

Little Lunch - Big Data: Using digital systems to understand and affect purchases from primary school canteens

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Background

Online school canteens, where users access the school canteen menu, and order and pay for student lunches online, are increasingly popular. There are multiple online canteen providers with the largest in >1,000 schools, with >250,000 users and processing >13 million lunch orders/yr.

Objectives

To describe a research program based on online canteen ordering in NSW primary schools. Specifically, to describe the opportunity for online canteens to: 1. Efficiently pilot novel interventions to encourage healthier purchasing; and 2. Implement effective public health nutrition interventions at scale.

Method

The research program has utilised multiple methodologies including: cross-sectional surveys of principals, canteen managers and parents; pilot RCTs testing individual intervention strategies (menu labelling, tailored feedback, modifying menu layout); a 10 school cluster pilot RCT testing a multicomponent intervention (manual implementation), and a 17 school cluster RCT testing a more comprehensive multicomponent intervention (automated implementation). Each trial recruited NSW primary schools with an existing online canteen, and all users of the online canteen participated, providing a large amount of data in a short timeframe.

Results

Results from the pilot cluster RCT (n=10 schools, 2714 participants, 19,081 orders, ~40,000 items purchased over a 2-month baseline period) have demonstrated that an intervention implemented using online canteens significantly reduced the kilojoule (-572kJ), saturated fat (-2.4g), and sodium (-231mg) content of students' lunch orders (p<0.001), without any decrease in revenue. Trials of the individual strategies were less effective.

Conclusions (if applicable)

Online canteens represent an effective and efficient way of testing and translating public health nutrition interventions.