SILENT MEDICINE

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This piece of work was a creative submission for the distinction component in Population Health at University of Auckland School of Medicine. Students were assigned to groups, given a health topic to study and come up with an intervention using an arbitrary fund of NZD $5000.

Abstract (491 words)

Background

Oral health in New Zealand remains low compared to OECD averages. (1) Despite public health initiatives, 1 in 7 preschool children have dental caries, 40% of children have them by the age of 5. (1) This increases to 60% in Maori and Pacific Island (PI) children. (2) These children are twice as likely to have untreated teeth and those of the lowest quintile are less likely to brush their teeth as recommended. (1) Due to the socioeconomic distribution, Maori and PI children are disproportionately affected. Despite previous initiatives such as free dental care for residents under 18 and dental bus services, there remains an unacceptable level of inequity. (3) Although many of these interventions merit in serving the majority of the population, they fail to target high needs populations. Current proposals such as national water fluoridation and sugar taxes are a step in the right direction, however, there remains a need for interventions targeting children of lower socioeconomic position.

Methods

We conducted an internet search to identify interventions that are and had been in place. We then discussed potential interventions and critiqued each one. Subsequently, we liaised with local organizations and representatives in the field to discuss the feasibility of our proposed interventions and to receive expert opinions on each. We contacted NZ Dental Association, Plunket, Colgate representatives, Waikato Dental Service, NZ Maori Dental Association, Ministry of Health representatives, NZ principal dental officer and a senior dentist through physical meetings, Skype calls and phone calls.

Results

Our intervention is called SMILE-4-LIFE, a volunteer-facilitated toothbrushing programme that works in partnership with the pre-existing "Breakfast in Schools" programme, by introducing protected toothbrushing time to attending Year 1 students. This is a critical period in which responsibilities of toothbrushing transitions from parent to child. Furthermore, it coincides with the development of adult teeth. The introduction of toothbrushing habits is therefore critical to maintaining healthy teeth for life. This is a 3-year programme which involves compulsory toothbrushing following the breakfast programme. This will be supervised by volunteers from high schools who will receive training from a dentist/dental hygienist on basic oral hygiene and toothbrushing technique. This programme will provide free toothbrushes and toothpaste for the children and family.

Conclusions

SMILE-4-LIFE provides a practical and low cost intervention targeting disadvantaged children in New Zealand. The pilot study will provide data for cost benefit analyses and be used as evidence to guide future policies. Incorporating SMILE-4-LIFE with the pre-existing "Breakfast in Schools", will reduce total costs of the intervention and targets children most at risk of dental disease. Instead of perpetuating inequity, SMILE-4-LIFE directly targets children of low socioeconomic status and is likely to improve barriers to access and inequity in the future.

References

1. Ministry of Health. 2010. Our Oral Health: Key findings of the 2009 New Zealand Oral Health Survey. Wellington: Ministry of Health.
2. Indicators for the Well Child /Tamariki Ora Quality Improvement Framework: September 2015
3. Mauri Ora Associates, 2004, p. 5