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## Assessment of food availability in New Zealand primary schools

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Childhood obesity and overweight rates in New Zealand are considerably higher than that globally with one in three children aged between 2-14 years being overweight or obese<sup>(1)</sup>. Children's dietary knowledge and food preferences are influenced by various factors including the food environment. Schools are an excellent setting to influence children's dietary behaviours since they have the potential to reach almost all children during the first two decades of their lives. However, previous analyses indicate many school canteens and food providers do not supply foods that promote healthy eating and nutrition behaviours<sup>(2,3)</sup>. The Ministry of Health (MoH) recently implemented a 'Food and Drink Guidance for Schools' which utilises a traffic-light framework dividing foods into three categories: 'green', 'amber', and 'red'<sup>(4)</sup>. The aim of this study was to assess primary school canteen food menus against the newly implemented MoH Guidance. A convenience sample of 133 primary school canteen menus were collected in 2020 as part of the baseline evaluation of the Healthy Active Learning initiative across New Zealand. Four researchers (three nutritionists and one dietitian) developed a menu analysis toolkit to undertake the analysis of all menus collected. The toolkit provided a breakdown of commonly packaged foods and meals/menu items available to purchase within schools based on Health Star Ratings, ingredients, and/or standard recipes. Assumptions were created for menu items requiring additional detail to be categorised according to the guidance through consensus by all four researchers. Primary school menus were coded by two researchers, and intercoder reliability was ensured by independent coding and cross-checking of 10% of menus. Descriptive and inferential analyses were conducted using IBM SPSS and  $P < 0.05$  denoted significance. Analyses of canteen menus revealed that most menu items belonged to the less healthy amber (41.0%) and red (40%) food categories. Low decile schools had a lower percentage of green food items (8.6%) and a higher percentage of red food items (48.3%) compared to high decile schools ( $p = 0.028$ ). Similarly, schools in low deprivation areas had a significantly higher percentage of green food items (14.2%) compared to high deprivation areas (8.6%) ( $p = 0.031$ ). Sandwiches, filled rolls, and wraps were the most commonly available items (86%) followed by baked foods and foods with pastry (71%). Sugar-sweetened beverages were just as prevalent as water on school food menus (54% each). Over half of in-house catered canteen menu items were classified as 'red' foods (55.3%). This study highlights that most school canteens were not meeting the guidelines for healthy food and drink provision outlined by the MoH. Improving school food availability for children in socioeconomically deprived areas needs to be prioritised to reduce inequities. Findings suggest the need for more robust national policies and mandated school guidance to improve the food environments in New Zealand schools.

**Keywords:** food policy; menu audit; policy evaluation; traffic-light guidance

### Ethics Declaration

Yes

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### References

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