Increase in healthy life years through sugar, fat and salt taxes

By DTI

MELBOURNE, Australia: Modelling the effect of different combinations of taxes on sugar, salt and fat and a subsidy on fruits and vegetables on the death and morbidity rates of Australians, a new study has found that imposing a tax on sugar could avert about 270,000 disability-adjusted life years. In addition, the research estimated that, when combined to maximise benefits, taxes and subsidies could reduce the country’s health care spending by A$3.4 billion.

In the Western world, non-communicable diseases, such as obesity, diabetes, cardiovascular disease and dental caries, are mainly attributable to an unbalanced intake of fats, sugars and salt. In order to tackle the burden of those diseases, an increasing number of countries have already implemented or proposed taxes on unhealthy foods and drinks. However, the actual cost-effectiveness of levies and subsidies on certain nutritional items to reduce the burden of diet-induced diseases is uncertain and can only be estimated.

In the current study, researchers at the University of Melbourne simulated the effect of different combinations of taxes on unhealthy foods and a subsidy on fruits and vegetables based on the Australian population of 22 million in 2010. The model analysis set the sizes of the taxes and subsidy such that combined there would be less than a one per cent change in total food expenditure by the average household.

The results showed that a tax on sugar had the greatest impact among the taxes simulated. A sugar tax could avert 270,000 disability-adjusted life years (DALYs), the researchers calculated. DALYs are years of a healthy lifespan that are lost to disease. This equals a gain of 1.2 years of healthy life for every 100 Australians alive in 2010, which is a health outcome that few other public health interventions could deliver across the whole population, according to the researchers.

In comparison, a salt tax was estimated to save 130,000 DALYs, a saturated fat tax 97,000 DALYs and a sugar-sweetened beverage tax 12,000 DALYs. As for a fruit and vegetable subsidy, the study was unable to determine an isolated clear health benefit, although it too made for additional averted DALYs and reduced health sector spending, the researchers wrote.

The study adds to growing evidence of large health benefits and cost-effectiveness of using taxes and regulatory measures to influence the consumption of healthy foods. Based on the results of the models, the formulation of a tax and subsidy package should therefore be given more prominent and serious consideration in public health nutrition strategy, they concluded.

The study, titled “Taxes and subsidies for improving diet and population health in Australia: A cost-effectiveness modelling study”, was published online on 14 February in the PLOS Medicine journal.

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senting the Australian WOHD lecture, titled “Putting the Mouth into Health—Time for a paradigm change in dentistry!”. Dental Tribune had the opportunity to speak with Eberhard, who was appointed the university’s first Chair of Life-span Oral Health in 2015, about the role of preventative care in research and clinical practice and the general need for a more holistic view on medical conditions and oral health.

Prof. Jörg Eberhard: Research over the last several decades has shown that oral disease is linked to general health and other diseases, including cardiovascular disease, diabetes mellitus and rheumatoid arthritis. The available evidence demonstrating this association is based on epidemiological studies, clinical intervention trials and knowledge of sound biological mechanisms.

“Oral health literacy is not limited to the oral cavity, but releases inflammatory mediators and bacteria into the bloodstream over decades. This may initiate or propagate atherosclerotic plaques, leading to stroke or heart attack, and detrimentally affect blood glucose levels in pre- or diabetic states. Do you think there is enough awareness among the public about the relationship between oral health, overall well-being and quality of life? There is very limited awareness of the link between oral and general health among the public; however, many health care professionals too are not aware of the association between oral and general health, even though it may significantly affect the well-being of patients. Oral health literacy education of the community and health care professionals is a major challenge for the dental profession. Furthermore, teaching of the association between oral and general health to medical students is necessary to establish a holistic view of health in the future. What is the dental community’s role and that of national health care policies in this matter? The dental community must consider that dentistry is not limited to caries and infected root surfaces, the work of the dental community should be aimed at easing a global disease burden and improving the health of the community. Policies must recognise oral health as an integral part of general health and health services should be provided if the population’s health is to be maintained or improved. Do you think that there should be an increased interdisciplinary exchange between dentistry and medicine? The exchange between dentistry, medicine and other health professions is fundamental to make substantial contributions to medical research and clinical health care in the future. A holistic view on health and disease is obviously highly relevant for clinical decision-making, since medical research has repeatedly demonstrated the interdependence of the various organ systems owing to similar generalised mechanisms.

With the rising burden of diseases such as periodontitis and diabetes on one hand and increasing awareness of prevention on the other, where does dentistry stand today? Since the introduction of fluoridation, the dental research community and the dental profession have neglected preventative pathways for decades, and research and clinical activities have focused on restorative treatments. This trend is epitomised by the use of artificial materials like dental implants to restore natural teeth, which have to be extracted because of the lack of adequate preventative treatment. This development is advanced by policies that reward restorative treatments and do not support preventative dental treatments.

What role does the increasing use of highly advanced and complex technology in dentistry play in achieving the goal of retaining the natural dentition for as long as possible? Highly advanced and complex technologies should be limited to those patients who have suffered trauma or who have severe disease or genetic deteriorations. Health care systems are not able to provide these technologies to the broader community and therefore these cost-intensive technologies are limited to the privileged. A preventative health care system is also a cost-efficient health care system, relieving individuals and the public from suffering and high costs.

In your opinion, concerning the promotion of oral health and prevention among the public, what will the main challenges to modern dentistry be in the years to come? The main challenge in the future for health professions will be to introduce the concept of a holistic health care approach based on preventative treatments rather than on therapeutic interventions. Thank you very much for the interview.

Editorial note: Eberhard will be holding the 2017 WOHD lecture on 20 March from 5 p.m. to 7.30 p.m. at the Australian Dental Industry Association’s office in Alexandria in New South Wales. Registration for the event is open at www.wohd.com.au/register.html.