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Brushed Aside: A Social Epidemiological Perspective on Asian Children's Oral Health in Aotearoa New Zealand

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Abstract

Dental caries remains a prevalent yet largely preventable non-communicable disease. In Aotearoa New Zealand, child caries persists despite publicly funded oral health services. This commentary applies a social epidemiological lens to children's dental caries, examining how social, political and economic structures shape oral health, and highlighting gaps in evidence for Asian children. The paper draws on New Zealand and international literature on child caries, policy and governance, and equity frameworks, including Te Tiriti o Waitangi and Kaupapa Māori scholarship, with attention to ethnicity data practices and structural racism. National reporting demonstrates persistent inequities for Māori and Pacific children; however, Asian children are often aggregated into an "Other" category, obscuring heterogeneity. Where Asian children are analysed separately, emerging evidence indicates elevated odds of multiple caries at first dental visits and rising hospital admissions for dental treatment under general anaesthesia, challenging "model minority" assumptions. Explanations focused only on language, acculturation or "cultural beliefs" risk reinforcing Eurocentrism when detached from historical and structural determinants. Equity-oriented action requires culturally safe, structurally informed research and policy, including nationally standardised, ethnicity-disaggregated oral health data and prevention and access strategies co-designed with Asian communities.

Manuscript

Dental caries, commonly known as tooth decay, remains one of the most prevalent non-communicable diseases globally, despite being largely preventable (Qin et al., 2022). Oral Health (OH) can be defined as the ability to eat, breathe, speak, and engage socially without pain, discomfort, or embarrassment (Foláyan et al, 2025). In Aotearoa New Zealand, children experience substantial levels of untreated caries, despite access to publicly funded OH services (Kanagaratnam & Schluter, 2021). The inequitable dental caries experiences provide a powerful example for social epidemiology, which is a discipline that investigates how social, political, and economic

structures influence the distribution of health outcomes across populations (Berkman et al., 2014). This commentary critically reviews the literature on children's dental caries through a social epidemiological lens and highlights the gap in research for understanding the OH needs of Asian children in New Zealand.

According to the Ministry of Health (2023b), only 56% of five-year-olds are caries-free, with an average of two decayed, missing and/or filled teeth among those with dental caries. Caries prevalence among Māori and Pacific children is nearly double that of their peers, reflecting a longstanding and persistent inequity in dental disease burden (Kanagaratnam & Schluter, 2019, 2021). It has been widely acknowledged that for Māori, OH inequities are inseparable from colonisation and systemic and structural racism, a pattern found globally across indigenous populations who have been colonised (Nath et al., 2021).

In Aotearoa New Zealand, Kaupapa Māori-informed epidemiology (rooted in Māori principles and worldview and centred on Te Tiriti o Waitangi) has been absent from dominant Eurocentric epidemiology (a worldview that places Europe at the centre of world history, portraying it as the main driver of progress, reason, and universal values) and policymaking (Simmonds et al., 2008; Willing & Swingle, 2026). While Good Oral Health for All, for Life (Ministry of Health, 2006) has acknowledged OH disparities for Māori and Pacific children, policy efforts have prioritised equality over equity, thereby exacerbating OH disparities (Boyd et al., 2022). Recent strategies such as Pae Tū: Hauora Māori Strategy (Ministry of Health, 2023a) have signalled a shift toward Māori-led approaches, yet structural resistance remains evident in the short-lived establishment of Te Aka Whai Ora (Came et al., 2024). Unfortunately, population health governance is inherently political, and ethnic public health inequities persist for not only Māori and Pacific children but also for other ethnic minorities when systems fail to redistribute power or acknowledge systematic racism (Bastos et al., 2018).

In Aotearoa New Zealand, questions of belonging and institutional authority are situated within a distinctive constitutional and cultural landscape shaped by Te Tiriti o Waitangi (Orange, 2015). Public discourse often frames Te Tiriti as a strictly bicultural relationship between Māori and Europeans. However, scholars such as Lincoln Dam have argued that because Te Tiriti's preamble refers to "…many of her (the Queen's) subjects (were) already living on this land and (with) others yet to come" that Asian communities in Aotearoa New Zealand are tangata tiriti - a person or people group belonging here via Te Tiriti – the first immigration document of this nation (Dam, 2022). Mikaere (2011) and other Kaupapa Māori academics have also contended that conventional Treaty scholarship's reliance on biculturalism derived from settler-colonial understandings and may continue to obscure deeper questions of tino rangatiratanga (Māori self-determination) and, in some cases, operate as a device to maintain historical colonial power structures in modern-day New Zealand. Nevertheless, the question of how Asian peoples should be positioned in relation to Te Tiriti remains complex and, for many, unresolved. However, what is continuing to rapidly evolve, and grow is Aotearoa New Zealand's demography.

Research about Asian children's OH remains limited in NZ, despite population estimates predicting that Asians will be 33% of the population by 2048 (Stats NZ,

2025). Kim and colleagues (2021) have highlighted that the lack of research on Asian Americans in public healthcare may be due the model minority myth, which stereotypes Asians as having good health outcomes and having no need for research or funding. Arguably, the model minority myth is a continuation of the "Yellow Peril", which marginalises Asian Americans. Similarly, within a NZ context, the "white New Zealand" policy regime from the 1880s to 1920s reflected historical systematic marginalisation of Asians (Ferguson, 2003). Unfortunately, current public health policies and research practices continue to marginalise Asians through categorising Asians, alongside NZ Europeans, under the ambiguous "other", thereby obscuring the specific needs and health outcomes of diverse Asian communities (DeSouza, 2007). Furthermore, yearly national reporting of children's OH in NZ often aggregates Asians into an "Other" category along with non-Māori, non-Pasifika other ethnic groups, further obscuring heterogeneity and data transparency (Ministry of Health, 2023b).

However, when Asians are separately analysed as a distinctive group within OH research contexts, data evidence contradicts assumptions of the model minority myth. For example, international evidence from England has found higher caries rates among Asian five-year-olds compared with other groups (Department of Health & Social Care, 2025). In NZ, it has been found that Asian children have elevated odds of presenting with multiple caries at first dental visits (Thornley et al., 2020) and rising rates of hospital admissions for dental procedures under general anaesthesia (Narsinh, 2022). While hospital admission rates for European preschoolers have nearly halved, the numbers for Māori, Pacific, and Asian children have increased significantly, with the rate for Asian children nearly doubling (Narsinh, 2022), highlighting the urgency for research in this area.

Existing global research tends to attribute inequitable OH outcomes for ethnic minorities to micro-systemic factors such as linguistic barriers (Banihashem Rad et al., 2024) and cultural beliefs that reflect poor OH literacy (Butani et al., 2008), with higher levels of acculturation being correlated with better OH outcomes (Dahlan et al., 2019). However, such research, which omits critically examining the influence of historical and structural racism and systems of oppression, risks further reinforcing Eurocentrism and marginalising ethnic minorities across the globe (Bastos et al., 2018). Thus, cultural safety and critical reflection on power imbalances and institutional bias are essential for equitable research and practice (Hursthouse, 2024).

In conclusion, dental caries among children in Aotearoa NZ exemplifies how non-communicable diseases are socially patterned and politically produced. Traditional epidemiological measures such as prevalence, incidence, odds ratios, and uncertainty intervals quantify inequity, but social epidemiology reveals its structural roots. Racial inequities in OH in New Zealand continue to persist because OH systems and research in New Zealand have historically been developed through Eurocentric lens that inadequately accounts for the long-term implications of colonialism and systemic racism.

Addressing these gaps is essential to advancing equity-oriented, structurally informed public health action in Aotearoa. Future recommendations include nationally standardised OH data that is disaggregated by ethnicity, including MELAA.

Importantly, future OH promotion strategies in Aotearoa New Zealand will need to not only explore the Asian population's understanding of OH, but also critically reflect on why ethnic OH inequities have persisted and continue to worsen.

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