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 AUD 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 these 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.
Profs Jörg Eberhard: Research over the last several decades has shown that oral disease is linked to general health and other dis-
eases, including cardiovascular disease, diabetes mellitus and rheumatoid arthritis. The avail-
able evidence demonstrating this association is based on epidemi-
ological studies, clinical interven-
tion trials and knowledge of sound biological mechanisms.

Irrespective of this body of knowledge, a holistic view on medical conditions that includes oral health has not been estab-
lished in clinical medical prac-
tice. "Putting the mouth into
health" stands for the strategic vision of overcoming this short-
coming and is aimed at improv-
ing the community's health.

How does oral health affect general health?

Dental caries and periodontal disease are the most common diseases worldwide and responsi-
ble for a large part of today's
disease burden. Caries results in
pain, tooth loss and enormous
treatment expenses. Each of
these conditions negatively af-
fects school attendance during
childhood, reduces the ability to
ensure good nutrition and to
develop adequate immune sys-
tems. Periodontal disease is
not limited to the oral cavity,
but releases inflammatory me-
diators and bacteria into the
bloodstream over decades.
This may initiate or propagate
the development of athero-
sclerotic plaques, leading to
stroke or heart attack, and
detrimentally affect blood
glucose levels in pre- or dia-
abetic states.

Do you think there is enough
awareness among the pub-
lic about the relationship
between oral health, over-
all well-being and quality
of life?

There is very limited awareness of the link be-
tween oral and general disease among the pub-
lic; however, many health
health care professionals too
are not aware of the as-
sociation between oral
and general health,
even though it may sig-
nificantly affect the well-being of
patients. Oral health literacy edu-
cation of the community and health care professionals is a
major challenge for the dental
profession. Furthermore, teach-
ing of the association between oral and general health to medi-

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 com-
plex technologies should be lim-
ited to those patients who have suffered trauma or who have se-
vere disease or genetic deterio-
ration. Health care systems are not
able to provide these technolo-
gies to the broader community
and therefore these cost-inten-
se 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 pre-
vention among the public, what
will be the main challenges to mod-
ern dentistry be in the years to
come?

The main challenge in the fu-
ture for health professions will be
to introduce the concept of a holis-
tic health care approach based on
preventative treatments rather
than on therapeutic interven-
tions.

Thank you very much for the inter-
view.

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