Cancer Prevention through Legislation—Hong Kong Experience

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ABSTRACT Cancer is the major cause of death worldwide and in the local community. Due to the aging population and changes in lifestyle of the citizens, it is expected that the incidence of cancer will continue to increase. In fact, according to the World Health Organization, about 30% of cancer death can be prevented. The fight against cancer relies on support from the government, together with collaborations with the policymakers, healthcare professionals, and the public. Legislation can act as a tool for cancer prevention. The purpose of this paper is to provide an overview of the global cancer burden and to describe how cancer legislation acts as a tool for cancer prevention in the Hong Kong region.

KEY WORDS: neoplasma, public health, legislation, Hong Kong.

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Introduction

The purpose of this paper is to provide an overview of the cancer burden worldwide and to describe how cancer legislation acts as a tool for cancer prevention in the Hong Kong region. First, this paper provides an overview of the global cancer burden, and effects of legislation on the prevention of cancer. Then, the current situation of cancer legislation in Hong Kong and its effect on the population health are described. In this paper, some of identified barriers to passing cancer legislation and strategies for implementing legislation are illustrated.

Global cancer burden

The International Agency for Research on Cancer estimated that there were more than 12.4 million new cancer cases worldwide in 2008, 7.6 million deaths from the disease, and 28 million people with cancer surviving within 5 years of initial diagnosis. Cancer is the third leading cause of death in the world, after cardiovascular disease and infectious and parasitic diseases. Compared with communicable disease and injuries, non-communicable disease is the most frequent cause of death, accounting for almost 60% of all global deaths. Cancer is also one of the 4 major non-communicable diseases, the others being cardiovascular diseases, diabetes and chronic respiratory diseases. Unless action is taken, these non-communicable disease deaths...
will increase by 17% over the next 10 years[3].

Globally, lung cancer is the most common form, and more than 1.4 million people all over the world suffer from it. The second and third most common forms are breast and colorectal cancers[2]. The 3 most common cancers are different for men and women. Lung cancers (including those of the trachea and bronchus) are the most common forms among men, followed by stomach and liver cancers; whereas breast cancer is the most common form among women, and lung cancers (of both trachea and bronchus) and stomach cancer rank second and third. Although the rankings of most common cancers vary from one region to another, lung and breast cancers respectively are the leading cause of death among men and women in most regions of the world[3].

Factors that lead to global cancer burden

There are 3 main factors that lead to an increase in the global cancer burden: an increase in the global population, the growth of aging population, and a rising incidence of cancer[1].

According to the World Health Organization database[4], the world’s population is expected to rise from 6.9 billion in 2010 to 7.6 billion in 2020, and to attain 8.3 billion by 2030. This growth in global population will lead to an increase in the cancer burden, even if age-specific rates remain constant. The estimated life expectancy of both sexes combined rises significantly from 47 in the 1950s to 66 in the 2000s, and to 75.5 years in 2050. Although women live longer than men, the upward trend in life expectancy for both sexes is increasing considerably[4]. When comparing the present global cancer burden with the past, the number of cancer cases worldwide has doubled over the last 3 decades (5.9 millions in 1975 vs. 12.4 millions in 2008), and will increase more than twice in the next 20 years (26.4 millions in 2030)[3].

Modifiable risk factors for cancer worldwide

Various factors contribute to the abnormal changes in a cell that result in cancer. Many of them are modifiable risk factors. Though risk factors vary worldwide, with differences in lifestyle and in socio-economic or political development, the most important modifiable risk factors for cancer are tobacco use, an unhealthy diet, infectious agents, ultraviolet radiation, and physical inactivity[5]. Tobacco use is the main cause of cancers of the lung, larynx, oral cavity, esophagus, and a major cause of bladder and pancreas cancers. In developed countries, up to 30% of cancers may be related to unhealthy diets, such as those high in saturated fats and low in fruit and vegetables. Unhealthy diets increase the risk of cancers of the breast, colon, prostate and esophagus. Eighteen percent of cancers worldwide are caused by infectious agents and human papillomavirus. The hepatitis B virus and the helicobacter pylori bacterium are the most common infectious agents which cancer is concerned. Sunlight is the major source of UV radiation, which causes skin cancer. A sedentary lifestyle increases the risk of colon cancer which are also closely related to an individual’s nutrition[5].

In fact, it is estimated that more than half of all new cancers and cancer deaths worldwide are potentially preventable by controlling these modifiable risk factors[5]. In other words, effective means of cancer control can no longer be focused exclusively on treatment, but must also include measures for early detection and prevention.

Cancer population and modifiable risk factors of cancer-current situation in Hong Kong

In Hong Kong, the 3 most common cancers in both sexes are lung, colorectal and breast cancers, but the ranking of common cancers is different for males and females. Lung and colorectal cancers remain the 2 most common among men, with liver cancer ranking the third. In the female population, breast cancer ranks first, followed by colorectal and lung cancers[6]. Cancer is also one of the most common chronic health problems[7] and the major cause of hospitalization and registered deaths. Thirty percent of these deaths are due to malignant neoplasm[8].

In line with global cancer trends, the major causes of non-communicable diseases are lifestyle-related factors: smoking, physical inactivity, unhealthy diet, harmful use of alcohol and sub-optimal body weight[8]. In Hong Kong, about 13% of all persons aged 15 and over are current smokers, of whom 90% are daily smokers. Fewer than 1 in 5 people aged 18 to 64 have at least 30 minutes of moderate-intensity physical activity, or at least 20 minutes of vigorous-intensity physical activity, 5 or more days a week. Four out of 5 adults fail to have at least 5 servings of fruit and vegetables a day. More than 1 in 4 eat more meat than needed each day. More than 1 in 10 consume processed meat at least 4 times a week. About 1 in 7 adults consume alcohol, on average, beyond the recommended daily limit. One in 12 goes in for binge drinking. Four out of 10 people aged 15 and above are overweight or obese with a BMI of 23 or above. One in 5 primary-school students are obese[8].

Overall, the modifiable risk factors for cancer in Hong Kong are similar to those identified globally, except in the case of UV radiation.

Effects of legislation on the prevention of cancer

To change people’s behavior with the aim of better health, relying solely on individual initiatives may not be an effective approach. A combination of education and health policies may be more effective in supporting such changes and improving the population’s health in general. The role of health policy is to protect the population’s health, and the importance of legislation is to
provide powers and duties that strengthen all strategies to achieve that goal\cite{9}. In fact, successful cancer control policies and programs would increase public awareness of cancer, reduce exposure to cancer risk factors, provide information, offer support for the adoption of healthy lifestyles, and increase the proportion of cancers detected early\cite{9,10}. How can cancer legislation support change towards healthy behavior and promote public health in Hong Kong?

The legislative process in Hong Kong is described as follows. First of all, Legislative Council members of the government identify the health needs of the public and introduce a bill, and then propose new legislation, or amendments to existing legislation. Next, the bill is published in the Gazette before it is introduced into the Council for 3 readings, including discussion and debate. Then, if passed, the bill is submitted to the Chief Executive for signature, promulgated in the Gazette and becomes law\cite{11}.

Though the process of legislation in Hong Kong goes via the Legislative Council, and the decision of whether or not to pass legislation is made by its members, and other stakeholders in society also powerfully influence the whole process. These include pharmaceutical and biotechnology companies, employers with the autonomy to improve conditions of work and pollution controls, the academic community who contribute to research on solutions in population health, charitable foundations and civil society which offer care, support, and health advocacy to the community, and the media with its ability to increase the dissemination of information on health and risk factors\cite{12}.

**Effects of cancer legislation on public health—tobacco control**

Recently, the Hong Kong government has proposed amendments to the Smoking (Public Health) Ordinance to strengthen tobacco control measures further. The amended ordinance includes expansion of statutory no-smoking areas, inclusion of pictorial and graphic contents in health warnings, and further restrictions of the advertisement and promotion of tobacco products\cite{13}.

The first measure expands smoke-free areas. The original ordinance designated all department stores, shopping malls, supermarkets, banks, cinemas, concert halls, public lifts, amusement arcades, public transport vehicles, and airport terminal buildings as no-smoking areas. Under the newly amended ordinance, there are more no-smoking areas: night clubs, bars, bathhouses, restaurants, karaoke establishments, shops, escalators, child care centers, schools, universities, hospitals, public swimming pools, and public pleasure grounds. The amendment aims to provide protection against second-hand smoking in indoor workplaces and public areas\cite{13}.

The amended ordinance also compels any tobacco product sold in Hong Kong to have pictorial health warnings of a prescribed size and wording on its packaging, such as ‘smoking causes lung cancer’, ‘smoking kills’, ‘smoking harms your family’, ‘smoking causes peripheral vascular diseases’, ‘smoking may cause impotence’ and ‘smoking can accelerate the aging of skin’\cite{13}.

No person may now sell any cigarette, cigarette tobacco, and cigar or pipe tobacco to any person under the age of 18. A tobacco product cannot be sold in association with any gift, token, stamp, or raffle ticket which may be exchanged for any gift. Also, no retailer can display tobacco advertisements. Also, the ‘Fixed Penalty (Smoking Offences) Ordinance’ has been passed into law. Smokers who light-up in statutory no-smoking areas will be liable to a fixed penalty of HK$1,500\cite{13} (US$1 = HK$7.8).

In order to implement and enforce the ordinance, the Tobacco Control Office (TCO) was established to enforce the smoking ban in no-smoking areas through inspections, to organize seminars on tobacco control and prevention, and to provide training and support to relevant stakeholders and the public. The Hong Kong Council on Smoking and Health (COSH) has been set up for the purpose of advising the governments on matters related to smoking, passive smoking, and health; publicizing the hazards of smoking; and conducting and coordinating research into the causes, prevention, and curing of tobacco dependence. Smoking cessation services have been provided to the public in public hospitals and outpatient clinics\cite{13}.

Apart from making laws and implementing health campaigns, the Hong Kong government has set up a cancer coordinating committee with the aim of formulating a comprehensive strategic plan and making recommendations for the effective prevention and control of cancer in the territory\cite{14}. For example, an expert working group has been formed under this committee to evaluate the existing cancer preventive measures, and to make recommendations on primary prevention and screening of certain cancers based on a standardized review of the scientific evidence\cite{15}. The coordinating committee has also participated in formulating a strategic framework for the prevention and control of all non-communicable diseases\cite{16}.

The Hong Kong Cancer Registry is a population-based registry. Its main purposes are: 1) to provide statistical information for planning and evaluating cancer services in the healthcare system; 2) to monitor trends in the incidence of cancer; and 3) to provide the public, health professionals, and scientists with statistical information for education and research\cite{17}. The Centre for Health Protection of the Department of Health has also set up a Behavioural Risk Factor Surveillance System (BRFSS) to monitor trends in health-related behaviour, which is important for identifying emerging health issues and for planning, supporting, and evaluating health promotion and disease prevention programs\cite{18}. The
Government has established several health-related research funds to finance projects in public health and support those who help people to adopt healthier lifestyles by enhancing awareness, changing their behaviour, or creating an environment that supports good health practices[9]. All of this has aimed at inhibiting the modifiable factor through legislation, education and surveillance.

**Barriers to passing cancer legislation**

While achievements in promoting population health have certainly been made, the process has not always been smooth. There are still barriers to the process of cancer legislation. One of the main barriers is related to the emphasis on protecting the right to individual choice. People who oppose the smoking ordinance do so mainly because they fear that their freedom of choice will be taken away or that they will be stigmatized as offenders. Other resistance to passing the ordinance comes from the commercial side—the tobacco industry, nightclubs, bars, and karaoke restaurants, and they are worried that their business might suffer a significant loss after the bill is passed. The entertainment industry association is strongly against any increase in the tobacco tax, and has asked for a freeze on the tax this year. Night restaurants have also asked for a long period of grace before prohibition of smoking. Legislative Council members who are supported by such commercial interests have used various means to hinder the progress of the amended smoking ordinance. Last but not the least of the barriers is the allocation of resources by the government for protecting the public against cancer.

**Strategies for implementing legislation**

Although barriers do still exist to the process of cancer legislation, there are some successful elements moving it forward. One of these is due to the emphasis on the harmful effects of second-hand smoke. By focusing on the second-hand smoking may cause a large number of people, legislation is more likely to be initiated. Another strategy is the emphasis on evidence-based legislation. Confidence in moving the legislative process forward would be enhanced by obtaining objective and validated data from research. These data are evidence for legislative council members when they support the passing of the cancer legislation. Of course, the cooperation of stakeholders, such as the media definitely helps to increase public awareness of the modifiable factors of cancer, and the importance of changing unhealthy behavior. When the public generally accepts the need for change, passing the cancer legislation is more likely to go smoothly.

Last but not the least, social marketing is an effective approach to implementing legislation, by focusing on what people want and need. Thus, the approaches promoting health would be attractive to the target group. For example, using rap music with trendy slogans to draw the attention of young people to the benefits of quitting smoking; inviting well-known actors and actresses to various health promotion campaigns to attract more people in participation; an emphasis on the adverse effects of smoking on women’s skin condition and appearance; advertisements focusing on family health when the target group is middle-aged persons. Such strategies mentioned above have all been used to encourage the implementation of legislation in the Hong Kong region.

**Conclusion**

This paper has covered the global cancer burden, the effects of legislation on the prevention of cancer, the current situation in Hong Kong as regards cancer population and modifiable risk factors for cancer, the effects of tobacco control legislation on the improvement of public health through legislation, and barriers to passing cancer legislation and strategies for implementing it. Cancer is no longer exclusively a chronic illness, but also a non-communicable disease, and for some types of cancer can indeed be prevented. Legislation can act as a tool for cancer prevention. However, we all have to work together in order to implement the legislation successfully, and build a healthy place for ourselves.

**Conflict of interest statement**

No potential conflicts of interest were disclosed.

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