

Prevention is key to halting the global silent killer – cancer

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Cancer- cáncer (Spanish) - rak (polish), - kanker (dutch), - 癌症 (Chinese simplified) - is a disease with no boundaries. Although cancer is often thought to only affect individuals from the developed world, over half of the 12.4 million new cases and two-thirds of cancer-associated deaths occur in developing countries¹. Strikingly, this disease kills more individuals than AIDS, tuberculosis and malaria combined yet is often ignored in major global health initiatives^{2,3}. The World Health Organization (WHO) has attributed this neglect to many misconceptions including, 1) cancer only affects developed nations, 2) cancer prevention is too expensive, 3) cancer is not preventable, 4) cancer affects primarily men and 5) cancer affects only old people³. In recent years, programs have been implemented to target cancer prevention. In 2007, the Global Alliance for Chronic Disease (GACD) was created with cancer being one of its top priorities⁴.

It is estimated that by 2020, there will be approximately 9.25 and 5.75 million new annual cancer cases occurring in developing and developed countries, respectively⁵. With a lack of global health initiatives to prevent cancer in developing countries, a disproportionate increase in the rate of incidence is expected. Moreover, developed countries may experience greater success in cancer prevention as a result of increased policies and strategies for prevention⁶.

Many forms of cancer are ultimately preventable; however, it is still one of the leading causes of morbidity and mortality worldwide⁷. Estimates indicate that 40% of cancer deaths can be prevented⁶. Lung cancer, for example, has an incidence rate of 23 per 100 000, accounting for 1.61 million new cases diagnosed worldwide in 2008 alone, and has a mortality ratio of 19 per 100 000^{5,8,9}. Although cancer mortality is expected to increase 104% worldwide by 2020, developing countries will bear the brunt of countries will bear the brunt of this burden with an increase of 144-181%. In contrast, rates in developed nations are predicted to rise only 25%¹⁰. One explanation for this uneven distribution of cancer mortality rates is that developed nations have made progress in the prevention of cervical, lung, and liver cancer. Conversely, the incidence of these cancers continues to rise in developing

countries⁵. For example, although the risk factors are similar between developed and developing nations, 80% of new cervical cancer cases will occur in low-income countries⁵.

From a global health perspective, the key to reducing cancer incidence and mortality is through primary prevention which includes the elimination of cancer-associated risk factors such as infection, smoking, inactivity, and poor diet^{1,5,11}. Recently, many large-scale programmes focusing on primary and secondary cancer prevention have been initiated and are gaining momentum in developing countries^{5,6,12}. Primary prevention strategies include tobacco control, immunization, treatment of infections, and healthy lifestyle promotion^{5,13,14}. It is estimated that 25-30% of cancer cases in developed countries are related to smoking. Cigarette smoking is a fairly recent phenomenon in developing countries, although it is expected to drastically increase within the coming decade if anti-smoking campaigns are not implemented immediately¹. Strikingly, by 2030 it is estimated that 70% of tobacco-related deaths will occur in developing countries, further straining their already underfunded health-care systems¹². Internationally, tobacco-related deaths account for 60% of avoidable cancer deaths⁶. An example of a country successfully implementing an anti-smoking campaign is Brazil. Together with the help of the WHO, Brazil has experienced a 13% national reduction in smoking since 1989. China is another country integrating cancer prevention into its healthcare stratagem. Currently, liver cancer attributed to the high prevalence of Hepatitis B infection is the leading cancer morbidity in China. As a result, China's goal is to eradicate Hepatitis B infection in children by immunizing newborns within 24 hours of birth to prevent an infected mother from transmitting the disease to her child⁶.

When risk factors cannot be eradicated, secondary prevention strategies can be implemented to reduce cancer risk. Measures that can reduce the growing incidence of cancer in developed nations include initiatives such as annual pap smear tests for women to detect precancerous lesions relating to cervical cancer as well as immunization of Hepatitis C patients against Hepatitis A/B^{1,14}. Rudimentary, but effective, secondary prevention measures in developing nations such as visual

inspection with acetic acid programs to detect precancerous cervical lesions have also been successfully implemented in Kenya and Thailand¹². Primary and secondary prevention programs have shown promise in decreasing cancer morbidity and mortality, but further development and tailoring of programs are still required.

The extension of preventative measures to people at risk of developing cancer is an urgent health priority. With cancer incidence and mortality rates increasing in the developing world, a concerted global effort is required to reduce the burden of illness in low- and middle-income countries. Prevention is often seen as the key to combating cancer since it results in the best health outcomes and is the most cost-effective strategy. This is especially evident in preventable cancers such as lung, cervical and liver^{3,6,14}. In recent years, the international health community has united to confront the cancer pandemic by creating international bodies such as GACD⁴. In order for the momentum to continue, it is important that regional, national, and international organizations further enhance their collaborative partnerships. Although battling cancer can be complex, governments must continue to stress the importance of prevention to reduce incidence and mortality rates in both developed and developing countries.

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Author Profiles



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