

TOBACCO CONTROL IN SOUTH AFRICA

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South Africa has made significant progress in the past decade in reducing tobacco use. Fewer people smoke, and fewer cigarettes are being smoked. This in time will translate into fewer deaths from diseases caused by tobacco use.

The country stands in sharp contrast to many other middle-income and lower-income countries where the tobacco epidemic is still growing. South Africa has shown that the tobacco epidemic can be curbed, if evidence-based policies – such as those contained in the World Health Organization's Framework Convention on Tobacco Control¹ – are implemented.

Large reductions in tobacco use occurred because of government commitment, allied to public health activism and community support. Research played an essential role by feeding both policy development and advocacy efforts.

In this chapter tobacco control research conducted in South Africa between 1995 and 2005 is selectively reviewed, its utility assessed, and priorities for future research are indicated. The research studies were identified by searching PubMed and supplemented by the author's personal knowledge of unpublished reports in this field.

QUALITY AND CONTENT OF RESEARCH

For the review, 57 research articles were selected. An overall assessment of the content of the research reveals a serious imbalance in the range and utility of the publications. Very few of the studies generated information that could be used to inform policymaking or that would have a direct impact on health. The majority (56%) of the studies dealt with basic descriptive research on tobacco use – including prevalence, behavioural and attitudinal studies. About 34% of the studies reported on the health effects of smoking, while 10% dealt with policy issues and economics.

This clearly suggests that if good quality policy relevant tobacco control research is to be produced, a priority research programme needs to be identified and then adequately funded.

TOBACCO USE

Information on tobacco use is required for measuring the impact of public health policies and for predicting the likely future disease burden. Tobacco use can be measured in terms of the number of people who use the product (prevalence) and the amount of tobacco consumed.

Several studies have measured tobacco usage among adults.^{2,3} Though these surveys use different methods, have different sampling biases, and have taken place over different time periods; they do, when looked upon as a whole, provide useful information about smoking trends.

Cigarette smoking prevalence: Over the past decade, prevalence rates for adult daily cigarette smoking have continuously inched downward. Adult (15+ years) daily smoking rates fell by a fifth, decreasing from 30.2% in 1995 to 24.1% in 2004, according to the South African Advertising and Research Foundation surveys.⁴ An estimated 2.5 million smokers stopped smoking during this period. Data from other national surveys confirm that between a fifth to a quarter of adults smoke cigarettes. The South African Social Attitude Survey in 2003 found that 21.4% of adults smoked, including 35.8% of men and 8.1% of women,⁵ while the earlier South African Demographic and Health Survey reported a prevalence rate of 24.6% in 1998.³

The positive overall trend masks the fact that smoking rates remain alarmingly high in certain sections of the population (Table 5.1). Age, gender, 'race', cultural and economic characteristics all affect smoking prevalence rates. An Afrikaans-speaking, divorced coloured male, aged 40 years, living in a

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metropolitan area, with a primary school education and an income of R20,000 per year is most likely to smoke.^{3,6}

Interestingly, poorer smokers are more likely to quit than smokers that are more affluent. Between 1993 and 2000, there was an annual decrease in smoking of about 0.89% in households earning less than R1400 a month, while smoking increased by about 0.33% in those earning more than R7000 a month.⁶

Table 5.1. Daily adult smoking prevalence rates by 'race' and gender, 1998.³

	% Male	% Female
African	33.9	4.2
Asian	47.7	7.6
Coloured	57.0	40.0
White	33.4	23.2

Cigarette consumption: In 2003, cigarette sales fell for the twelfth consecutive year in South Africa. This sustained drop is testament to the effectiveness of the country's tobacco control policies.

Annual cigarette consumption fell from 1.8 billion packs in 1993 to 1.2 billion packs in 2003 – a 33% decrease. Consumption fell despite an increase in the population size, so the per capita decline in consumption was even larger – falling by about 40% during the same time.⁶

The white community smokes the most heavily. In 1998, whites reported smoking an average of 18 cigarettes a day; the corresponding figure was 11 for Asians, 9 for coloureds and 7 for Africans. Women, on average, smoked about 2 cigarettes a day fewer than men.³

Although manufactured cigarettes dominate, hand-rolled cigarettes account for about 21% of the market, and such use is particularly common among African women and coloured men.⁵

Other tobacco products: In most of Africa, tobacco usage will be grossly underestimated if only cigarette smoking is measured. While the overall rate of smokeless tobacco use in South Africa is low at about 6%, black women are twice as likely to use snuff (12.6%) than to smoke cigarettes (5.3%).³

Nicotine delivery from the commercial brands of snuff sold in South Africa is higher than from comparable brands in the USA. A typical commercial snuff user may be receiving nicotine concentrations equivalent to smoking 20 cigarettes a day.⁷ Homemade snuff (tobacco leaf ground with ash) seems to deliver lower levels of nicotine than commercial brands.⁷

School children: The measured declines in smoking among adults were also observed among the youth.

In 1999, nationally representative data on tobacco use among adolescents in secondary school (grades 8 to 10) became available for the first time when South Africa participated in the Global Youth Tobacco Survey (GYTS). This survey was conducted in 43 countries. The MRC repeated the survey in 2002. Among the key findings is that there were significant declines in cigarette smoking between the two surveys. The number of students who had never smoked increased by 20% (from 53.3% in 1999 to 62.4% in 2002) and the number of frequent smokers (smoked on 20 or more days in the past month) declined from 10.1% to 5.8% between 1999 and 2002.⁸

It is noteworthy that in 2001, the government banned tobacco advertising and the surveys provide data from before and after the ban. Although the declines in cigarette smoking cannot be definitely attributed to the ban, it is encouraging that the trend was in the expected direction.

Despite the fact that the law prohibits the sale of tobacco to minors or its free distribution, 66% of the students reported that they bought cigarettes in a store. Moreover, 22% claimed that they were offered free cigarettes by a tobacco industry representative.⁸

Children's attitudes toward tobacco are formed early. A study conducted in 1995 on 5-year-old children living in Soweto, Johannesburg, found that they had well-developed beliefs about tobacco use: 29% knew tobacco brand names, 77% thought tobacco was bad for you, 81% thought they would not smoke when they grew up, but 19% thought they would, and 7% had tried smoking.⁹

Quitting rates: About 72% of adult smokers say they would like to stop smoking (OFS) and 24% have tried to quit.³ About 10% of those who had ever smoked cigarettes daily reported that they had successfully quit. Teenage smokers are equally disillusioned about smoking: 73% reportedly want to stop smoking and 74% had tried unsuccessfully to quit in the previous year.⁸ Teenagers are not inclined to believe they are addicted to nicotine, even though they experience a significant level of withdrawal symptoms when they try to stop smoking.¹⁰

Quitting snuff is just as difficult as stopping smoking. About 67% of female users of smokeless tobacco surveyed wanted to stop using snuff, and 36% had tried to quit without success.¹¹

Studies that measure the effectiveness of smoking cessation methods among South Africans are almost non-existent. A low-cost community-based tobacco control programme designed to build cessation skills was found to reduce the smoking rate significantly compared to before the programme.¹²

SMOKING AND WOMEN

Maintaining the low-levels of smoking among women in lower-income countries is one of the major challenges in tobacco control. Research into 'protective' factors is a neglected but highly important area of study.

One such project surveyed Xhosa-speaking women aged 15 to 64 years living in Cape Town. A quarter of those interviewed were smokers, 27% snuff users, 2% used both products, and less than 46% did not use tobacco.¹³

Tobacco users were found to be older and less educated than non-users. Tobacco use is perceived to be taboo for black women of reproductive age and those who use it do so secretly or only with trusted others. Over 75% of the women said that most Xhosa people would not approve of women smoking, and even the majority of smokers agreed with this. The reasons offered for why men should not smoke focused mainly (80%) on the negative health effects of cigarettes. By contrast, most of the reasons they gave for why women should not smoke (72%) were that it was disgraceful, shameful, and taboo for women to do so. Snuff users were similarly circumspect about their behaviour.

Social norms currently work against black women using tobacco, but it would be inadvisable to rely on traditional restraints to keep their tobacco usage rates low. Instead, tobacco control efforts need to start linking being tobacco free with the things black women value most, such as personal dignity, family welfare, upward mobility or access to personal and social development.

Smoking during pregnancy: It is estimated that about 20% of women in South Africa smoked during pregnancy and the rate was particularly high among coloured women.¹⁴ Smoking significantly increased the risk of the two leading causes of perinatal death (preterm labour and abruptio placentae) at Tygerberg Hospital.¹⁵ Yet only 12% of pregnant smokers presenting at the hospital were aware of these risks.¹⁶ Most doctors in the public sector antenatal services in Cape Town do not regard smoking as a priority issue, and few advised their patients about the risks of smoking or quitting the habit.

Although it has been recommended that pregnant smokers attending antenatal services should receive appropriate information, advice and support throughout their pregnancy, this is unlikely to occur. Doctors are pessimistic about their ability to influence patients to quit.¹⁷ This pessimism is misplaced, as even a brief intervention by a doctor can motivate people to quit. However, it points to a deeper problem that there is insufficient education of health professionals in this area. It is proposed that the training of health-care professionals has to change so that they are better equipped to deal with addictions.¹⁸

MORTALITY

In 2000, an estimated 4.83 million premature deaths in the world were attributed to cigarette smoking, 2.41 million in lower-income countries, and 2.43 million in industrialised countries. This amounted to 12% of the total global adult (30+) mortality.¹⁹

A conservative estimation is that in South Africa in 1998 about 8% of adult deaths (21 500 deaths) were attributable to smoking.²⁰ The proportion of deaths from tobacco is expected to continue to grow in the near future because the smoking epidemic is still maturing – that is, the fraction of those most vulnerable (older people who started smoking at a young age and have smoked throughout their lives) is still increasing.

The leading causes of death from smoking in South Africa are chronic obstructive pulmonary disease (COPD), tuberculosis (TB), lung cancer, and ischaemic heart disease (IHD). This mortality pattern is different from that in high-income countries where cardiovascular diseases and lung cancer are the main causes of death from smoking. Out of 100 people in South Africa who die from a smoking-related disease, 28 die of COPD, 19 of TB, 13 of lung cancer, 12 of IHD, 10 of cancer of the lip, mouth, pharynx and oesophagus, 9 of strokes and vascular disease and 9 of other conditions.²⁰

It is estimated that if people stopped smoking, 58% of lung cancer deaths, 37% of COPD deaths, 20% of TB deaths, and 23% of vascular deaths could be avoided.

The above estimates come from an analysis of death certificates. In 1998, South Africa became the first country in the world to include questions on the smoking status of the deceased, and of the next of kin/informant, on the national death registration form.

An alternative method of estimating deaths from smoking – based on the absolute difference between the observed lung cancer death rate and the level in non-smokers – gives higher estimates of mortality from cigarette use. A study using this method found that smoking caused between 30 000

and 41 000 deaths in South Africa, accounting for 8% - 10% of deaths and 3.5% - 4.6% of DALYs in 2000, and ranked third (after unsafe sex and high blood pressure) in terms of mortality among 17 evaluated risk factors.²¹

Case-control studies have also established that smoking was the leading cause of a number of cancers in South Africa. In a mainly rural setting in Limpopo, smokers had a ten-fold increased risk of lung cancer compared to non-smokers (OR 10.7 and 5.5 for male and female smokers, respectively). Exposure to asbestos, and/or a dusty occupation (men), also contributed to the development of lung cancer.²²

A study in Johannesburg-Soweto found that smokers had an increased risk of death from lung cancer (OR 9.8 in males and 13.5 in females), oesophageal cancer (OR 3.8 in males and 3.1 in females), oral cancer (OR 7.5 in males and 13.9 in females) and laryngeal cancer (OR 13.8 in males).²³ In this study, snuff use did not increase the risk of cancer. This finding is at odds with international studies. In a rural South African population of snuff dippers, 81% of them demonstrated keratotic lesions at the site of snuff placement.²⁴ The severity of the lesions was significantly associated with the brand of snuff use, suggesting that differences in the composition of snuff may explain why some snuff users do not get oral cancer.

Tobacco smoke pollution (TSP): In children, exposure to passive smoking is a cause of lower respiratory tract illnesses, chronic respiratory symptoms, middle ear infections, sudden infant death syndrome, and reduced lung function.²⁵

Surveys show that large numbers of children are exposed to TSP in South Africa. A 1990 study of 5-year-old children in the Johannesburg-Soweto metropole found that 64% of the children were exposed to second-hand tobacco smoke. Coloured children were most frequently exposed, with 42% living in homes with two or more smokers.²⁶

In Cape Town, 80% of 6-11-year-old schoolchildren were exposed to pollution from tobacco smoke. Using urinary cotinine concentrations to estimate exposure, the most important source of smoke pollution was maternal smoking, followed by the male parent and other household smokers.²⁷

Among high-school students in Vanderbijlpark, Gauteng (average age 16 years) the prevalence of respiratory illness before and after 2 years, respiratory symptoms, earache over the past year, low birth weight and learning difficulties were found to be significantly increased in the children exposed to parental smoke in the home, especially those exposed to maternal smoking. Spirometric and serological measures, however, were not affected by passive smoking.²⁸

Household smoking was confirmed as an important modifiable risk factor in asthma/wheeze among schoolchildren aged 7 to 9 years, and maternal smoking in pregnancy (OR 1.87; 95% CI: 1.25 to 2.81), and current household exposure (OR 1.15; 95% CI: 1.01 to 1.30) were independent contributors to this effect.²⁹

ECONOMICS

In recent years, policy discussion on tobacco has moved increasingly into the area of economics. As a counter to health arguments, the tobacco industry publicises its supposed contribution to the economy. It points to the jobs and tax revenues it generates and argues that tobacco control policies would have dire economic consequences. In 2003, 3 000 people were employed in manufacturing and 23 600 (including seasonal workers) in farming, while the industry paid R6 billion in VAT and excise taxes.³⁰

The tobacco control community, on the other hand, views tobacco not as an economic benefit but as a financial burden. The Medical Research Council estimated that tobacco use cost the South African economy twice as much in medical costs and reduced productivity as the industry paid in taxes.

The industry's arguments about taxes and jobs, though superficially compelling, are fatally flawed. The industry's case is based on the assumption that money spent on tobacco would disappear if tobacco sales declined. It ignores the fact that when smokers quit smoking, they switch their spending to other goods and services. This new spending will generate new employment in other sectors of the economy and new tax revenues.

Instead of leading to job losses, reductions in tobacco use would have a positive net economic effect and lead to increased employment in South Africa. It is calculated that in 1995, if smokers (who spent R1.8 billion on tobacco products that year) had given up smoking and instead spent their money like non-smokers or ex-smokers (these groups spend proportionally more than smokers on education, recreation and entertainment) between 9 000 and 50 000 new jobs would have been created. The new jobs would result because of a switch of spending from less to more labour-intensive industries.³¹

While debates on the costs of tobacco to society were previously mainly academic, they are now assuming legal importance. In the USA, for instance, 40 states sued the tobacco industry to recover publicly funded expenditures for the care of poor people made ill by cigarettes. Updated estimates of the costs of tobacco to the South African society are needed.

Excise taxes: Increasing the price of tobacco products is the single most effective short-term measure for reducing smoking. A 10% increase in the price of cigarettes in South Africa leads to an estimated 7% decrease in cigarette consumption.³¹ Since the early 1990s, health advocates have called for large increases in tobacco excise taxes claiming it would be good for health, good for the exchequer and popular with the public.

These claims have proved to be correct. Between 1992 and 2001 in South Africa, the real (inflation-adjusted) price of cigarettes increased by 111%, real government revenues increased by 131% and cigarette consumption declined by 34%.⁶ Furthermore, many smokers have supported tax increases as it provides them with an added incentive to quit.

Poorer people who smoke and who are traditionally less responsive to health education are more likely to quit when prices increase. Between 1990 and 1995, spending by poorer households on cigarettes decreased, while spending by the richest households increased fractionally.⁶

Despite the benefits, successive governments have been strangely reluctant to tax tobacco. Recent steep increases in the price of cigarettes were more a result of manufacturers driving up prices than of the state driving up taxation. Between 1990 and 2000, increases in taxes only accounted for 50% of the increase in real price; the other half was a result of industry-imposed increases in price.⁶ The industry has been profiteering and its strategy seems to be to increase its profit margins at the cost of sales volumes. This finding suggests there is still much room for a stronger tobacco taxation policy in South Africa that will enhance government revenue and contain consumption. The National Council Against Smoking has called on the government to take a close look at the pricing policies and profit margins of the manufacturer's and has asked for excise tax policy to be revisited.³² The government's objective should be to ensure that tobacco does not become more affordable. This requires increasing tobacco taxes at least at the rate of growth of incomes and considerably ahead of inflation. Ideally, some fraction of tobacco tax revenue could also be used to fund health promotion and smoking cessation.

Fires: Smokers' materials are a leading cause of residential fires and fire-related losses in South Africa, resulting in about 5% of all fires. In 2002, smoking caused 2 535 of the fires that fire-fighting units were called out to, most of them a result of discarded cigarettes setting fire to rubbish, grass or bush. In total, in 2002, there were 48 000 fires, which killed 290 people and caused damage totalling R1.2 billion.

LEGISLATION

The decline in cigarette consumption, after tobacco control legislation was enacted in the 1990s, is perhaps the real test of the effectiveness of the government's tobacco control programme. Nonetheless, it is important to measure the implementation, enforcement, compliance and economic effects of the law.

In 2002, the compliance of public places in Gauteng, Limpopo and the Northern Cape with the restrictions on smoking in public places was studied.³³ The study found that varying levels of compliance with the law at pubs, restaurants and shebeens: one in three establishments was smoke-free; another 26% had separate smoking sections, but 44% still allowed smoking anywhere. The majority of the latter were small informal establishments, situated in rural areas. Encouragingly, nine out of ten workplaces had a policy regulating smoking.

Public support for the law was widespread and a sizeable fraction demanded the right to smoke-free environments. Over 80% of smokers and non-smokers agreed that restaurants and bars should have separate smoking and non-smoking areas. One in three non-smokers had complained about smoking in prohibited areas. The outcome of the complaint in 43% of cases was for the smoker to either stop smoking or go outside the building. In a minority of instances (21%) the smoker became argumentative or aggressive.³³

A survey in 2004 by the tobacco industry found no support for allowing unrestricted smoking in a restaurant, while 19% preferred completely non-smoking venues, 58% were satisfied with separate smoking and non-smoking areas and 21% indicated no particular preference. There was support for tightening of the law with 68.2% of people polled agreeing that smoking should not be allowed at the entrances to public buildings.³⁴

In contrast to the claims of the hospitality industry, few establishments recorded changes in income following the implementation of the law. About 69% of establishments experienced no change in income linked to the law, 19% reported a decline in income (mainly from lower cigarette sales) and 7% an increase in income.³³ A more formal economic analysis of the impact of the smoking restrictions on restaurant revenues – using VAT receipts from the period 1995 to 2003 as a proxy for restaurant turnover – found that the restrictions may have had a positive effect on revenues and certainly did not have a negative impact on sales.³⁵

In distinct contrast to the above research, the Federated Hospitality Association of South Africa (FEDHASA) claimed, shortly after the introduction of the legislation in 2001, that 85% of its members did not obey the law but that sales were down 37% because of the legislation. This claim was widely reported by the media, even though it defied reason as a law, which according to FEDHASA was being widely ignored, still resulted in a loss of more than a third of restaurant sales.³⁶

TOBACCO INDUSTRY DOCUMENTS

In the last 10 years a new field of tobacco control research has mushroomed internationally - namely, research into internal tobacco industry documents. Millions of pages of industry memos, research papers etc., were released onto the Internet as a result of legal proceedings in the US. These documents reveal the inner workings and strategies of the multinational cigarette manufacturers. Based on these documents the US Justice Department filed charges against the US tobacco industry, accusing it of (a) conspiracy to defraud consumers by denying the dangers of smoking and passive smoking; (b) sponsoring junk science by funding sympathetic scientists to carry out research to cloud the issue; (c) manipulating nicotine levels to keep smokers hooked; (d) intentionally marketing to underage youth; (e) promoting low-tar cigarettes as less harmful knowing this was not true; and (e) destroying and concealing documents to hide their illegal activities.

Some of the documents relate to South Africa and are revealing of industry strategies. For instance, a 1993 British American Tobacco Company (BAT) memo outlines preparations for a "media seminar". It reveals that the industry's "independent experts" were to be paid US \$50 000 for a five-day visit to South Africa. The venue for the seminar had to be "somewhere pleasant (e.g. a beach resort)" because this "motivates the journalists to attend". The memo also cautioned that journalists unsympathetic to the industry were not to be invited.

Other documents relate to plans to undermine the work of the "outspoken, infamous anti-tobacco campaigner", Dr Derek Yach, and discuss strategies for overcoming the country's ban on tobacco advertising.

The documents are a key data source for research dealing with the industry marketing efforts, political strategies, or cigarette design research. A systematic examination of the documents relating to South Africa has not been undertaken.

RESEARCH PRIORITIES

This section outlines several areas in which research is needed to support effective tobacco control in South Africa. Gaps in knowledge and areas where regular updates of information are needed is identified. Some areas are of higher priority than others are. Policy makers, advocates, and researchers should together decide a key research agenda.

1. What is the size of the problem?

- * What is the prevalence of tobacco use and how do consumption patterns vary? In particular, what are usage rates among pregnant women and health professionals? Can rates among youth be updated every two years?
- * What is the impact of new products (snus, hookahs, bidis, etc.) on patterns of tobacco use? Will snus provide a gateway to smoking for youth or an exit strategy point from cigarettes for adults?
- * What is the incidence of, mortality from, and patterns and trends in tobacco-caused diseases? What are the health effects of smokeless tobacco, including snus, in South Africa?
- * What is the relationship between tobacco use, HIV/AIDS, and tuberculosis?

2. What policies work, when and for whom?

General:

- * What gains in mortality and quality-adjusted life years are attributable to tobacco control policies?
- * To what extent has South Africa implemented the provisions of the FCTC and how best to monitor compliance?

Economics:

- * What are the health and productivity costs associated with tobacco use in South Africa?
- * What are the cost-benefits of tobacco control policy to the South African economy?
- * What has been the impact of tobacco control policies on business (e.g., advertising agencies, media, casinos, restaurants, pubs, etc.)?
- * What would be the economic effect of a tobacco-free society?
- * What is the optimal level of tobacco excise tax from a health perspective?

- * If smokers stopped buying cigarettes, how could the Treasury substitute for tobacco taxes?
- * What are the determinants, process, and impact of the illicit trade in tobacco? What is the most effective way of reducing smuggling and counterfeit cigarette sales?
- * How affordable is tobacco, particularly to children?
- * What is the impact of tobacco taxes on the poor?
- * Does the sale of single cigarettes and small packs make cigarettes more affordable? Would a ban on such sales reduce children's smoking? What effect would it have on adults?
- * What information would be needed to convince health insurers that it is financially prudent to fund prevention programmes.

Youth:

- * Do youth-targeted prevention campaigns, including school-based programmes work?
- * What are the main sources of tobacco for minors?
- * Laws banning tobacco sales to minors - do they matter? How can they be effectively enforced? Is a consumer boycott of stores making illegal sales a viable strategy?
- * How effective are industry-sponsored programmes (e.g. retail awareness campaigns) in preventing the sale of tobacco to minors?
- * Would the public and smokers support the licensing of the retail tobacco trade?
- * How much public support is there for a policy that would require tobacco companies to be fined, taxed or refund the money they make from children's smoking?
- * What guidance can we give to schools about optimal smoking control policies?
- * What factors characterize young people who do not take up smoking?
- * Can general life-skills' training change attitudes and intentions with regard to tobacco use?
- * What is the relationship between smoking and the use of other licit and illicit drugs?

Product regulation:

- * What factors characterize low-rate daily smokers in South Africa? Do they compensate for lower consumption rates by increased intensity of smoking?
- * How do South African tobacco products compare toxicologically to products produced in other countries?
- * How can the chemicals in tobacco and its smoke best be measured to approximate delivery under real-life situations?
- * What proportion of morbidity and mortality could be avoided if tobacco products were modified to the lowest toxic level technologically possible?
- * How much does the harmfulness of tobacco products need to be reduced to compensate for fewer people quitting smoking?

Cessation:

- * What methods are used by South Africa to stop smoking and what are natural cessation rates?
- * How effective is the Tobacco or Health Information Line in helping people quit?
- * How affordable are smoking cessation aids?
- * How can economically disadvantaged groups be supported in their quitting attempts?
- * How can we make the most of health professionals?
- * What strategies might be effective in assisting pregnant women to quit?

Determinants:

- * How do we measure the cultural environment relevant to smoking, particularly for youth and women?

Health warnings and labelling:

- * How could health warnings be improved to increase effectiveness? How many languages should be used? How frequently should new warnings be introduced to maximize impact? What public health strategies would enhance attention to warnings?
- * Do people understand current nicotine and tar yield labels? Do smokers know that low-tar cigarettes are just as harmful?
- * Would generic packaging make cigarettes significantly less attractive to youth?
- * What information on additives and smoke constituents does the public need? What should appear on packaging? What does the public do with ingredient information?

Smoke pollution:

- * What levels of compliance are there with the restrictions on smoking in public places, particularly in the workplace, restaurants, and bars and how can these be improved?
- * Is there public support for smoking bans in cars with children, day-care centres and in restaurants?

- * How can domestic workers be protected from tobacco smoke pollution at their places of employment?
 - * What are the preferences of employees in the hospitality industry, and of the public with regard to smoke-free policies?
 - * Are parents aware of the risks of smoking on their children's health in their homes/cars?
- 3. What are the information and educational needs?**
- * How complete is smokers knowledge and understanding of the health risks of smoking?
 - * Are smokers making informed choices to smoke?
 - * Do people understand the benefits of quitting?
 - * Do people know what is in tobacco and the effects of constituents on the body?
 - * What should people be informed and warned about? How should they be informed? What messages/images are effective among youth and women? What style of presentation maximizes comprehension and impact?
 - * What effect does media coverage of smoking issues have on public attitudes and perceptions? How can media coverage of the smoking issue be maximized?
 - * Would messages that decode the tobacco industry's deceptive practices be effective among young people in South Africa?
 - * Is teaching on tobacco control in schools of public health adequate and commensurate with the importance of the problem? How can teaching be improved?
 - * What incentives (continuing medical education points, practice accreditation, support schemes) can be provided for encouraging health professionals to engage in tobacco control?
- 4. What is the tobacco industry doing?**
- * What tactics are the industry using to circumvent the advertising ban and point-of-sale advertising regulations? What is the extent of overt breaches of these regulations?
 - * How does the industry continue to target youth?
 - * How much of tobacco industry profits stay in South Africa and how much goes to shareholders abroad?
 - * How has a shift away from tobacco affected former tobacco farmers and their workers economically? What crops are former tobacco farmers now growing?
 - * What effect does heavy pesticide use during tobacco growing have on the environment?
 - * What is the extent of occupational health problems among tobacco farm workers (e.g. green tobacco disease)?
 - * How viable are small-scale tobacco farming projects in South Africa?

CONCLUSION

Substantial progress has been made in conducting prevalence, health impact, and economic studies in South Africa. These have contributed greatly to the policy formulation. Nonetheless, research is still driven by the interests of the researcher and not based on policy needs. It is recommended that key stakeholders jointly decide a priority research programme, which should then be adequately funded. Some key areas for on-going research have been identified in this chapter.

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