EDITORIAL

A maternalistic approach to prevention

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One of the fundamental goals of public health is the prevention of disease to reduce human suffering. Identifying risk factors for diseases is an important milestone towards prevention, but influencing global health often requires converting such findings into behavioural modifications. We are painfully aware how difficult behavioural changes are, and consequently many insights into disease causation remain scientific discoveries that do not translate into substantial reductions of the global burden of disease. Can we more effectively convert our knowledge into successful prevention using a population strategy of prevention that circumvents the individual's choice? Or does our society favour the freedom of the individual's choice even at the expense of a conscious self-destruction of health, thus increasing the burden of disease and the cost to society?

In this issue of the journal, Adams and White focus on one possibly problematic aspect of the population approach to prevention, its effect on individuals with the lowest risk when a J-shaped curve characterizes the relation between risk factor and disease. Adams and White point out an issue that Geoffrey Rose, a prominent proponent of the population strategy of prevention, noted as well: a reduction in the levels of a risk factor across the entire population moves the population to the left, and, in the case of a J-shaped risk curve, individuals initially at the lowest risk will be shifted to a higher risk pp. 17, 106. Adams and White maintain that the effect on individuals cannot be ignored and identifiable groups of individuals that might be harmed should be protected from population interventions. In an accompanying commentary, Rockhill argues that individualism especially in democratic societies makes population strategies of prevention an avenue less pursued. Her recommendation is one of education and communication in providing honest if complicated messages to the public if such information is required for understanding the potentially complex associations between exposure and disease.

Can we implement our research findings through communication and education? The sad but plain truth is that a substantial proportion of the population is not interested in messages about their health if these messages prescribe a behavioural change. Health recommendations are mainly embraced by the healthy—which underlines the concerns about the J-shaped curve of risk. There is no lack of education, communication, and national recommendations about obesity being dangerous to health and about the effects of diet on a variety of health outcomes. Nevertheless, two-thirds of the US population is overweight, one-third is obese (with many countries around the globe following this lead), and the consequences of this disastrous situation will be felt more painfully in the upcoming decades, reflected in increasing morbidity and mortality of the population and astronomically rising health care costs. Similarly, the diet preferred by most adults in western societies and increasingly by most children adversely affects health and will inevitably result in a substantial rise in chronic diseases in the years to come, including diabetes, heart disease, and cancer. Not even financial hurdles seem an obstacle; increased tobacco and alcohol taxes have not prevented people from consuming these products. Unfortunately, there is a lack of motivation and interest in a large section of the population (in the US and elsewhere) to be educated and to listen to the message, let alone to do anything about their disease-promoting habits. Our society of consumer choice and consumer demand seems more interested in suing McDonald’s for offering Big Macs than to stop eating them. Which might open the door for the polypill, which is convenient and does not require a change in lifestyle.

However, everything is not left to the individual's choice. We do already have in place a system that, for selected problems, prescribes prevention to the entire population with no way to opt out. For example, an increasing number of foods are fortified with micronutrients to satisfy the minimal requirements in the population without obtaining informed consent. Milk is fortified with vitamins A and D, flour is fortified with folic acid. Nobody can escape the consumption of such fortified foods. Similarly, the water fluoridation in most parts of the USA follows a utilitarian principle from which many benefit in the form of a reduced incidence of dental decay, but an increase in the risk of cancer observed in animal experiments cannot be excluded for humans. Many European countries do not follow this example, and fluoridation of the drinking water has still not been implemented to this day due to the potential risk of cancer associated with fluoride intake.

Faced with detrimental prospects of the global burden of disease, we may want to err more often on the side of a paternalistic approach to prevention. More opportunities present themselves to implement a population strategy of prevention, especially in situations where all individuals are likely to benefit, although this comes at the price of a restriction of consumer choices. For example, convincing food manufacturers to eliminate trans fatty acids from their foods would probably result in a dramatic reduction in cardiovascular morbidity and mortality. Such strategies would, of course, require the collaboration of profit-oriented enterprises or guidelines from regulatory bodies such as the Food and Drug Administration. Notably, manufacturers removed MSG and salt from baby foods in the US as a result of public pressure.
Changing social norms and attitudes is another promising if slow path to prevention. The US Surgeon General’s campaign against smoking was accompanied by limits on cigarette advertising and laws prohibiting smoking in certain public places. In the US, smoking has become stigmatized and there is a collective disapproval among the population at large. As a result, the prevalence of smoking has decreased. The obesity epidemic might lend itself to a similar approach.

There may be risk factors that we cannot eliminate in the population due to addiction, consumer preference, indifference, or maybe because a J-shaped association with risk may raise ethical concerns. The roads to prevention may differ depending on the quality of the evidence, the necessity of consumer compliance, the motivation of the population, the possibility of a population-wide intervention and the acceptability of such an intervention. Clearly, physical activity—despite its undisputed benefits to health—cannot be required nor enforced. We would not consider taking hormone replacement therapy (HRT) off the market despite recent reports indicating adverse effects, because many women benefit from the unique effects of HRT on menopausal symptoms. In the case of HRT, women have shown considerable motivation to try to understand the complexities of the available scientific evidence.

There are other health threats that lend themselves to prevention by intervention from the providers’ side. It seems we have not sufficiently explored these opportunities, which do not require behavioural changes of the consumer and may result in a substantial decrease in the global burden of disease.

References