Between 2007 and 2018 there were many cases of countries’ performance dropping for particular measures, and even since 2016 this has occurred several times. This instability in tobacco control efforts threatens any long-term achievement in reducing prevalence and the disease burden of tobacco use.

Third, many countries lack a comprehensive tobacco control strategy. Across all editions of the Report (data from 2007 to 2018) only one country (Islamic Republic of Iran) has achieved the highest level for more than 3 MPOWER measures. A comprehensive tobacco control approach is key for reducing prevalence (15), as is evident in countries that have achieved significant reductions, such as Brazil, Turkey and Uruguay (5,9).

Fourth, poor compliance with national tobacco control laws is still a major problem. Many countries in the Region do not fully enforce the tobacco control laws that they have passed. If a country does not enforce such legislation, then while it may be formally performing at the highest level for a particular MPOWER measure, it will not achieve the intended reduction in tobacco use. Lack of compliance is seen most markedly for Smoke-free Policies. While over 60% of people in the Region are formally covered at the highest level for this measure, there are very low levels of compliance among many countries, including almost all of the highest achieving countries.

The way forward

While there is much work to be done to achieve highest level implementation of all MPOWER measures, the analysis indicates certain specific priority areas. First, more people should be lifted out of lowest level coverage for both Health Warnings and Mass Media.

Second, taxation on tobacco products should be increased to combat low coverage at the highest level and high coverage at the lowest level. Decreasing the affordability of cigarettes in this way is recognized as the most effective means to reducing prevalence (16). Multi-sectoral work that recognizes the health and economic benefits of increasing taxation to more than 75% of the retail price is needed. In addition, where incomes are increasing and where inflation is taking place, taxes must continue to rise to prevent tobacco products becoming more affordable over time.

Third, it is necessary to improve access to cessation services in the Region. The EMR is by global standards far behind in terms of coverage at the highest level for this measure, and there was a large percentage decrease in the number of people covered at the highest level between 2016 and 2018. While covering the costs of all cessation services is not possible for all countries in the Region, work should be done on encouraging countries to provide brief advice in primary health care facilities, establish national tobacco quit lines (which are low cost and relatively easy to implement) and at least partially covering the cost of some medication and quitting support.

Fourth, it is crucial to maintain upward momentum by getting countries to move beyond intermediate coverage, since the MPOWER measures are only properly effective when fully implemented at the highest level (14,17). This requires political commitment to be achieved in a sustainable way. Countries should aim to protect the tobacco control legislation they implement to prevent regressive changes in the future. It is also vital that sustained upward momentum is comprehensive in covering all tobacco products, including waterpipe and novel tobacco products like electronic nicotine delivery systems (ENDS) and heated tobacco products (HTPs).

Fifth, to translate legislative and regulatory success into prevalence reductions, countries must drastically improve their governance and enforcement. Legislative achievement at the highest level is not enough for prevalence reduction. It should be recognized that such improvements in enforcement mechanisms (e.g., via increased sanctions and monitoring) benefit all sectors of society.

Sixth, increasing the scale, scope and frequency of monitoring systems for tobacco use is key to gaining an accurate picture of tobacco use prevalence and trends in the Region. This monitoring should include both adult and youth prevalence and all tobacco products, including waterpipe and novel products like ENDS and HTPs.

Any efforts to improve tobacco control in the EMR must take into account the strong presence of the (multi-national and national) tobacco industry. Alliances between governments and the tobacco industry are clear (18). The industry is also exploiting the lack of stability that exists in many parts of the Region (19). Any serious attempt to strengthen tobacco control at the country level must fully consider the implementation of FCTC Article 5.3 to avoid any industry interference (20).

If tobacco control policies were implemented at the highest level, it is highly likely that a significant reduction in smoking prevalence would be achieved (21). For four representative countries of the Region considered (Egypt, Lebanon, Pakistan and Tunisia), a reduction in prevalence of between 21% and 35% is estimated if all MPOWER measures were fully implemented (21).

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Situation de la lutte antitabac dans la Région de la Méditerranée orientale : progrès dans la mise en œuvre des mesures MPOWER.

Résumé

Contexte : Les mesures MPOWER mises en place par l’Organisation mondiale de la Santé (OMS) constituent un ensemble de recommandations très efficaces en matière de lutte antitabac issues de la Convention-cadre de l’OMS pour la lutte antitabac, destinée à aider les pays à réduire la prévalence de la consommation de tabac. Le rapport de l’OMS sur l’épidémie mondiale de tabagisme est publié tous les deux ans afin de suivre la mise en œuvre au niveau mondial de ces mesures.

Objectifs : La présente étude avait pour objectif d’évaluer de manière critique la situation concernant la mise en œuvre des mesures MPOWER dans la Région de la Méditerranée orientale.

Méthodes : Les données ont été collectées en vue de la rédaction des rapports de l’OMS sur l’épidémie mondiale de tabagisme, en privilégiant l’édition 2019 qui est la plus récente. Les chiffres concernant la couverture de la population régionale ont été calculés à l’aide de ces données et des chiffres de la population des pays de la Région.

Résultats : Entre 2007 et 2018, pour toute mesure MPOWER, on a observé 29 cas de pays ayant progressé au plus haut degré d’exécution ; 23 cas de pays étant passé du niveau le plus faible au niveau intermédiaire ; 12 cas de pays ayant régressé par rapport au plus haut niveau ; et 18 cas de pays ayant régressé au degré le plus bas. Cinquante-sept pour cent de la population est couverte au plus haut niveau d’exécution en ce qui concerne la mesure de suivi ; 63,7 % concernant la mesure relative aux politiques sur les environnements sans fumée ; 67,7 % concernant la mesure relative aux mesures d’assistance sanitaire ; et 29,4 % concernant la mesure relative à la taxation.

Conclusions : Les pays doivent travailler de manière globale afin de renforcer la lutte antitabac. Les priorités régionales devraient inclure le passage du niveau de couverture le plus bas à un niveau supérieur pour un plus grand nombre de personnes en ce qui concerne les mesures relatives aux mesures d’assistance sanitaire et aux médias, l’augmentation de la taxation sur les produits du tabac et l’amélioration de l’accès des services de sevrage.
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