

FoodTrack™ – a systematic Australian retail food composition database

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Background

Current, accurate and comprehensive information on the composition of the Australian food supply is required to be able to monitor changes over time - an important initiative to guide strategies and interventions for public health nutrition. This information, in the retail environment (ie: major supermarkets), is not commonly available from a centralised source.

Nutrition data collection is often out-sourced to third parties, using a paper-based manual collection model – a time and resource intensive exercise resulting in poor data quality and restricted coverage. An alternative model has used off-shore data entry from images taken in the supermarket – although cheaper than the previous model, those entering the information are often not trained in nutrition, resulting also in limitations with data quality.



To address these issues, the Heart Foundation, together with the Commonwealth Scientific and Industrial Research Organisation (CSIRO) have developed FoodTrack™ – a technology-based supermarket nutrition data collection model. This tool was developed in 2014, and consists of an intelligent smartphone application (app), a cloud-based database, and a web-portal.

The app is used to collect product data (e.g. brand, nutrition information panel(s), ingredients, front-of-pack, images, product information), from fresh and packaged foods in major Australia supermarkets.

Improve evidence basis

The FoodTrack model facilitates a highly-controlled, sustainable collection model that is accurate, efficient, and ensures significant coverage of the current market:

- Efficiency – barcode recognition software is used to retrieve existing data; the average collection/auditing time has reduced from ~14 to ~6 minutes/product (paper-based collection vs using FoodTrack);

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- Accuracy – smart forms in the app highlight questionable data to reduce entry errors, and auditing is streamlined through the web portal which allows direct comparison between images and recorded data. Error rates are currently < 1%, on average, within category;
- Sustainable – moving to the FoodTrack model has resulted in reduced time, and therefore costs, for data collection, making it affordable to employ qualified field officers, ongoing and to facilitate annual data collection.

Programme implementation

FoodTrack was first implemented in 2014; using this model we collected nutrition and product data for 13,000+ food products, across all major categories, in Australian supermarkets. The first round of collection was completed in early 2015, and we are currently in the second round of collection. Data will be updated annually, allowing tracking of changes to the dynamic Australian retail environment.

Success

To our knowledge, FoodTrack is the first example in Australia of a consolidated retail food composition database that contains current, accurate and comprehensive product data. We have seen significant improvements in data collection efficiency, accuracy and sustainability, and product coverage, to date.

This has recently been recognised by key stakeholders, including the Australian Federal Government, who have contracted us to monitor the implementation of the Health Star Rating system using FoodTrack. In addition, FoodTrack provides an evidence base for monitoring food reformulation over time, advocacy activities and strategic research.

Source

- AIFST conference presentation (Sydney, Aug 2015); 'FoodTrack platform: Technology assisted supermarket nutrition data collection system'
- ICDAM workshop (Brisbane, Sept 2015); 'Use of technology in dietary intake and food environment assessment'