144/617 - Simplification of the Health Star Rating front-of-pack nutrition labelling system

Track: Track 3: Public Health Nutrition and Environment

Proposed Symposium Title: Track 3: Public Health Nutrition and Environment

Background and objectives: The Health Star Rating (HSR) is an interpretive front-of-pack nutrition labelling system designed for packaged foods. Packaged foods are given a star rating of 0.5 to 5.0 stars in half star increments based on their overall nutrient profile score. The underpinning algorithm includes energy, risk nutrients (saturated fat; sodium; and total sugars), and positive nutrients (fibre; protein; and fruit, vegetable, nut and legume [FVNL] content). We assessed whether the HSR could be simplified, without materially changing its performance, by removing fibre and FVNL content, which are not mandatory on current nutrition labels.

Methods: Nutrition information for 34,135 packaged foods available in Australian supermarkets were used. Products were classified as â€˜coreâ€™ or â€˜discretionaryâ€™ based on the Australian Dietary Guideline dichotomy between those everyday foods intended to make up the bulk of a healthy diet and those which should only be eaten occasionally. Fibre content (g/100g) and FVNL content (%) were estimated using a validated method for each product. HSRs were calculated using both the standard HSR algorithm and a simplified HSR algorithm excluding fibre and FVNL values. The performance of the simplified HSR was determined by comparing the capacity to discriminate between core and discretionary foods using the area under the receiver operating characteristic curve (AUC).

Results: 15,965 core and 18,350 discretionary foods were included. The AUC (95% confidence interval) for the standard HSR algorithm with all components was 0.820 (0.816; 0.825). Removing FVNL, fibre, and both together changed the AUC by -0.0106 (-0.0134; -0.0079), 0.0001 (-0.0027; 0.0029), and -0.0099 (-0.0127; -0.0071), respectively.

Conclusions: The ability of the HSR to discriminate between core and discretionary foods did not change with the removal of fibre from the equation. Removing FVNL from the algorithm did reduce HSR performance by a small margin. Removal of both fibre content

and FVNL content from the current HSR algorithm would have little material impact on performance but would greatly simplify HSR calculation for food manufacturers and researchers.

Keywords (5 keywords maximum): public health; food policy; nutrition labels; front-of-pack labelling; Health Star Rating

Conflict of Interest Disclosure (mandatory): Cliona Ni Mhurchu is a member of the New Zealand Health Star Rating Advisory Group. The New Zealand Health Star Rating Advisory Group had no role in study design, data analysis, decision to publish, or preparation of the abstract. Alexandra Jones is a member of the HSR Technical Advisory Group. The Technical Advisory Group had no role in study design, data analysis, decision to publish, or preparation of the abstract.

Further collaborators (include furhter co-authors if they exceed the permitted number): NA