Caries prevalence remains high in most parts of Asia despite international and national efforts to address the disease. At the recent Asia Pacific Dental Conference in Singapore, Dental Tribune South Asia had the opportunity to talk to Dr Iain Pretty from the University of Manchester about caries on the continent, the pitfalls of water fluoridation and what he considers the right measures for dealing with the condition.

Dental Tribune South Asia: According to the recently published Global Burden of Disease report by your colleagues in London, 55 per cent of the world’s population currently suffers from untreated carious lesions in their permanent dentition. Is this a matter of concern?

Dr Iain Pretty: While we still have a significant problem with caries, we have seen a massive reduction in the overall caries burden since the late 1960s and early 1970s. For the most part, this has been due to the introduction of fluoride toothpaste.

What we see now is that the burden of the disease is concentrated in groups that are difficult to reach. We have eradicated the disease in many individuals and they are now caries-free. But those who do have caries are a much smaller population and carrying a greater burden of the disease.

It is now up to organised dentistry, as well as government and policymakers, to see how we can reach those individuals. It is often not only a question of finance or income levels. For example, in the UK we have free dentistry for the vast majority of people, yet we still find access to be difficult. Similar issues can be seen in the US.

It is about encouraging people to visit the dentist when available, to use evidence-based products, such as fluoridated toothpaste, to brush regularly and to seek care wherever they can. As with all public health problems, it is going to require joint thinking between many stakeholder groups.

A high-income country such as Singapore appears to have a different caries experience from most countries in Asia. What do you consider the main differences when it comes to the management of caries here?

Versus the rest of Asia, Singapore is a relatively high-income country and has the benefits of water fluoridation. Access to dental care is also good and programmes that help support dental education and oral health are introduced as early as primary school. These things combined probably account for it.

Could the Singaporean model be transferred to the rest of Asia?

I would agree that the assessment of water fluoridation has an important role to play, although I think that it is not water fluoridation only. As I have mentioned, the evidence supports that it was also the introduction of fluoride toothpaste that helped with caries reduction. It has been probably both things working in tandem.

It also depends on water consumption. Asia covers a large area and one would not want to fluoridate water in Thailand, where the water is naturally highly fluoridated. Generally, it remains difficult to fluoridate the water supplies of small individual villages, where people will often have water supplies, but use different supply for drinking, cooking, laundry and that sort of thing. Ensuring that those water supplies are perfectly fluoridated is complex and depends on the logistics.

On an individual basis, government and policymakers need to assess whether it is possible to fluoridate the water, whether it is already naturally fluoridated or to what level it needs to be fluoridated. Much, of course, depends on temperature or the amount of water that is consumed. In some cases, water fluoridation might not even be possible and that has nothing to do with the Asian region. For example, in North West England, it was not easy to bring fluoridated water into certain areas, as where the water-flow is just not great because there are mountains in the way.

There are also political arguments, a state and the logistics, the natural condition of the water and the cultural use of water. All of these things need to be considered. I think we need a combination of water fluoridation and the fact that it has continued with that. Areas that can should look towards Singapore as an example.

Community-based interventions implemented in many Asian countries have achieved mixed results. What are the main obstacles there?

Generally what one would hope for is that community-based interventions are locally driven, locally informed and evidence based. If we think we need to be very careful with taking a programme that appears successful in one region and simply applying it to another region. One really has to look at the particular countries. It may not be appropriate for them. For example, water fluoridation may be the best choice for some countries, whereas community programmes, such as supervised toothbrushing, may work best for others.

More broadly, income and resource levels, as well as the availability of the dental workforce, are inadequate. However, there is a great deal of evidence that well-planned community interventions can make a difference, particularly in children and older adults. We need a good level of resourcing for dental public health activities.

What other measures do you consider useful to halt or reverse decay levels in Asia?

I think that education is a really important factor, so that parents, children and older adults are aware that there are evidence-based interventions that they can do at home. Other measures are ensuring that self-care is done effectively and that access to dental professional care is made as widely available as possible. Clearly, in some countries where the dentist per capita ratio is still very low further work needs to be done.

We should also be using community to deliver messages and simple treatments, in terms of distributing toothbrushes and toothpaste and having community-based champions. Something like that can be very effective and not necessarily restricted to developing countries. Scotland, for example, used the Child Smart programme to embed local community leaders in developing and enhancing oral health.

Thank you very much for the interview.