



Five year review of the Health Star Rating system

August 2017

The Dietitians Association of Australia (DAA) is the national association of the dietetic profession with over 6000 members, and branches in each state and territory. DAA is a leader in nutrition and advocates for food and nutrition for healthier people and healthier nations. DAA appreciates the opportunity to provide feedback on the five year review of the Health Star Rating system by the Health Star Rating Advisory Committee.

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DAA interest in this consultation

DAA is the peak professional body for dietitians in Australia and responsible for the Accredited Practising Dietitian (APD) program as the basis for self-regulation of the profession.

DAA advocates for a safe and nutritious food supply in which the community has confidence and which meets the nutritional needs of all Australians, including groups with special needs.

As experts in nutrition, APDs assist the general population and groups with special dietary needs to meet their nutritional needs. APDs also assist with the translation of food labels and nutrition content claims.

Recommendations

DAA has provided recommendations in response to the questions posed by the Health Star Rating Advisory Committee (HSRAC). A summary of the key recommendations is as follows:

- DAA recommends the Health Star Rating (HSR) system should be better aligned with the Australian Dietary Guidelines (ADGs). A number of issues have been identified and discussed in response to the questions posed by the HSRAC: currently, whole fruit, vegetables and nuts do not score well; some minimally processed products are disadvantaged (due to inability to be reformulated, or as unpackaged, whole foods are unable to carry a HSR), while some discretionary foods are scoring too highly.
- DAA would like to see the HSR algorithm modified to correct issues of high-scoring discretionary products or lower-scoring core food products. The current HSR of some food products is inappropriate, largely due to a single nutrient, however this ignores the overall health impact and how the food fits within the context of the overall diet.
- DAA recommends greater consumer education efforts are required, particularly regarding how the HSR system is to be used (comparing products within a food category), and in alignment with the ADGs.
- DAA notes the action taken on reported anomalies by the HSRAC to date has not been adequate and reported issues are not being acted on. DAA recommends greater publicly available detail on the rationale for HSRAC determination on anomalies should be provided in future.
- DAA notes the HSR is not to advise on the healthiness of a diet, however DAA also notes there has been little investment in the ADGs which do advise on diet. This limits the public health benefits associated with the HSR system. DAA recommends greater investment in the promotion of the ADGs by the

Department of Health, and particularly, the promotion of the two public health strategies in tandem.

Discussion

1. Are there any significant barriers or limitations to including the HSR system on packaged foods? If yes, please describe and provide examples.

DAA acknowledges the HSR system can be useful but it is also complex. The system is not a complete solution to assisting consumers in making healthier food choices.

DAA is pleased to see an increase in the uptake of the HSR across an increased number of products on supermarket shelves. Overall, it would be ideal for all packaged food products to carry a HSR.

The HSR is not a complete solution for choosing foods that are aligned with the ADGs. The HSR system was designed for use on packaged, processed products not unpackaged, whole foods such as fruit, vegetables and nuts, and therefore, does little to encourage consumption of core foods. Overall, DAA notes there has been little investment by the Department of Health in promotion of core foods or healthy dietary patterns as outlined in the ADGs.

DAA sees there are some limitations to including the HSR on various packaged foods and would like to highlight two issues to address:

- Inclusion of fruit, vegetables and nuts in the HSR system
- Scoring of oils high in unsaturated fatty acids.

Fruit, Vegetables and Nuts

DAA recommends that it is imperative that fruit, vegetables and nuts be better incorporated into the HSR system, which would correct some existing anomalies and better align with the ADGs. DAA would like to see fruit, vegetables and nuts carry the HSR in some form as a priority.

More often fruit, vegetables and nuts are now sold in packages as a way for businesses to differentiate and innovate since reformulation is not an option. Such products include pre-cut fruit and vegetables, ready-made salads in bowls, nuts in bags, as well as canned, dried and frozen fruit and vegetable options. Some manufacturers are already including HSRs on these products.

Fruit, vegetables and nuts are also considered a home brand or private label of supermarkets, and most supermarkets include the HSR on all packaged private label brands, thus packers of fruit and vegetables, as well as nuts, are being asked

to include a HSR on the label. DAA recommends that all such core food products should, in some form, carry a HSR to encourage consumption, however also note a possible unintended consequence that must be dealt with may be an increase in packaging of fresh produce to allow a HSR to be displayed, which DAA does not encourage.

An example of a way that fruits and vegetables could be promoted more widely in the community under the HSR messaging comes from some research that has been undertaken in Australian IGA supermarkets by Deakin University researcher Adrian Cameron (1). Posters were displayed, with the 5 Health Stars, indicating “All fresh fruit and vegetables are a healthy choice.” The effect of these posters on the sale of fruit and vegetables were evaluated separately and showed a small positive change (+0.3%) when comparing the pre- to post period change in intervention, and compared to control stores. Furthermore, this signage is continuing to be used by retailers to indicate that fresh fruit and vegetables are a 5 star choice (Appendix 1). This research also looked at in-store shelf tag signage for packaged fruit and vegetable products, including frozen and canned fruit and vegetables, and resulted in a +0.8% change in sales (1). Improvements in sales of fruit and vegetables would likely be higher if such an initiative were widely adopted and accompanied by a social marketing campaign promoting fruit and vegetables as 5 star choices.

DAA notes not all fruits and vegetables score a 5 HSR in the current system. Most fruit lose 0.5 stars due to the natural sugar content, and many vegetables and nuts lose 0.5 to 1 star due to lower fibre content or a higher natural sodium or saturated fat content.

DAA supports fruit, vegetables and nuts carrying a HSR and have outlined recommendations throughout our response to this public consultation to overcome some current limitations, including recommending a policy ruling for all minimally processed fruit and vegetables to carry a 5 HSR.

Oils

DAA supports consumption of oils high in monounsaturated and polyunsaturated fatty acids, consistent with the ADGs (2). However, the anomaly that sees a number of oils receive more stars than extra virgin olive oil may potentially be misleading and confusing to consumers. This is a limitation to including the HSR on oils, as whilst the main intent may be to assess the saturated fat content in the oil, this does not take into consideration the scientific evidence which has proven the health benefits of mono- and polyunsaturated oils, including extra virgin olive oil. For example, the PREDIMED Mediterranean Diet study was a large, long-term clinical trial following some 7,400 participants for 4.8 years on average, over 16 study centres in Spain (3). The study compared two Mediterranean diets – one with 50ml of extra virgin olive oil a day, and the other with 30g of mixed nuts a

day - with a reduced fat diet (3). The ethics committee ceased the study early due to the results they found. Those consuming nuts and extra virgin olive oil had reduced risks of several chronic diseases, such as heart disease, diabetes, metabolic syndrome and overall mortality, compared to those following the reduced fat diet (3). The researchers have published over 240 peer reviewed papers on the study and they highlight the importance of unsaturated fats, as well as polyphenols and other phytochemicals found in plant foods.

This HSR system ignores all other positive nutrients for oils and only assesses them on saturated fat content. This is a misleading assessment as these oils have positive health effects despite their saturated fat content. A solution may be to include positive nutrients such as monounsaturated and polyunsaturated fats, and polyphenols into the HSR algorithm. DAA is aware that high saturated fat dairy products, that are eligible to make nutrient content claims for calcium, are categorised differently. DAA proposes a similar option for oils (refer to DAA response to Question 6).

Furthermore, while avocado, macadamia, peanut and olive oils score 2.5 to 3.5 HSRs in the fats category, reduced fat monounsaturated margarines are able to score a 4 HSR through reformulation. This is a limitation to these oils scoring a comparable HSR as they cannot be reformulated. The ADGs clearly state in Guideline 3:

*Replace high fat foods which contain predominantly saturated fats such as butter, cream, cooking margarine, coconut and palm oil **with foods which contain predominantly polyunsaturated and monounsaturated fats such as oils, spreads, nut butters/pastes and avocado** (2).*

In this regard, the HSR system is doing little to encourage Australians to achieve Guideline 3 of the ADGs.

A consumer education campaign may clarify some of these issues around oils such as healthy fats, healthier choices within the oils category and types of fats.

2. Thinking about making comparisons between products in the supermarket, how appropriately are consumers using the HSR system? Please provide comments.

Evaluation of the HSR system by the Heart Foundation in July 2016 (4) showed the majority of consumers are not using the system correctly in relation to comparing products across different categories. However, they are using it appropriately to compare products within the same category.

Specifically, the Heart Foundation progress report found 58% of consumers agreed with the statement that the HSR makes it easier for them to compare

products that are in different categories in the supermarket (4). Seventy-two per cent agreed it helped them compare products within the same category (4).

These figures indicate the majority of consumers are not fully aware of how to appropriately use the HSR system. A more visible consumer education campaign may assist with consumer understanding.

3. Has stakeholder engagement to date been effective in providing information about the system and addressing stakeholder implementation issues? Please describe how, including examples where appropriate.

Stakeholder engagement through industry workshops have been beneficial to raise key issues with the HSR algorithm and the implementation strategy.

4. How effective has the implementation of the HSR system to date been in meeting the overarching objective of the HSR system? Please rate below.

Tick box 4 – Satisfactory.

The implementation of the HSR system has been effective in meeting some of the overarching objectives as listed. DAA has provided further details regarding each objective below:

Objective 1. Enable direct comparison between individual foods that, within the overall diet, may contribute to the risk factors of various diet related chronic diseases;

There is some concern that many consumers may not be aware that the HSR is a measure of relative nutritional value of individual foods *within* food product categories, and instead interpret it as a measure across all food product categories. The Heart Foundation progress report (July 2016) (4) showed 58% of consumers agreed with the statement that ‘Health Stars make it easier for me to compare products that are in the different categories in the supermarket,’ indicating confusion does exist in this area. Furthermore, it may be unclear for consumers that the HSR can be carried on processed, packaged products only.

A consumer education campaign should be considered to minimise consumer confusion. DAA suggests that an education campaign could increase awareness about making healthier choices *within* a food product category (e.g. juice A versus juice B) and within the context of the *overall diet* – encouraging fresh foods like fruits, vegetables and nuts (e.g. making a snack choice where fruit, vegetables and nuts are available as a choice).

DAA notes the term “processed packaged food” may also need to be reconsidered, as more foods are being processed and packaged for convenience

such as fruit, vegetables and nuts. If the scope of the HSR were expanded to include minimally processed whole foods, the education campaign would need to reflect this.

Objective 2. Be readily understandable and meaningful across socio-economic groups, culturally and linguistically diverse groups and low literacy/low numeracy groups;

DAA supports the HSR system as an easy way to compare products at a glance. It is positive that the system is a visual and evaluative system, which the research shows helps consumers make fast and effective product comparisons. In a study by Talati et al., participants preferred the HSR system regardless of age, gender or socio-economic grouping (5). It has also been shown that consumers would prefer one, consistent labelling system across all packs, with multiple and inconsistent systems perceived as more difficult to understand (6). However, only 54% of Australians and 47% of New Zealanders surveyed by CHOICE felt they had a good understanding of the HSR (7).

In 2015, a gap in awareness of the HSR was evident between low socio-economic status (SES) and medium-high SES groups, with lower-SES groups and those speaking languages other than English at home being more likely to be uncertain of how to use the HSR (8). More recently, a report by CHOICE indicated that recognition of the HSR varies by income category, with less people on lower incomes having seen the HSR compared to those on higher incomes (7). DAA recommends further research be undertaken to explore whether the HSR is meaningful across culturally and linguistically diverse groups and low literacy, low numeracy groups. The next Australian Bureau of Statistics Health Survey plans to assess health literacy in 2018, which has not been completed since 2006. DAA suggests this may also be an opportunity to assess Australians' literacy of the HSR system.

Furthermore, as previously outlined, DAA suggests an education campaign specifically targeting these sub-groups is warranted and would be beneficial.

Objective 3. Increase awareness of foods that, within the overall diet, may contribute positively or negatively to the risk factors of diet related chronic diseases.

As previously outlined, DAA recommends unpackaged whole foods which are physically unable to carry a HSR, such as fruit, vegetables and nuts, should still be able to be promoted as part of the HSR system. Furthermore, clarification is also needed regarding discretionary foods which may carry a HSR.

Consumers may be confused about a discretionary food choice carrying a HSR. For example, consumers have questioned how potato chips and foods high in sugar can receive high HSRs (7). Talati et al., reported that study participants spontaneously queried the appropriateness of the HSR on discretionary foods,

such as ice-cream, chocolate and chips (5). It was noted that participants expressed beliefs that they purchased discretionary foods for non-health-related reasons and that due to their unhealthy nature it was pointless to search for healthier alternatives (5). On the other hand, the HSR can offer consumers guidance on making a healthier choice between similar food products.

DAA recommends a modified approach for discretionary foods is required so the HSR system is better aligned with the ADGs. Increased consumer awareness of the importance of core foods and the health impacts of discretionary foods is needed. DAA has made recommendations regarding discretionary foods in response to Questions 5 and 6.

5. Do you think the HSR currently scores foods appropriately? Please provide evidence to support your response.

DAA does not believe that the HSR always scores all foods appropriately. By way of example, a variant of Naturally Nood Bars made up of 50% cashews and 50% dates, scores a 4 HSR (9). While this is an example of a healthier food choice with only whole food ingredients, the saturated fat component of the cashews and/or sugar component of the dates prohibit the bar scoring a 5 HSR without diluting the content of the nuts or the dates (e.g. with a refined carbohydrate product).

This highlights just one example of where foods are not scored appropriately. Further examples and have been described below, to highlight some of the key issues:

Fruit, Vegetables and Nuts

DAA acknowledges the HSR may only be carried on processed, packaged products, however as previously outlined, DAA suggests it is imperative that fruit, vegetables and nuts are acknowledged within the HSR system.

DAA recommends fruit, vegetables and nuts which are minimally processed but still whole foods (for example, products bagged, sliced, portioned, etc.) should carry a 5 HSR, achieved via a policy decision where all unprocessed fruit, vegetables and nuts automatically receive a 5 HSR (as is currently the case for water).

This approach may also assist with correcting some other anomalies within the Fruit, Vegetables and Nuts Category:

- Orange juice (100% fruit juice) scores a 5 HSR which is higher than a whole orange which scores a 4 HSR. Whilst these examples are across food categories, consumers may still be confused as to how a fruit juice can score higher than a whole piece of fruit.

- Prunes and plums, fresh and dried apricots score a 4.5 HSR, but grapes and sultanas do not – with grapes scoring a 4.5 HSR and sultanas (dried grapes) scoring only a 3 HSR. Research shows that dried grapes fit within the context of a healthy diet (10) and do not cause dental caries as once thought (11). Dried grapes should be treated like prunes and dried apricots with a consistent HSR.
- It can be seen that all fruit loses half a star due to sugar content, except for raspberry, lime and passionfruit, while vegetables also tend to lose half a star for numerous and varying reasons, e.g. celery loses half a star due to a higher natural sodium content. These inconsistencies are nonsensical and provide evidence that the HSR system does not always score foods appropriately.
- Macadamia and brazil nuts lose 1 to 1.5 stars because they are naturally higher in saturated fat, despite the research showing that both macadamia and brazil nuts, help lower blood cholesterol, regardless of their saturated fat content (12).

These types of examples of unfitting scoring may raise doubt and distrust of the HSR system in consumers' minds. DAA suggests modifications to the scoring and algorithm to amend these types of issues and allow core foods to use the HSR system. This will ensure the HSR system is more consistent, trustworthy, and may help to reduce consumer confusion.

Whole Grains

DAA suggests recognition of the nutritional value of whole grains when determining a product's HSR should be considered. Currently, whole grain content of foods is not factored into the HSR algorithm. This is despite the ADGs encouraging Australians to "*Eat a variety of grain foods, mostly wholegrain and/or high fibre varieties*" (2), which reflects the evidence that whole grain intake is associated with reduced risk of chronic diseases.

DAA is aware foods may already be scored on fibre content, however recognising whole grain content of foods in the HSR system could preferentially advantage core foods with whole grains and/or may have the potential to encourage reformulation toward higher whole grain content of foods, which may offer additional health benefits. Based on the 2011-13 Australian Health Survey, analysis of Australians' whole grain intakes concluded 73% of all participants aged ≥ 9 years did not reach the whole grain Daily Target Intake of 48g specified by some groups (13). Recognising the nutritional value of whole grains in the HSR algorithm would improve alignment with the ADG to "*Eat a variety of grain foods, mostly wholegrain and/or high fibre varieties*" and may assist consumers to meet recommendations to eat more whole grains.

Discretionary foods

DAA is concerned that some discretionary foods (as classified within the ADGs) currently carry a high HSR.

A research report from Dunford et al., showed that the HSR system generally aligned with the ADG concepts of core and discretionary foods, with core foods scoring 3.5 to 5 HSRs and discretionary foods scoring 0.5 to 3.5 HSRs (14). The report showed that 79% (n=4883) of foods and beverages classified as core foods scored ≥ 3.5 HSRs, however 14% (n=760) of discretionary foods and beverages also scored ≥ 3.5 HSRs (14). Therefore, it can be seen that improvements in appropriate scoring could be made for discretionary foods. A list of ‘outliers’ (i.e. discretionary products that scored ≥ 3.5 HSRs) is available from Dunford et al., with product categories (and the percentage of outliers in that category) summarised below (14):

- Snack bars (24%)
- Dairy desserts (47%)
- Ice blocks & ice-creams (11%)
- Coated frozen fish (97%)
- Oven baked potato products (100%)
- Processed meats (30%)
- Salty snacks, chips, pretzels (41%)

DAA would like to highlight that to align with the ADGs, discretionary foods should not make up a substantial portion of the total diet, yet they currently provide up to one third of the total daily energy intake of Australians (15).

A recent study by Peters et al., showed that using added sugars in the calculation of the HSR score resulted in improved discrimination between core and discretionary foods when compared to using total sugars, however there were still overlaps with some discretionary foods receiving high HSRs (16).

Whilst a possible solution to the challenge of appropriately scoring discretionary foods has been raised as applying a ‘ceiling’ or ‘cap’ on the HSR that a discretionary food can receive, DAA notes this poses its own challenges in that there is no clear definition of “discretionary foods” given in the ADGs. Furthermore, it has been noted, “The HSR may be useful for some discretionary food categories to indicate a healthier choice within the category. However, as these products are not required to be consumed as part of a nutritious diet, caution should be taken when applying a HSR cut-off to discretionary categories as the overall goal is to limit their consumption” (14).

Therefore, DAA recommends the HSR system/algorithm be revised to better reflect the ADGs in regards to discretionary foods.

Added vs. Naturally-occurring sugars

Further to the point regarding added sugars, DAA notes some foods that are high in added sugars, but low in saturated fat and sodium are scoring too highly. In addition, by using total sugars in determining the HSR of a food, intrinsic sugars

naturally present in fruits, vegetables and dairy products are considered in the same way as sugars added during food processing (16), contributing to "negative" sugar points.

The World Health Organisation Guideline on sugar intake for adults and children focuses on limiting free sugars, noting their association with poor dietary quality, obesity and chronic disease risk (17). Free sugars refer to "monosaccharides (such as glucose or fructose) and disaccharides (such as sucrose or table sugar) added to foods by the manufacturer, cook or consumers in addition to sugars naturally present in honey, syrups and fruit juices and fruit concentrates" (17).

This approach is also aligned with that taken in the European nutrient profile model (18) and US Food and Drug Administration changes to the Nutrition Facts Label where added sugars must be displayed on the label from June 2018 (19).

DAA recommends the distinguishing between natural and added sugars in the HSR algorithm. This would enable manufacturers to appropriately determine the amount of sugar in a fruit flavoured yoghurt, for example, while the natural sugars in the milk and the fruit would not contribute negative points to the HSR. This would also provide more clarity for consumers in making a purchase decision between different breakfast cereals which contain dried fruit or added sugar. It may also help address the problem of unprocessed fruit not achieving a 5 HSR due to its natural sugar content.

6. Can you suggest how the algorithm and/or the generation of a star rating might be improved? Please provide worked examples illustrating the effect of any modifications you propose.

DAA has outlined below some suggestions for how the algorithm can be improved:

- Unprocessed/minimally processed fruit, vegetables and nuts should all receive a 5 HSR. As previously outlined, this could be achieved by a policy decision to automatically grant these products a 5 HSR (as is currently the case with water).
- Currently the HSR calculator defines 10 HSR calibration categories (based on the Australian Guide to Healthy Eating), which are associated with 6 HSRC categories. We note that "non-core foods" are included in the same HSRC category as core cereals, fruit, protein and vegetables (Appendix 2). DAA recommends non-core foods be considered in a separate category with point allocations specific to this category. In order to determine which products should be classified as "non-core", DAA suggests utilising the principles and cut-off points used for the *Discretionary Food List* from the Australian Health Survey 2011-13, which was developed based on the ADGs (20).

- A review of ‘outliers’ (i.e. high-scoring discretionary products or lower-scoring core food products) within each category will assist in generating a more appropriate HSR for some products. For example, as previously discussed regarding oils, extra virgin olive oil scores less than a number of other mono- and polyunsaturated oils. This is potentially misleading consumers to think it is a less healthy option, when in fact all monounsaturated and polyunsaturated fats are recommended for use in small amounts by the ADGs, outlined in Guideline 3 (2). The ADGs list a number of sources of oils that are equally healthy options (2). In determining the HSR for oils, it is apparent that the differentiating factor is saturated fat (SAFA) content since energy density is the same for all oils (3400kJ/100g) (refer to Appendix 3). Therefore, DAA suggests the allocation of points for SAFA content be revised in order to ensure a consistent HSR across all mono- and polyunsaturated oils. Alternatively, additional nutrients such as monounsaturated fats, polyunsaturated fats and polyphenols could be included in the algorithm to ensure minimally processed oils score a higher HSR.
- The algorithm for sugar could be improved by differentiating between natural and added sugars or assigning points for added sugars only. For this purpose, added sugars could be defined in line with the US FDA definition of added sugars (21) which includes guidance on treatment of fruit juices and fruit concentrates, and is based on the WHO recommendation to reduce added sugars in the diet.
- To recognise the nutritional value of whole grains in the scoring system, a possible mechanism is to include whole grain content in the algorithm along with %FVNL. DAA recognises that - like fruit, vegetable, nut or legume content of food – whole grain content contributes to fibre content of foods and has potential to contribute to F point. However, while FVNL content of foods contributes to HSR V points, whole grain content does not contribute to V points.

7. Is the HSR Calculator easy for industry to use? If not, why not.

DAA notes that product category classification is not always clear when using the HSR calculator. Providing more examples or descriptions of the range of foods that fit into each category, in the online and excel version, would improve ease of use. Beyond this, the HSR calculator is easy to use and the provision of the excel version is beneficial to industry.

As mentioned in DAAs response to the consultation on the form of the food (as prepared) rules for the HSR system, a potential issue with using the HSR calculator is that a product’s HSR category may change based on whether it is calculated as sold or as prepared (e.g. a chocolate powdered drink based on as sold may be categorised as non-core; as prepared it may be categorised as a beverage or dairy beverage). Updating the HSR calculator to ensure HSR category

classification is clear should be considered based on the outcomes from the consultation on the form of the food (as prepared) rules for the HSR system.

8. Are the process and guidance documents for the HSR system (HSR system Style Guide, Guide for Industry to the HSR Calculator, artwork file, anomaly process and dispute process) adequate and do they provide clear guidance? Please provide detail and examples to support your answer, and rate any of the materials you are familiar with.

The HSR system Style Guide, Guide for Industry to the HSR Calculator and artwork file are adequate and provide clear guidance. The dispute process appears adequate, however DAA notes the HSR website has not published a de-identified register of disputes on their website, so further comment is limited.

The anomaly process is adequate to instigate a process to review anomalies, however DAA is concerned that the HSRAC determination process is not adequately considering underlying issues with the algorithm. The rejection of most of the anomalies to date and no further action planned on these is concerning as many of these issues reported as anomalies are important issues with the HSR system, and may be indicative of issues requiring review. Provision of greater publicly available detail on the rationale for HSRAC determination on anomalies should be provided in future. This would assist all stakeholders to better understand the basis of the HSRAC determination and also clarify precedent on these determinations, minimising duplication.

9. Do you think the informative elements provide additional useful information to consumers? If not, why not? Please provide evidence to support your response.

The informative elements provide additional useful information, however it is not clear whether industry is using these options, whether this information is understood, or if it is being used by consumers to inform better decisions on food choices. Capturing their use and impact on consumer decision making should be considered in ongoing research and evaluation of the HSR system.

The additional informative elements allow flexibility for industry to express additional information to consumers.

10. Is the HSR graphic easy to understand for all consumers, including people from a non-English speaking background and those with low levels of literacy? If not, why not?

Evaluation of the HSR by the Heart Foundation in July 2016 showed the majority of consumers are not using the system correctly (refer to response to Question 2) (4). This questions the current level of understanding of the HSR graphic and how to use it appropriately by consumers. DAA feels the investment in promotion of the system and public education on how to use the system to date has been inadequate. An example being the key message of ‘*the more stars, the healthier the choice*’, does not make it clear that it is based on comparing foods within one category and consumers may think that by buying all 5 HSR foods they are assured of eating a healthy balanced diet.

There is evidence that the HSR system, among other easily accessible front of pack labelling schemes, may assist consumers to make healthier food choices (22), however DAA recommends that a greater level of investment in consumer education and awareness is needed to ensure the HSR graphic is recognised, understood and is used appropriately by consumers to inform healthier choices.

12. How effectively are the key messages of the HSR system communicated to different stakeholders (consumers, industry, government and public health groups)? Please clearly outline whether your response relates to the Australian or New Zealand campaign.

This response relates to the Australian campaign.

The high degree of misunderstanding about use of the HSR to compare products across different categories (as outlined in the response to Question 2), indicates the key messages of the HSR system are not being communicated effectively to consumers. In addition, 17% of consumers report that they believe they can eat as much as they like of a product that contains a higher star rating (4). This message is contrary to the ADGs which recommend choosing amounts of food to meet energy needs, in order to achieve and maintain a healthy body weight (2).

The key messages for industry are unclear. The information for industry on the HSR website lacks context and while it provides clear steps on how to calculate the HSR and how to apply it on packaging, there are no other key messages that link the program to its overall aims and objectives.

There is evidence that industry is reformulating foods to increase the HSR of a product, however in some cases, the reformulation leads to lower nutrient density, therefore not aligning with the intention of the ADGs. An example is the reformulation of a nut and seed bar to reduce the concentration of nuts and seeds while increasing the amount of starch in the product. This reduces the energy and saturated fat content of the formulation, which may be beneficial for those looking for lower kilojoule products, but may not be useful for promoting higher nutrient intakes. This indicates that the key messages of the program ‘*the*

more stars, the healthier the choice' may not be in alignment with industry efforts to reformulate. Furthermore, some products are being misclassified to enable the use of a different algorithm that in turn leads to a higher HSR. For example, spreads that have been classified in category 3, rather than category 2, therefore obtaining a 5 HSR – rather than a lower HSR. This nullifies the benefits of within category comparisons and indicates more detailed guidance may be required for industry around product classification and program intention.

DAA does not feel that public health groups and health practitioners have been communicated to effectively. As experts in nutrition, Accredited Practising Dietitians assist the general population and groups with special dietary needs to meet their nutritional needs, and also assist with the translation of food labels. It is therefore imperative that more effective communication on the key messages of the HSR system is provided to health professionals and public health groups, such as DAA.

13. Are the government communication resources and materials for the HSR system useful and meaningful i.e. campaign material, stakeholder kit, website, fact sheets etc.? Please note whether these resources are part of the marketing campaign in Australia, New Zealand, or both.

These answers are based on the Australian campaign.

While it is commendable to have a single, simple message such as *'the more stars, the healthier the choice'*, this message becomes complex when considering the quantities of a single food which may be included in the diet. Consumers eat foods in combination and to make up their total dietary pattern. For, example, the addition of a very small quantity of a poorly rated product to an otherwise healthy meal (e.g. the inclusion of a tablespoon of cream in a pasta dish made with wholemeal pasta, vegetables and fish) may not make the meal a poor choice overall. The overall dietary pattern is the most important consideration when promoting healthy eating. The HSR system is therefore not necessarily meaningful when considered in the context of the overall diet.

The single food approach is also highlighting a number of anomalies which are undermining consumer confidence in the HSR system and can contribute to consumer confusion, rather than providing clarity.

There is insufficient emphasis in the campaign materials given to the inclusion of unpackaged whole foods, many of which are core foods, as a way of achieving a healthy eating pattern. For example, all whole fruit, vegetables and nuts are considered valuable additions to the diet yet may be rated with variation (as outlined in response to Questions 4 and 5).

14. Do you think there are additional opportunities to monitor the HSR system? If so, please provide examples of what the opportunities are, and how additional monitoring may be conducted

Ultimately the aim of a front of pack labelling system is to improve the health of the population and, in particular, to assist with reducing rates of chronic disease, overweight and obesity. Awareness of the HSR is a limited way of evaluating the effectiveness of the program as the more packaging that carries the HSR the greater awareness. This does not necessarily translate into a change in behaviour or an improvement in weight status or nutritional intake. DAA recommends these endpoints require evaluation in order to determine if the system is making a difference.

15. Do you consider the operational structure of the HSR system, including the effectiveness of HSRAC and the New Zealand HSR Advisory Group and their associated working / sub groups, appropriate?

DAA considers the operational structure of the HSR system, including the effectiveness of HSRAC and the New Zealand HSR Advisory Group and their associated working / sub groups, appropriate. However, greater communication and transparency of the anomalies process and outcomes need addressing and may require appropriate staffing.

17. To what extent do you agree that the HSR is, or has the potential to be, a successful public health intervention? If not, why not?

DAA is supportive of front-of-pack labelling, and suggest the HSR system has the potential to be a successful public health intervention if the areas for improvement outlined in our response to this consultation are addressed.

- As the best available scientific evidence on the types of foods, food groups and dietary patterns that aim to promote health and wellbeing, reduce the risk of diet-related conditions and chronic disease (2), greater alignment with the ADGs is needed. This includes consideration of whole foods, such as fruit, vegetables and nuts, in the HSR system.
- Additionally, the HSR algorithm should be modified to correct issues of high-scoring discretionary products or lower-scoring core food products. This includes consideration of added sugars, as opposed to total sugars, and additional nutrients such as monounsaturated and polyunsaturated fatty acids (as outlined in response to Questions 5 and 6).

- As outlined, the current system may be confusing and misleading for consumers, and research has shown that consumers are not using the HSR system appropriately. DAA would like to see greater consumer education efforts regarding how the HSR system should be used (comparing products within food a category), and promotion of the ADGs to guide selection of healthy food choices. This consumer education should also be appropriate across socio-economic groups, culturally and linguistically diverse groups and low literacy and low numeracy groups.

18. Does the HSR graphic help consumers choose healthier foods? If not, why not?

DAA recognises there is evidence that a star rating system, among other easily accessible front of pack labelling systems, can assist consumers to make healthier food choices (22, 23). Despite lacking in adequate promotion of the HSR system, DAA also recognises the HSR system is aligned to suggested best practice front-of-pack labelling systems, as recommended by the US Institute of Medicine (24).

However, to date, the effect the HSR system has on consumer food choices or overall diet quality is not clear. The evaluation of the HSR by the Heart Foundation in July 2016 showed the majority of consumers are not using the system correctly (outlined in response to Question 2) (4). Furthermore, a survey of 1200 consumers recruited on exit from supermarkets in New Zealand in 2016 found that the presence of the HSR label had a significant depressive effect on consumer preference (25).

This early research on the HSR system indicates consumer misunderstanding about use of the HSR. This highlights the need for a greater level of investment in promotion of the HSR system and a consumer education campaign for appropriate use among consumers.

In addition, DAA recommends further, ongoing research is needed to evaluate consumer understanding, and the impact of the HSR system on food choices of consumers.

19. Do you think the HSR will encourage positive reformulation of foods by industry? Please provide evidence supporting your response.

The HSR has the ability to encourage positive reformulation of food by industry, however it equally has the ability to encourage negative reformulation. One example, as outlined in response to Question 5, is a variant of Naturally Nood Bars made up of two whole food ingredients only (50% cashews and 50% dates), yet this bar scores a 4 HSR (9). The saturated fat component of the cashews and/or sugar component of the dates prohibits the bar scoring a 5 HSR without diluting

the content of the nuts or the dates (e.g. with a refined carbohydrate product). This simple, whole food bar is an example of a healthier food choice given it contains only whole food ingredients and no additives. Alternatively, nut bar manufacturers have also explained that reducing the nuts in bars and replacing them with high glycemic index rice puffs enabled them to score a higher HSR.

These examples highlight an unintended consequence of the HSR algorithm, when the focus is solely on nutrients and not the whole food matrix. Diluting nutrient-rich, whole food ingredients with nutrient-poor, processed ingredients should not be the solution to improving the HSR of a product.

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Appendix 1: In store signage at IGA stores stating that ‘All fresh fruit and vegetables are a healthy choice’ with the logo of Health Star Rating – 5 stars



Source: Cameron AJ. Nudging supermarket customers toward healthy eating. Australian and New Zealand Obesity Society Annual Meeting, Invited Speaker, Brisbane 2016.

Appendix 2: Health Star Rating Calibration Categories*

HSR Calibration Category from the AGHE groups	The associated HSRC Categories for the categories to the left
Beverages, non-dairy	1 - Beverages
Core Dairy - beverages	1D - Dairy Beverages
Core Cereals	2 - Food
Fruit	2 - Food
Non-core foods	2 - Food
Protein	2 - Food
Vegetables	2 - Food
Core Dairy - yoghurt, soft cheese	2D - Dairy Food
Fats, oils	3 - Oils and spreads
Core Dairy - cheese	3D - Cheese and processed cheese

*Adapted from MS Excel version of HSR Calculator

Appendix 3: Saturated fat (SAFA) points, total points and HSR calculation

Oil type	SAFA content (g/100mL) ^a	SAFA points	Total points ^b	Star rating	Corresponding points range
Almond	5.5	5	15	4.5	14-16
Blended mono	6.3	6	16	4.5	14-16
Canola	6.7	6	16	4.5	14-16
Safflower	8.6	8	18	4	17-20
Sunflower	9.8	9	19	4	17-20
Grapeseed	10.5	10	20	4	17-20
Maize	12.1	12	22	3.5	21-23
Macadamia	12.5	12	22	3.5	21-23
Soybean	13.5	13	23	3.5	21-23
Blended poly	14.0	14	24	3	24-27
Sesame	14.0	14	24	3	24-27
Olive	14.1	14	24	3	24-27
Peanut	16.6	16	26	3	24-27
Rice bran	21.1	21	31	2	31-34

^a NUTTAB 2010.

<http://www.foodstandards.gov.au/science/monitoringnutrients/nutrientables/nuttab/Pages/default.aspx>

^b all SAFA points +10 (for kJ > 3350/100mL) as all oils have 3400kJ/100mL

SAFA points, total points and HSR calculated according to 2016 Guide for Industry