



A surgical tooth extraction at a community health event in Arawa, PNG (U.S. Pacific Fleet/Flickr/CC BY-NC 2.0)

The world's most common childhood disease: the burden and the solution for PNG

By Barry Reed

The world's most common childhood disease affects over 90% of the world's children. It is chronic, non-communicable, neglected, and the most common cause of pain (80% of children will experience pain from it).

What disease am I referring to? Dental disease, usually from tooth decay.

Many Pacific nations, including Papua New Guinea, are experiencing the growing problem of dental pain, which can be alleviated through the control of dental disease.

One survey of six villages in the Western Province showed that there were three untreated diseased teeth per person. There is only one dentist per 90,000 people in PNG, an overwhelming number of patients for PNG dentists. During my time in PNG, I removed twelve abscessed teeth from the mouth of one four year old girl, who was in so much pain that she could only eat bananas, which clearly affects her general health. She had already been in pain for half of her life, as there was no local dentist.

This burden is only set to increase as PNG's population is expected to double in the next twelve years. PNG needs effective and permanent prevention of dental disease, and they need it soon.

Worldwide, there are three preventative methods for reducing dental disease. However, only one is practical for PNG: salt fluoridation, or the addition of fluoride to commonly-consumed table salt. This method has been effective for 300 million people in 30 countries across Europe and America, and benefits a wide variety of people: children, adults, the rural disadvantaged, and the urban poor. The cost-benefit ratio of salt fluoridation is 1:240, which means that for every \$1 invested in prevention, \$240 is saved in future fillings and tooth extractions. In addition, it only costs less than ten cents per person per year.

Salt fluoridation results in the rapid reduction of tooth decay, of 10% per year, which is a massive permanent reduction of 50-65% in just five years. This would be a fantastic public health achievement, and its safety has been proven by research, particularly as it does not increase the consumption of salt.

So how does this prevention of dental disease enhance Australia's development impact?

Australia provides substantial support to education and health in PNG. Australia's educational development impact is reduced by dental disease because children miss school due to the pain they are experiencing, and their education suffers. Adults with strong pain cannot work or are less productive at work due to the pain. This results in an ongoing loss to the economy and extra costs to the health system for pain relief. Reduced dental disease would increase school attendance and productivity at workplaces, enhancing Australia's aid impact.

I make three recommendations for this to work.

- 1. Appeal for a small amount of aid for a national fluoride mapping study by PNG dental postgraduates.**

This research, on a national scale, would verify my initial research that shows that fluoride levels in drinking water is very low across PNG. If we know definitively that fluoride levels are low nationally, we know that fluoridated salt is suitable for the country as a whole.

- 2. Provide aid to PNG dental postgraduates to educate the people and government in the effectiveness and safety of fluoridated salt, gain their approval, and promote the need for action now.**

This is key, as everyone needs to be on board for this to work.

- 3. Dental disease takes away the enjoyment of life.**

Its pain is stealing away the smiles of children. Action to fund and legislate for fluoridated salt will bring these smiles back. Action and aid *now* will enhance the health and impact the lives and wellbeing of children within five years.

Without fluoridated salt, there is no realistic solution for the suffering children of

PNG.

About the author/s

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Dr Barry Reed is an oral and maxillofacial surgeon in Newcastle and Maitland, NSW since 1991 and has been an OMS specialist in Oncology at the Newcastle Calvary Mater Hospital and John Hunter Hospital for over 20 years. As a former Kokoda Track Foundation and YWAM aid volunteer and teacher, he has made eight aid visits to PNG in the last 5 years. He teaches dental undergraduate and postgraduate students at UPNG as a self-funded aid volunteer, has conducted research into dental problems in PNG, and has been a speaker at the Medical Society of PNG's National Medical Symposium for the last two years.