Tobacco Use in Africa:
Tobacco Control through Prevention

Evan Blecher, PhD
Hana Ross, PhD
American Cancer Society

American
Cancer
Society®

About the Authors

Evan Blecher, PhD, is a senior economist and director in the International Tobacco Control Research Program at the American Cancer Society.

Hana Ross, PhD, is managing director of International Tobacco Control Research at the American Cancer Society.

Tobacco Use in Africa:
Tobacco Control through Prevention

Introduction

Tobacco use is the most preventable cause of death worldwide and is responsible for the deaths of approximately half of its long-term users. An often-quoted statistic is that tobacco use killed 100 million people in the 20th century and will kill one billion people in the 21st century if current trends continue. In 2011, tobacco use killed more than 6 million people, nearly 80% in low- and middle-income countries (LMICs). By 2030, more than 8 million people will die annually from tobacco use.[i] The inequalities in tobacco use and tobacco-attributable death in the developed and developing world are likely to get even worse. Between 2002 and 2030, tobacco-attributable deaths are projected to decline by 9% in high-income countries (HICs) but are expected to double from 3.4 million to 6.8 million in LMICs. For example, tobacco is currently the number one killer in China, responsible for 1.2 million deaths annually, a figure that is expected to rise to 3.5 million deaths annually by the year 2030.[ii]

Tobacco use in Africa has received little attention. The perceived low smoking prevalence in Africa combined with high smoking prevalence in other developing regions, alongside the more immediate need for interventions with infectious diseases, has resulted in a low priority for tobacco control in Africa. However, improving economic growth and health have resulted in growth in the number of smokers and cigarettes smoked in Africa. The purpose of this report is to delve deeper into trends in tobacco use, particularly smoking, in Africa, a developing region of the world that represents the future epicenter of the tobacco epidemic. The report highlights a critical distinction between patterns in tobacco use, developing a strategy differentiating **prevention** and **intervention** efforts.

What is changing?

The general economic narrative about Africa is that of a continent oppressed by poverty. On the other hand, the general narrative about Asia is that of a region exploding with economic growth and opportunity. However, this simplistic narrative neglects to recognize more recent trends in economic growth. While Africa is by far the poorest region in the world, with the highest rates of poverty, it is not becoming poorer. In fact, Africa is currently one of the faster-growing regions in the world today.

In the early 1990s, economic growth in Africa significantly lagged global trends; the late 1990s saw Africa enjoying rates of economic growth similar to the rest of the world. In the 2000s, however, Africa experienced some of the strongest economic growth in decades, peaking at above 6% in 2004 and remaining higher than the global average post-2001. The most significant driver of this economic growth in the country has been the strength of global demand for resources and improved ability to exploit them. Growth in the global demand for resources has been driven by rapid economic growth in Asia. African countries are among the production leaders of many of these resources. However, at the same time that Africa has been experiencing an economic boom, this has reduced income inequality within countries by more than initially thought.[iii]

[i] Eriksen, Mackay and Ross (2012) *Tobacco Atlas.* Atlanta: American Cancer Society.

[ii] American Cancer Society (2011) *Global Cancer Facts & Figures 2nd Edition.* Atlanta: American Cancer Society.

[iii] Sala-i-Martin and Pinkovskiy (2010) *African Poverty if Falling … Much Faster than You Think!* National Bureau of Economic Research Working Paper No. 15775.

The world of 1950 is very different from the world of today, and the world of 2100 will doubtless be very different from today. For instance, in 1950, the population of Africa accounted for only 7% of the global population of 2.5 billion people, while Asia (SEARO and WPRO) accounted for 51%, and Europe for 24%. By 2010, the global population has grown to 7 billion people, and the distribution of this population has changed significantly. Asia now accounts for 52% of the global population, while Europe has declined in its share (although not in absolute terms) and now accounts for only 9%. Importantly, Africa has grown considerably and now accounts for 12% of the global population. Population forecasts by the United Nations show these trends continuing. Asia's proportion of global population is expected to peak sometime in the middle of the 21st century. The population in Africa will continue to grow, and by 2100, Africa will account for 30% of the global population.

Understanding what drives these population trends is critical. As the economy develops and incomes rise, people have greater access to improved health, which results in people living longer, and more children surviving infancy and living to adulthood. Child mortality is a good indicator of the general health of the population, and a critical factor in future population growth in Africa. Contrary to popular thought, great strides are being made in child mortality in Africa. A recent study by the World Bank[iv] found that child mortality had declined in 17 of 20 sub-Saharan African countries since 2005. Remarkably, 12 countries saw annual child mortality decline more than 4% per year. These successes are certainly driven by successes in public health strategies, including greater access to immunizations, reductions in child HIV/AIDS infections (i.e., reduction in mother-to-child transmission) and improved prevention and treatment of malaria. One of the most significant results of improved health is that people live longer. As the population lives longer, the effects of tobacco use on health become more significant; in effect, the health burden of tobacco use on users becomes greater as their life expectancy rises from other public health successes.

Tobacco Use in Africa

Consumption patterns of tobacco may differ from one region to another and, within a region, between population sub-groups as a function of gender, area of residence, education level, and other factors. It is critical to understand both the between- and within-region variation in tobacco use, and variations by gender, to form a coherent strategy to **prevent** tobacco use, and to **intervene** to reduce current tobacco use.

Gender-specific smoking prevalence by WHO region[1] is shown in Figure 1. Among adult men, smoking prevalence is the lowest in AFRO, with 14% of African men smoking. This is considerably lower than the other low-smoking-prevalence regions, AMRO and EMRO, where 23% and 31% of men smoke, respectively. However, the Asian regions of SEARO and WPRO have among the highest male smoking prevalence, with 33% and 50%, respectively. The only region with higher male smoking prevalence than Asia is EURO, at 36%. Female smoking has a very different distribution globally, with all but AMRO and EURO showing very low female smoking prevalence, and female smoking prevalence in AFRO of 3%. While Asia is the epicenter of the current global

---

[iv] Demombynes and Trommlerova (2012) *What Has Driven the Decline of Infant Mortality in Kenya?* World Bank Policy Research Working Paper No. 6057.

[1] WHO regions are used in this paper. The six WHO regions are Africa (AFRO), Eastern Mediterranean (EMRO), European (EURO), Americas (AMRO), Western Pacific (WPRO) and Southeast Asia (SEARO). AFRO includes sub-Saharan Africa and some North African countries, while most North African countries are included in the EMRO region. On the other hand, most Asian countries, except for those in the Middle East, are included in either SEARO and WPRO, with WPRO including much of the Pacific rim countries.

Figure 1: Smoking prevalence by WHO region
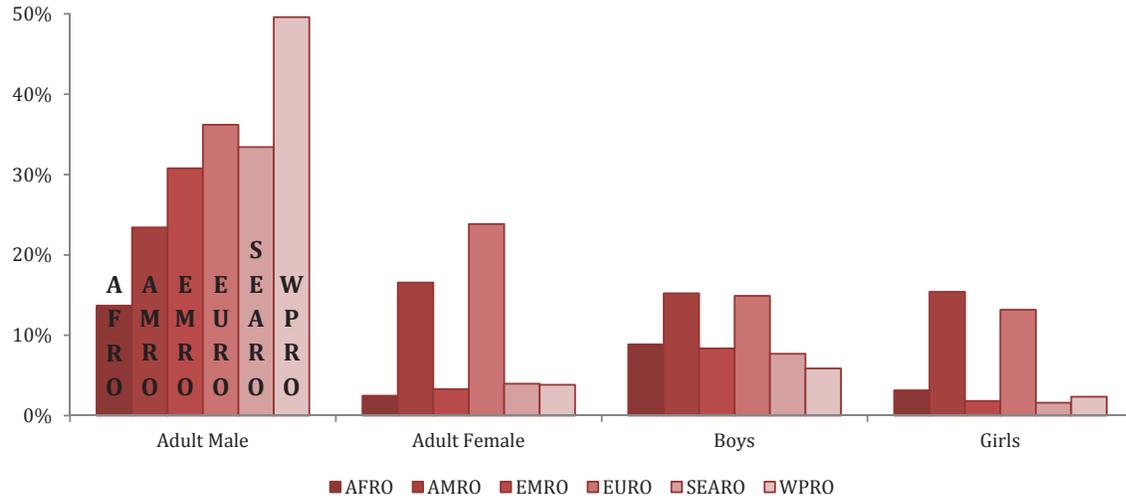
Source: Eriksen et al., 2012

smoking epidemic, Africa presents the greatest threat in terms of future growth in smoking. Additionally, a clear dichotomy exists between smoking among men and women, with men smoking at higher rates in the developing regions of the world, while women smoke at higher rates in the developed regions of the world. In the same way that Africa has the most significant potential for future smoking among men, the entire developing world is a substantial concern for smoking among women. While the barriers to the social acceptability of smoking among women in the developed world have fallen, they are intact among women in the developing world.

Unlike smoking prevalence among adults, smoking prevalence among youth in Africa does not follow the same pattern of being significantly lower than in all other regions. Among boys, smoking prevalence in AFRO is 9%, higher than in other developing regions like the EMRO, SEARO, and WPRO (8%, 8% and 6%, respectively), but still lower than in AMRO and EURO (15% each). Among girls, smoking prevalence in AFRO is 3%, which is slightly higher than in other developing regions but significantly lower than in AMRO and EURO (15% and 13%, respectively). Globally, smoking prevalence among girls follows a similar pattern to that among women. Youth smoking data show some critical warning signs. First, even though adult male smoking in Africa is significantly lower than in all other regions, smoking prevalence among boys is higher than in other developing regions. This suggests that future male smoking prevalence in Africa is likely to catch up to that in other regions. Furthermore, smoking among women in Africa is very low, while smoking prevalence among girls is higher than among women.

Measuring tobacco use through smoking prevalence is the most common metric because it is easy to make cross-country or time-series comparisons. However, a complicating factor is the definition of tobacco use, (e.g., the age or gender cohort, the definition of tobacco products, or the frequency of tobacco use). Additionally, even when such data are available over time, the inconsistency of the data creates limitations. Few if any surveillance instruments have consistently collected prevalence

data in Africa. An alternative metric is tobacco consumption. Although tobacco consumption is a less tangible metric, it shows trends over time relatively accurately. Cigarette consumption data are available in some African countries, although not all, on an annual basis and are shown in Figure 2, which includes 18 African countries representing 79% of the population, respectively, from 1990 to 2010.

In the figure, South Africa is shown separately from the rest of Africa since consumption in South Africa has shown a trajectory altogether different from the rest of the region. In 1990, South Africa accounted for 39% of the African market, and by 2010 it accounted for only 17%. This change was driven both by the decline in the size of the South African market as a result of successful tobacco control interventions, as well as the growth in the rest of Africa. Between 1990 and 2010, the South African market declined by 46%, while the non-South African market grew by 68%.

### Figure 2: Aggregate cigarette consumption, 1990-2010
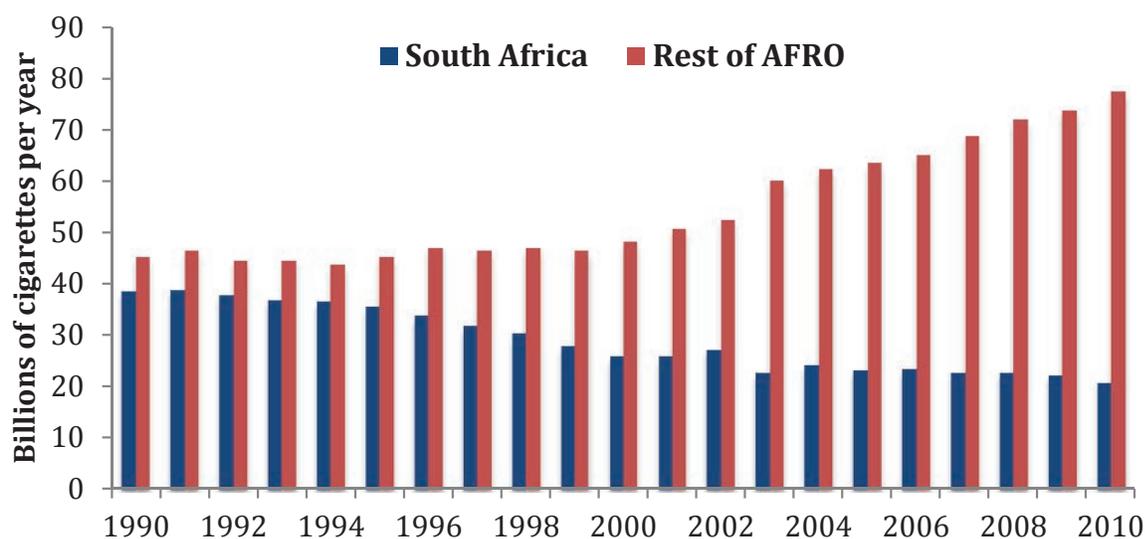
Source: ERC Group, 2010[xi]

Some critical distinctions need to be made between consumption and prevalence. Figure 3 shows the number of cigarettes smoked by region, as well as the number of smokers by region. While only 2% of cigarettes smoked are in Africa, 6% of smokers live in Africa. This means that, on average, smokers smoke considerably fewer cigarettes per smoker than they do in other parts of the world. This is most likely due to lower incomes, but it also shows the incredible scope for market growth in Africa independent of growing the number of smokers. This is an important reason for tobacco industry interest in growth. Not only is significant market scope brought about by population growth and a low base of smoking prevalence, but also through the potential for increased sales to current smokers. As economies and incomes grow, and as cigarette and tobacco markets in Africa develop and mature, so will smoking intensity, thereby increasing the value of the market dramatically.

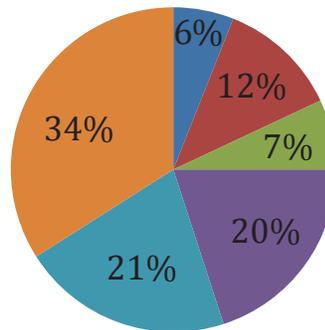[xi] ERC. (2010). World cigarette reports, 2010. Suffolk, UK: ERC Group Ltd.

Figure 3: Cigarettes smoked and the number of smokers by WHO region

### Cigarettes by region
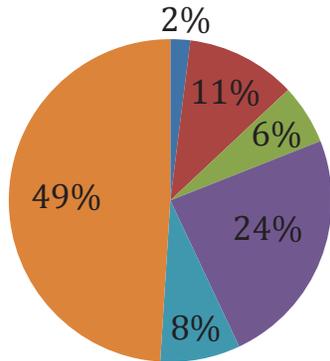
Smokers by region

■ AFRO ■ AMRO ■ EMRO ■ EURO ■ SEARO ■ WPRO

Source: ERC Group 2010, WHO 2011[xii] and authors' calculations

The significant between-region variation does not reflect the significant within-region variation. Within-region variation is important because it indicates the need for both prevention and intervention strategies, targeting strategies to individual countries. The large variation in smoking prevalence is indicative of countries being at different stages of the tobacco epidemic. **Figure 4** shows this variation in smoking prevalence by plotting male smoking prevalence on the updated Stages of the Epidemic model.[v] Each mark represents a single country and is superimposed on the model based on that country's male smoking prevalence (the years since the beginning of the

Figure 4: Adult male smoking prevalence by country and stages of the cigarette epidemic
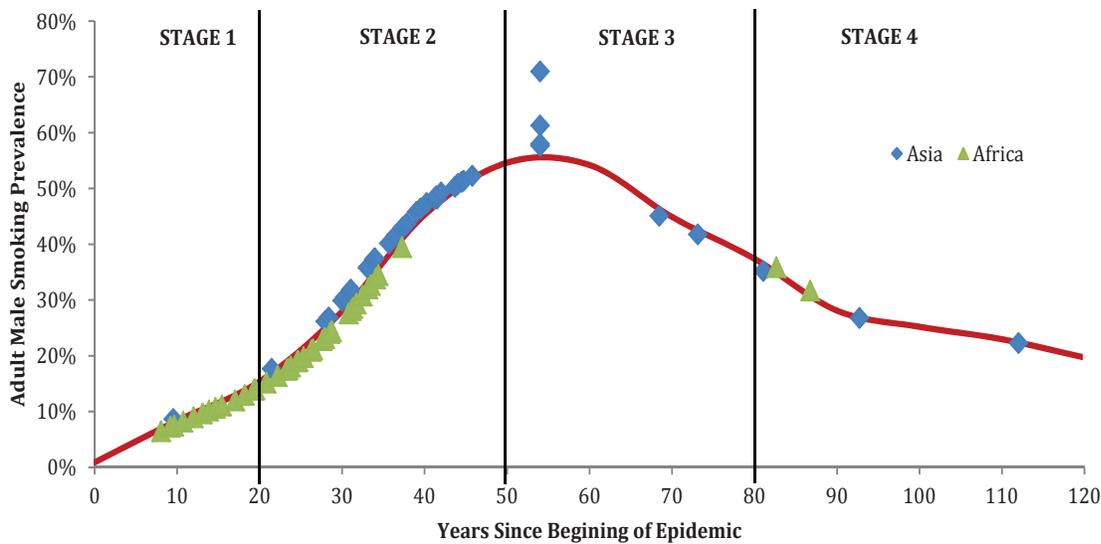
Source: (Eriksen et al., 2012) and authors' calculations
Note: There are a further four countries (Indonesia, Kiribati, Papua New Guinea and Samoa) that cannot be
    staged since their smoking prevalence is higher than predicted by the model.

[v] Thun, Peto, Boreham and Lopez (2012) Stages of the cigarette epidemic on entering its second century. *Tobacco Control*. 21:2, 96-101.

[xii] World Health Organization. (2011). WHO report on the global tobacco epidemic, 2011: Warning about the dangers of tobacco. Geneva: World Health Organization.

epidemic are simply assumed to fit the model and thus do not represent the actual years since the beginning of the epidemic). This model updates the 20-year-old landmark Lopez model[vi] by fully incorporating the lessons gained from the large concentration of global surveillance data that have been assembled since the original model's publication. The main innovation of the new model is that it de-links the timing of the tobacco epidemic for genders. The original model assumed that females in a country would, as in the US and the UK, rapidly take up smoking about 30 years after their male counterparts. This pattern has not been consistently observed across the world, especially in LMICs, where female smoking prevalence remains low in many countries.

While many African countries have low smoking prevalence, these countries will likely evolve to later stages of the epidemic with increased smoking prevalence. It is also likely that many non-African developing countries with higher smoking prevalence have peaked and will begin to move to later stages of the epidemic, where smoking prevalence declines. However, this is a generalization, and while there are more low-prevalence countries in Africa and high-prevalence countries in other regions, numerous countries do not fit this pattern. Critically, many of the low-prevalence countries in other regions are actually in advanced stages of the epidemic, while low-prevalence countries in Africa are in early stages of the epidemic. The most striking visualization is that a large number of African countries (22) are in stage 1; however, a lower number of countries (17) are in stage 2. Two countries, Mauritius and South Africa, which are among the most developed countries in the region, are likely at stage 3 or 4.

The model provides an indication that **prevention** of smoking is still far more realistic an objective in Africa, while **intervention** to reduce smoking prevalence is necessary in other regions. This intersection between prevention and intervention is critical to policy development and will be considered in greater detail later. The high degree of variation shows that unique tobacco control strategies are needed for different countries. In some countries with low prevalence, a pure prevention strategy may be the most appropriate and cost-effective tobacco control strategy; however, in high-prevalence countries, a tobacco control strategy that prioritizes intervention may be more appropriate. Likewise, a significant number of countries with moderate smoking prevalence would require a combination of both prevention and intervention.

Interventions and Future Tobacco Use

Forecasting trends in tobacco use is difficult, with little literature predicting global trends in consumption and/or prevalence. Forecasting individual country trends is easier where sufficient data are available and where the policy environment and economic relationships are well understood. However, scaling up a country-level forecast to a regional or global level is difficult. Recently, efforts have been made to forecast smoking prevalence by WHO region. Méndez et al. used a sample of 10 countries in each region, representing 85% of the world's population and 90% of the world's smokers, to forecast smoking prevalence over the next 10 and 20 years.[vii] The result is a population-weighted smoking prevalence for each region in 2020 and 2030 (Table 1), as well as a lower bound ("best case") and upper bound ("worst case") sensitivity analysis for both years.

[vi] Lopez, Collishaw and Piha (1994) A descriptive model of the cigarette epidemic in developed countries. *Tobacco Control*. 3: 242-7.

[vii] Méndez, Alshanqeety and Warner (2012) The potential impact of smoking control policies on future global smoking trends. *Tobacco Control*. ePub.

Table 1: Projections of smoking prevalence by WHO region

	2010	2020		2030	
	Current	No policy interventions	Policy interventions	No policy interventions	Policy interventions
AFRO	15.8%	19.4%	12.1%	21.9%	11.3%
AMRO	20.5%	18.0%	11.6%	16.7%	8.9%
EMRO	22.4%	22.9%	13.9%	23.7%	13.0%
EURO	31.2%	30.2%	17.1%	29.7%	15.1%
SEARO	20.1%	18.7%	13.3%	17.6%	11.7%
WPRO	28.5%	27.6%	19.2%	26.3%	17.0%
Whole world	23.7%	22.7%	15.0%	22.0%	13.2%

Source: Méndez et al., 2012

The forecasts are intended to reflect overall smoking prevalence if the 2010 trends persist and no additional tobacco control measures are implemented. The forecasts show that smoking prevalence in AFRO is expected to see a significant increase by 2020 and again by 2030. This is in contrast to the developed regions like AMRO and EURO, which are expected to see declines in smoking prevalence by 2020 and 2030. In Asia, both SEARO and WPRO are expected to see declines in smoking prevalence by 2020 and 2030.

WHO promotes best practices in tobacco control policy through the MPOWER framework. MPOWER is a comprehensive tobacco control strategy aligned to the obligations of the Framework Convention on Tobacco Control (FCTC). MPOWER is intended to Monitor tobacco use (M), Protect people from tobacco smoke through clean indoor air laws (P), Offer help to smokers through cessation support (O), Warn people of the dangers of tobacco use through mass media campaigns and package warnings (W), Enforce bans on advertising and marketing of tobacco product (E), and Raise taxes (R). While monitoring is not considered a prevention or intervention tool, all other policies, with the exception of cessation support, are effective in both prevention and intervention.

The Méndez model also forecasts the impact of implementation of the MPOWER strategy. In the model, the impact of policies on both increasing cessation and reducing initiation are included. The policies have differential impacts on cessation and initiation rates. For instance, clean indoor air laws (P) increase cessation by 11% and reduce initiation by 7%, while cessation support (O) increases cessation rates by 6% (no impact on initiation). Package warnings (W) increase cessation rates by 23% and reduce initiation rates by 20%. Bans on advertising and marketing increase cessation by 3% and reduce initiation by 6%. For price interventions, a price elasticity of initiation of -0.7 was used, while a price elasticity of prevalence of -0.2 was used. This means that for a 10% increase in price, smoking prevalence would decline by 2% (cessation), while initiation rates would decline by 7%.The model uses a 100% increase in price, adjusted to maintain its real (i.e., inflation-adjusted) value over time.

One can apply the forecast smoking prevalence from the Méndez model to future population forecasts to project the number of smokers in Africa. The baseline number of smokers (i.e., no change in smoking prevalence), the number of smokers with no policy interventions ("no policy"), and the number of smokers with the MPOWER policy interventions ("policy") for AFRO are shown in Figure 5. The shaded areas indicate the confidence intervals for the "best-case" (lower bound) and "worst-case" (upper bound) scenarios.

The current number of 77 million adult smokers in Africa will grow steadily over the next century, reaching 413 million smokers by 2100 in the baseline scenario. However, the forecast increases in smoking prevalence will, in the absence of policy interventions, result in a dramatically higher rate of growth in the number of smokers, which will reach 572 million by 2100. However, implementing policies to arrest the growth of smoking prevalence would have a considerable impact, with the number of smokers growing to 295 million by 2100.

Africa's population has grown substantially, relative to other regions, and is expected to grow as a proportion of global population at an even more rapid rate during the 21st century. As a result, all else remaining constant, the number of smokers in the African region will grow substantially. Currently, 6% of the world's adult smokers live in Africa (Figure 6). Over the next century, as the share of population continues to shift away from the developed regions to the developing regions, and as some developing regions become developed regions, so will the proportion of the world's smokers in the baseline scenario. By 2060, Africa will have the second-most smokers of any region, behind Asia, with 14% of the world's smokers (from the current 6%), and by 2100 Africa will be home to 21% of the world's smokers. By contrast, the proportion of smokers in Asia is likely to decline from 55% at present to 42% by 2100. When taking into account the forecast changes in smoking prevalence, the picture looks even more worrying for Africa. Its smoking prevalence will surpass the Americas by 2030 and Europe by 2050. By 2100, 26% of the world's smokers will live in Africa, and only 37% in Asia. Without action, Africa will grow from being the fly on the wall, to the elephant in the room.
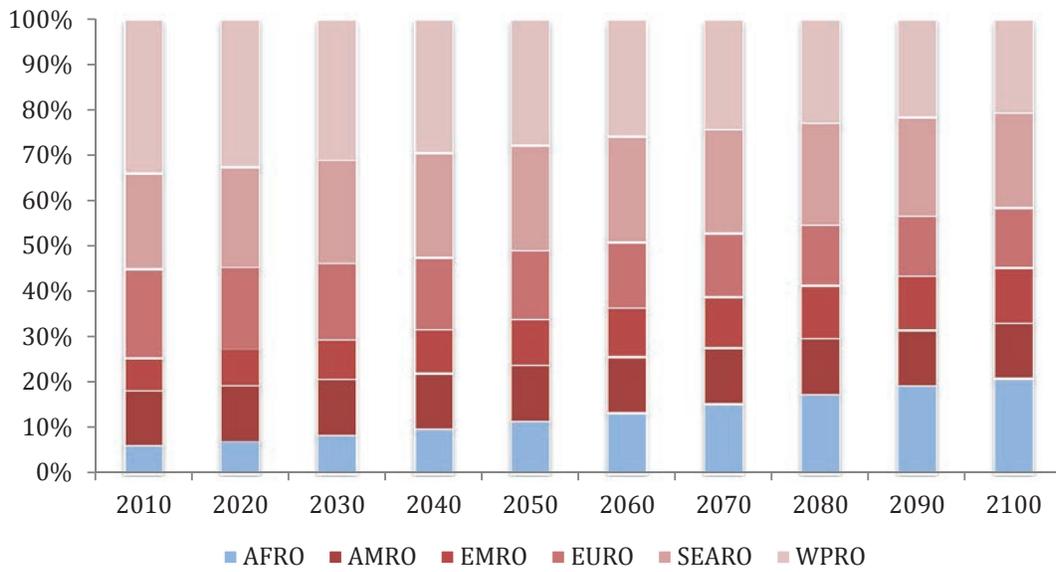
Figure 5: Forecast number of adult smokers in Africa, 2010-2100
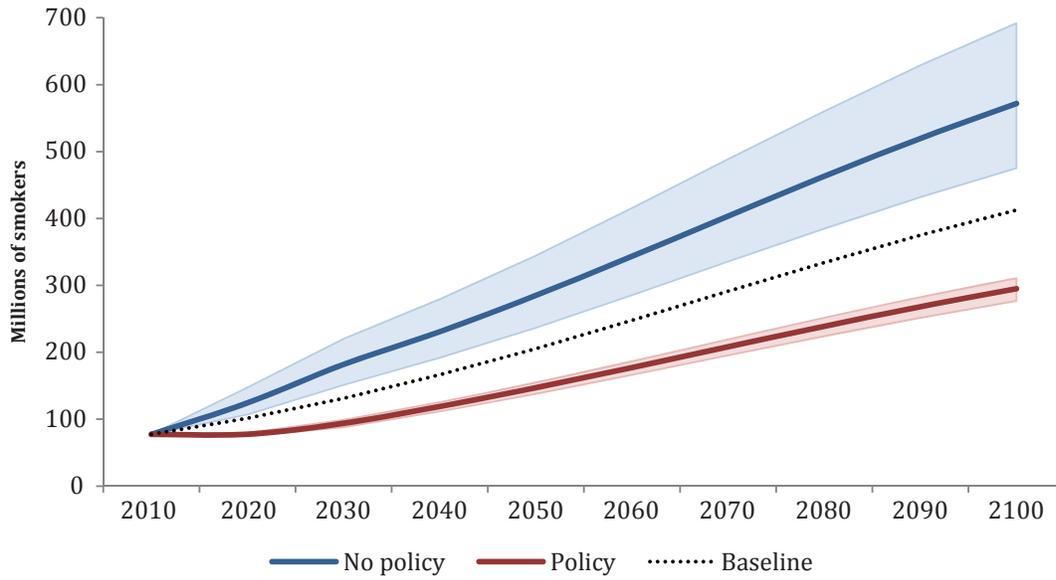
Source: (Méndez et al., 2012); United Nations[xiii] and authors' calculations

Figure 6: Forecast smokers by region

Source: (Méndez et al., 2012); United Nations[xiii] and authors' calculations

[xiii] United Nations. (2011) *World Population Prospects: The 2010 Revision, Volume I:* Comprehensive Tables. United Nations, Department of Economic and Social Affairs, Population Division.

Discussion

While significant variance exists in smoking prevalence between African countries, most are in early stages of the tobacco epidemic with very few countries in advanced stages. A clear dichotomy is drawn between the need for tobacco control in Africa and other parts of the world. In Africa, tobacco control should mostly be following a prevention strategy, to prevent new smokers initiating. This is important given the already detected relatively high smoking prevalence among African youth, as well as the expected population growth and economic development over the next century. In other parts of the world, given the existing large number of smokers, and given trends showing population is expected to peak in the next century, an intervention strategy is necessary in order to encourage cessation and reduce the number of smokers. Furthermore, given the low smoking prevalence among women, a prevention strategy among women is prudent in most developing regions.

The intersection between prevention and intervention policy is most striking when considering low-prevalence versus high-prevalence countries, or those countries at early stages of the epidemic versus those countries at later stages of the epidemic. However, the intersection between prevention and intervention is also striking when considering gender differences in tobacco use. The significant growth opportunities for the tobacco industry among women will become even more important as smoking prevalence among men begins to peak. The need for preventive policies to reduce or eliminate the ability for the tobacco industry to specifically target women through marketing activities is critical.

Russia serves as an example of what can happen to female smoking and serves as a warning to the developing world, where female smoking prevalence is so much lower than male smoking prevalence. In 1992, 57% of adult Russian men (ages 18 and older) smoked, while only 7% of Russian women smoked; however, by 2004, while male smoking prevalence had risen slightly to 61%, female smoking prevalence had skyrocketed, more than doubling, to 15%.[viii] The situation has worsened since, with female smoking prevalence for women in 2009 (ages 15 and older) now reported at 22% (the same survey showed male prevalence at 60%, relatively unchanged).[ix] The growth in female smoking in Russia is almost exclusively among young women, with smoking prevalence declining rapidly after the age of 35. This is in contrast to the patterns of smoking among women in many LMICs, where smoking prevalence increases with age among women.

While the recommended policies for both prevention and cessation strategies are sometimes similar, their cost-effectiveness is critically different. The most important benefit of prevention is that the costs of smoking are avoided altogether, and better health is able to positively influence the economic performance immediately. On the other hand, the benefits of a cessation strategy are essentially the reduction in costs attached to current and future tobacco use.

[viii] Ross, Shariff and Gilmore (2008) *Economics of Tobacco Taxation in Russia.* Paris: International Union Against Tuberculosis and Lung Disease.

[ix] Giovino, Mirza, Samet, *et al.* (2012) Tobacco use in 3 billion individuals from 16 countries: an analysis of nationally representative cross-sectional household surveys. The Lancet. 380: 668-679.

While both prevention and cessation/intervention strategies are important, they need to be implemented differently and with different advocacy strategies. For instance, a tax policy to prevent or reduce tobacco use might require the same increase in tax rates. In a less-developed country with higher economic growth and low current tobacco use (i.e., an African country), the tobacco industry's pricing strategy might absorb the tax increase to keep prices as low as possible in order to maintain the affordability of products with market growth in mind (i.e., they might sacrifice current profitability to mitigate the impact of the tax increase and increase the number of smokers with the goal of maximizing future profitability). However, in a more developed economy with significantly lower economic growth and a moderate smoking prevalence with an established base of smokers, they might choose to pass the tax increase onto smokers, and even compensate for the lower consumption by increasing their profit margins. The policy lesson is to design tax structures that ensure that the highest possible tax increase is passed on to prices. However, in the case of a country with an established base of smokers, the increase in tax is likely to result in a significant tax revenue increase. This will not be the case in a country with a smaller number of smokers and hence a smaller tax base. The result is that it would be easier to advocate for the tax increase on purely fiscal grounds in a country with an advanced stage of tobacco epidemic than in a country that needs to focus on preventing tobacco use.

In addition, we see different advocacy strategies in low- and high-prevalence countries with respect to the cost of smoking. While the cost of smoking is high in countries with large numbers of smokers, it will be relatively low in a low-prevalence country. While costs-of-smoking estimates have been critical to tobacco control advocacy in developed economies or countries with high prevalence, such evidence is not necessarily easily translatable to many countries at earlier stages of the epidemic. The benefits of tobacco control in these countries are not necessarily linked to the present costs of tobacco use, but the future costs, which are difficult to quantify. For instance, in a country at an early stage of the epidemic, a successful prevention strategy can effectively move a country from an early stage (say stage 1) to a late stage (stage 4) and avoid stages 2 and/or 3 altogether, thereby avoiding the most significant costs of tobacco use and disease. A country with higher prevalence that is currently in stage 2 or 3 of the epidemic, even with a successful intervention strategy, will most likely experience significant costs of tobacco use and disease for some time before it can see these costs declining (due to delayed impact of health damage caused by tobacco use). A healthier population from a country with successful prevention will, no doubt, experience higher economic growth. The delayed effect of smoking-related disease is now becoming evident in China, for example, where smoking-related costs quadrupled in only eight years.[x] Additionally, evidence from Russia shows that tobacco use has dramatically slowed down its economic performance.

[x] Eriksen, Mackay and Ross (2012) *Tobacco Atlas*. Atlanta: American Cancer Society.

Figure 7: Reduction in the number of smokers as a result of the implementation of tobacco control policies, 2020-2100
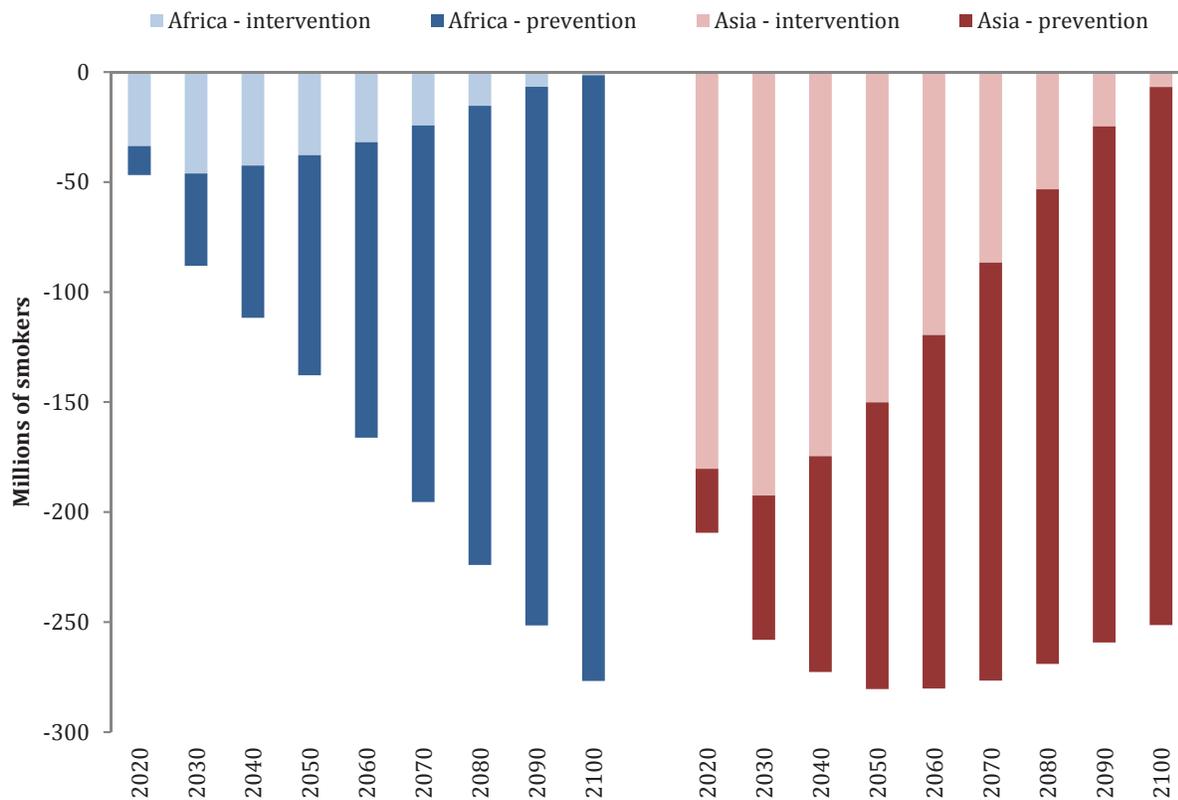
Source: Méndez et al. (2012); United Nations[xiii] and authors' calculations

[xiii] United Nations. (2011) *World Population Prospects: The 2010 Revision, Volume I:* Comprehensive Tables. United Nations, Department of Economic and Social Affairs, Population Division.

Countries in early stages of the tobacco epidemic tend to be poorer. While their low smoking prevalence currently has a limited impact on public health, demographic and economic trends show that this can dramatically change in the future. Given their poor status, these countries have limited means to invest in prevention. While tobacco control activities can be self-funded and even revenue-positive through increased taxation, countries at an earlier stage of the epidemic do not have the same revenue-generating capacity due to low smoking prevalence and poor tax administration. Thus a need exists for external funding for these critical prevention efforts that, as has been established, are more cost-effective than intervention strategies (even though calculating their cost-effectiveness is more difficult due to its reliance on multiple assumptions). Intervention strategies could be largely self-funded given the revenue potential of a tax increase in a country with a sizable number of smokers.

When considering prevention and intervention strategies, it is important to pay attention to the impact of such strategies in different regions of the world. Using projections, the impact of two distinct approaches on the number of smokes can be estimated: no policies are adopted (the status quo), and the implementation of the FCTC tobacco control policies. Figure 7 presents the reduction in a region and year as a result of a package of tobacco control policies. The figure indicates how many fewer people will smoke, thanks to prevention and cessation strategies.

In Africa, the reduction in the number of smokers increases consistently in every decade, from 37 million in 2020 to 277 million in 2100. In Asia, the reduction of smokers peaks in 2050 and 2060. The contrast is the proportion between the reduction due to prevention and intervention. In 2020, most of the impact results from intervention strategies. From 2050, however, the majority of the impact is due to prevention strategies. This means that tobacco control will become more cost-effective over time, providing even higher return on investment. The crossover point in Africa occurs by 2040, while in Asia it occurs much later, by 2060. Initially, intervention strategies will provide a larger payoff in Asia because of higher smoking prevalence. However, the reduction in the number of smokers in Asia is maximized as population size peaks. In Africa, the benefits of the prevention strategy in terms of public health seem smaller at first due to the current lower smoking prevalence, but they will skyrocket in the near future due to population growth and the projected number of smokers in the long run. The public health benefits of cessation interventions measured by fewer smokers are more immediate than the public health benefits of prevention. However, the economic benefits of prevention are immediate, and its public health benefits are even stronger in the long term, thanks to its compound effect on the economic performance.

American
Cancer
Society®

We **save lives** and create more birthdays
by helping you stay well, helping you get well,
by finding cures, and by fighting back.

cancer.org | 1.800.227.2345