Oral Public Health in the
Asia-Pacific Region

Colin Binns, MBBS, PhD¹ and Wah-Yun Low, PhD²

This issue of the journal concentrates on dental health, which is an important public health concern. In the latest iteration of the global burden of diseases project, the contribution of oral health is recognized. The 3 most important oral health conditions all appear in the top 100 conditions recorded in the Global Burden of Disease (GBD) project.¹ Between 1990 and 2010, the burden attributable to untreated caries and periodontitis has increased, while the number of people with severe tooth loss has decreased. Almost 55% of global citizens have dental conditions (a total of 3.9 billion) and untreated caries in permanent teeth was the most prevalent condition evaluated for the entire GBD 2010 Study. Marcenes et al concluded that oral health conditions contribute an average loss of 224 disability-adjusted life years per 100,000 persons.¹

Dental health has also been one of the great success stories of public health as an understanding of the importance of fluoride led to the implementation of fluoridation programs of water supplies with outstanding success.² The report by the US Surgeon General in 2000 on the success of fluoridation has recently been further endorsed in 2013 by the present Surgeon General. The provision of improved water supplies brings many public health benefits and one of them is the potential for fluoridation. One of the articles in this issue highlights the problem of fluorosis and this has to be taken into account in local areas before programs are implemented. Fluoride also has an important role in bone strength, although as yet there is no evidence on the role of fluoridation in the prevention of osteoporosis.

A healthy mouth is essential for good nutrition. Loss of dentition can be a severe limitation of good nutrition in the elderly. The improvement in public health dentistry in recent years has seen a decline in the number of severe cases of malnutrition attributable to this cause. Poor nutrition also results in signs in the mouth. Perhaps the most common in our region is the glossitis found in deficiencies of iron, vitamin A, niacin (pellagra), and riboflavin.

Sugar has an important role in providing a substrate for oral Streptococcus mutans, the most common cause of dental caries. The World Health Organization (WHO) has recently recommended that the average daily recommended intake of sugar should be halved so that it provides 5% or less of total energy consumption.³ In a draft guidance, WHO recommended that...

³Curtis University, Perth, Western Australia, Australia
¹University of Malaya, Kuala Lumpur, Malaysia

Corresponding Author:
Wah-Yun Low, Faculty of Medicine, University of Malaya, 50603 Kuala Lumpur, Malaysia.
Email: boww@um.edu.my

...policy makers should ensure that all monosaccharides and disaccharides added to food or found in honey, fruit syrups, fruit juice, and concentrate should be at most 10% of a person's energy consumption but that ideally it should be cut to 5%.
If this guideline is implemented it will have a significant impact on obesity and dental caries. The initial inoculation of *S. mutans* usually comes from parents and recent dietary guidelines recommend that food or cutlery that has been in a mother’s mouth should never be placed in an infant’s mouth. In Asia, this would include chopsticks and may also have the benefit of reducing transmission of *Helicobacter pylori*.

Breastfeeding is the basis of all good nutrition. It is recommended that all infants are exclusively breastfed for the first 6 months of life. A recent major review emphasizes the importance of dental health workers promoting breastfeeding. After the eruption of the first tooth “caregivers should be educated on the importance of cleansing infants’ teeth as soon as they erupt by using a washcloth or soft toothbrush to reduce bacterial colonization and to help reduce children’s risk of developing early childhood caries.”

Oral health is also important in many systemic diseases and is a continuing problem in the management of HIV/AIDS and other diseases resulting in deficiencies of immunity. Periodontal disease is one of the most common sites of chronic inflammation in the body. There is continuing interest in any relationship between any chronic inflammation and chronic disease. In the Scottish Health survey (n = 11869), de Oliveira et al found an association between the chronic inflammation of periodontal disease and coronary events. Several meta-analyses of smaller studies also suggest a relationship, stronger below the age of 65 years. However, most of the studies to date have been cross-sectional in nature and the direction of association is therefore problematical.

While awaiting the results of longitudinal studies, the best public health advice is to continue brushing your teeth— as well as keeping your mouth healthy; it may also stop your heart attack.

By all means use a toothpaste containing fluoride, but beware of brands of toothpaste that might be contaminated with mercury and other heavy metals.

No editorial on oral health would be complete without mentioning the link between betel nut chewing and oral cancer. This has been the subject of several symposia of Asia-Pacific Academic Consortium for Public Health (APACPH) and reviews in this journal. It remains a significant public health issue.

Many APACPH member institutions have Schools of Dentistry and we are also pleased to have several schools that are members in their own right. They make an important contribution to dental and public health in our region and we will continue to welcome papers submitted to our journal that address population issues related to oral health. We hope that the collection of dental papers in this journal will make a significant contribution to the dental public health literature in our region.

References