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The long road towards cancer prevention: 4 steps backward and 8 forward

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From 1990 to 2004, overall cancer mortality in the European Union declined almost 9%[1] – a result of substantial and heartening improvement in cancer care, while incidence in the EU has increased almost 20%, from 2.1 million new cases in 2002[2] to 2.5 million in 2008.[3] At the same time and partly as a consequence, prevalence of cancer has been rising from about 1.5% to 3%, especially in people of higher SES. Thus, despite better diagnoses and treatments to patients, the cancer burden is still increasing. A variety of strategies which integrate disease prevention policies across a wider population are needed to deliver better global results: oncology might be making progress in detection and treatment but losing ground in prevention.

This narration is not new. The 'Europe against Cancer' programme, which ran from 1986 to about 2002,[4] could be considered a modest response to the 'War against Cancer' in the United States of America (USA), launched in 1971 by President Richard Nixon. Both programmes responded to the worrying trends in cancer mortality especially in males and largely determined by the extensive use of tobacco in previous decades. They were accompanied by the increased hope for patients and clinical therapeutic progress. Cancer aetiology also received considerable attention,[5] led by the British doctors' study[6] by Doll and Peto – starting in the 1950s – who subsequently composed their landmark book[7] on the request of the US congress pushed around by a country to become cancer-phobic. Subsequently, quite a few research initiatives emerged like the ongoing European Prospective Investigation into Cancer (EPIC) cohort.[8] Based on the growing knowledge on diet and cancer, a specific institution like the World Cancer Research Fund reproduced a comprehensive report on nutrition and cancer.[9] Currently, it appears that

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25–50% of cancer in Europe is avoidable in the long run through lifestyle changes.[10,11]

Yet, as appears from the Eurocadet project (www.eurocadet.org) important barriers to the implementation of cancer prevention programmes persist. There are gaps in our knowledge on cancer aetiology (including misinterpretations of multi-dimensional causal complexities) and in policy research on effective programmes, introducing important caveats in prevention advocacy and confusion in population awareness campaigns. In addition, stakeholders with vested interests, such as lobbies, public relation agencies and industries have often played overtly and covertly misleading roles – a glaring example being the repeated denials made by the tobacco industry on the dangers of smoking and emphasising individual rights to do so. Since about 20 years such prevention-countering activities have also been repeated by the food industry[12] and also by the producers and marketers of alcohol and soft drinks.[13] Moreover, the challenges inherent in altering unhealthy lifestyles have frequently been under-appreciated, with a concomitant failure to engage socio-cultural and socio-educational partners in the effort, including communities, schools and urban planners. Indeed, the easiest 'fix' appeared to lie in discovering a cure which reflected in the gross under-investment in cancer prevention research compared with other cancer areas[14] – for example in the United Kingdom (UK), only 3% of all cancer research funding is spent on cancer prevention.[15]

The *European Journal of Cancer's* special issue on Implementing Cancer Prevention in Europe has brought together health professionals and health researchers from many corners of Europe to address these continuing challenges. Against a backdrop of increasing cancer incidence,[16] particularly for obesity-related cancers, a number of papers pull together evidence on physical activity and excess weight,[17–19] signalling best practices to deliver achievable improvements. In recognition of the heterogeneity and diversity between risk factors and populations,[20,21] it points to targeted and adaptable approaches to cancer prevention.[22] These issues are considered within the context of the current economic landscape; Martin-Moreno and colleagues[23] present the

Scheme: Duration and directions for cancer prevention: eight steps forwards and four backwards.

Directions		
Backward: Harming health	Forward: Benefiting for health	Duration[a] (years)
Introduction and large scale diffusion of various carcinogenic substances and exposures, e.g. tobacco, asbestos, hormones and irradiation		10–40
	Research: discovery and exploration of harmful effects in case–control studies and mortality statistics	10–20
Create controversy through doubt, attack studies and researchers; fund movements to focus on competing carcinogenic threats, stress freedom to act		5+
	Prepare and adapt laws, restrict space and time for use of harmful substance; develop guidelines	10+
	Confirmation of effects in prospective studies; policy advice by professionals and official advisory committees	15+
	Taxation of unhealthy habits Restrictions in sales/import	1
Lobby with regulatory and financial authorities, and with political parties and Ministries: offer promises of self-regulation (codes of conduct), confuse and threat		5+
	Confirmations of effects of avoidance or cessation in intervention studies	10+
	Enforce laws; let harm-providers co-pay for preventive measures	10+
Counteract through hidden campaigns, promote addiction, i.e. to smoking or food, smuggling, targeting vulnerable group		5+
	Monitor effects of campaigns, explore collateral effects	10+
	Seek alliances with partners with competing preventive activities	10+

[a]Duration until strategies are implemented and affect health (crude estimate)

financial crisis as an opportunity, arguing for the relevance of prevention efforts in spite of – and indeed due to – limited resources for health services.

Globally, the emphasis on communicable disease prevention, particularly but not only in the developing world, has created the illusion that these can be addressed also without tackling other common diseases. In fact, poor progress towards Millenium Development Goals (MDGs) related to infectious disease is associated with high mortality from chronic illness. Reducing population risk factors, such as smoking, excessive alcohol use, excess weight (gains) and physical inactivity should be a part of the global challenge.

In view of the past and current progress towards cancer, the schematic presentation of duration and direction for cancer prevention shows that quite a few steps forward (at least eight) are indeed necessary. Yet it recognises the delays in change, as with each step to progress in health, an often cynical counterattack is made. Current thinking is that sustainable progress needs a broad range of policy measures, including coalitions within the health sector[24] and with the non-health sector and initiatives to modify the built environment. Others should affect risk-factor pricing, stimulate the loco-regional agricultural sector to produce and use social marketing methods. WHO's Strategy on Diet, Physical Activity and Health currently provides a global framework to support Member States in the development, implementation and assessment of public policy, while also aiming to build a broad international alliance that is essential for risks often driven by transnational commercial interests. In anticipation of the upcoming UN General Assembly summit on chronic non-communicable diseases – currently slated for September, 2011 – there is reason to hope that emerging, effective, international action for chronic disease prevention (including cancer) is finally within reach.

Conflicts of interest statement

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