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examined had no sign of dental decay. The mean number of decayed teeth in deciduous and permanent dentitions was 2.5 and 1.1 respectively. These findings are significantly better post-fluoridation compared to pre-fluoridation. Almost 80% of children showed no sign of dental fluorosis. If required, most children needed only simple restorative care. **Conclusion:** Although cost-indicators might not be in favour of continuing water fluoridation, evidence that the oral health status of children is much improved, seven years post-fluoridation cannot be ignored. The next best alternatives all include active preventive measures, all of which will require resources which are hard to source in this remote area.

### **Economic Assessment and Effectiveness of Water Fluoridation in the Northern Peninsula Area of Far North Queensland**

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**Introduction/Aim:** There is general consensus that oral health of Indigenous children is substantially worse than their non-Indigenous counterparts. A fluoridation plant was installed in the Northern Peninsula Area (NPA) in 2005 at a stage when dental caries levels were more than four times greater than for Australian children. The aim of this study was to perform an economic assessment of the fluoridation plant, determine the current oral health status of school-going children and infer the effectiveness of the fluoridation of water since its introduction. **Methods:** After consulting the Queensland CDO, NPA District Health Council, community elders and school principals, ethics approval was obtained from Griffith University and Education Queensland. A published model to determine cost of water fluoridation was applied to the plant. The DMFT/dmft dental caries and Thylstrup-Fejerskov dental fluorosis indices were used to determine oral health status of all children present in November 2012 when the survey was conducted in the four NPA schools. **Results:** Based on operating cost and the age weighted caries reduction of 37.2% as found in this study, annual per capita cost of fluoridation for the total population is \$31.51, cost-effectiveness is \$324.37 and cost-benefit is 1.99. More than 50% of children