

# Response to Food Standards Australia New Zealand call for information: Nutrition Labelling - Health Star Rating and Nutrition Information Panel

17 January 2025



## **Acknowledgement of Country**

The George Institute for Global Health acknowledges the traditional owners of the lands on which we work, in particular the Gadigal people of the Eora Nation, on which our Sydney office is situated, and the Wurundjeri people of the Kulin Nation, where parts of this submission were written. We pay our respects to Elders past, present and future. We value and respect the ongoing connection of Aboriginal and Torres Strait Islander peoples to Country and seek to work in partnership with communities to deliver better health outcomes.

### About the George Institute for Global Health

The George Institute for Global Health is a leading global medical research institute, founded in Sydney, Australia, and with major centres in China, India and the UK. Our mission is to improve the health of millions of people worldwide, particularly those living in resource-poor settings, by challenging the status quo and using innovative approaches to prevent and treat non-communicable diseases.

Our Food Policy Team works in Australia and overseas to reduce death and disease caused by poor diets. The team conducts multi-disciplinary research with a focus on generating outputs that will help government, industry and communities to deliver healthier food environments for all.



## Introduction

The George Institute welcomes this opportunity to provide information to Food Standards Australia New Zealand (FSANZ) about two nutrition labelling systems operating in Australia and New Zealand, the Health Star Rating (HSR) and Nutrition Information Panel (NIP). Consumer engagement with and trust in nutrition labelling is important to achieve its public health and consumer objectives, in alignment with strategic guidance for the Australian and New Zealand food regulatory system agreed by Food Ministers.

Evidence suggests that HSR is readily understood by consumers but some outstanding issues affect confidence in the system, while the NIP is trusted but not easily used. The two labels have complementary but separate regulatory objectives. The HSR provides simple at-a-glance information on overall nutritional quality, interpreting key aspects of the NIP to help consumers follow diets in line with dietary guidelines, but poor uptake has hindered its effectiveness and industry involvement has undermined consumer confidence. The NIP provides detailed nutrition information to those who choose and are able to use it, as well as a transparent foundation for implementing and monitoring HSR and other important policies to improve the healthiness of dietary patterns and reduce risks relating to diet-related diseases.

Based on the totality of existing evidence, we believe a mandatory, strengthened HSR on the front-of-pack remains the priority action for improving the interpretive value of food labels to promote public health and consumer objectives.

The George Institute is available to discuss issues related to HSR and NIP in further detail with FSANZ, particularly regarding the evidence available to date and any gaps.

### A mandated and strengthened Health Star Rating system

We support the food regulatory system's proactive efforts to plan for the future of the HSR system. We note that the significant existing body of high-quality evidence on HSR's performance and potential and considerable innovation in front-of-pack nutrition labelling (FOPNL) globally in recent years offer clear lessons for any reform.

Consumers want to see the HSR label on all eligible products. Mandating HSR is the most important step to support informed consumer choice and maximise public health impact, given voluntary uptake by industry has demonstrably failed. The introduction of a mandatory HSR should not be delayed once results against the final uptake target (70% in Nov 2025) are considered by Food Ministers. We understand that a formal proposal on the future of HSR will only be raised by FSANZ once uptake is discussed by Ministers in early 2026, and that that proposal will be completed by the end of 2026. To encourage engagement and support, we suggest that timeframes for this process be formalised by Ministers and communicated to stakeholders. Once a decision by Ministers to approve a change to regulatory standards to mandate the HSR takes place in 2026, an implementation period of two years (i.e. 2028) will be feasible to allow for packaging to be updated. This will ensure that, 14 years after the introduction of HSR, consumers will finally be shown HSRs on all eligible products and can begin to make easy and informed comparisons of product healthiness in supermarkets.

Options to strengthen the HSR system to better support consumers in following healthier diets and encourage meaningful industry reformulation are readily available, including improvements to governance, the underlying nutrient profiling model, and visual display elements. Some of these additional reforms could occur during the preparatory phase and others could be set down for future action. These improvements are essential to maintain system performance, support



consumer use, understanding and confidence in the system, address "outlier" products that receive a high score despite unhealthy content, and better ensure the system functions as a public health and consumer empowerment measure.

### A Nutrition Information Panel that supports a range of direct and indirect uses

Australians and New Zealanders generally trust the NIP, and in its current form it aligns with global standards. The NIP can directly help consumers with making choices, and it also supports implementation and monitoring of a range of public health and consumer policies. These indirect uses of the NIP may provide more substantial and equitable benefits across the population, particularly for those consumers less likely to understand some aspects of nutrition labels. The retention of the NIP on packaging is critical for these purposes, and we consider that the NIP is not in need of fundamental reform.

Some gaps and concerns remain, however. In particular, while Australian and New Zealand dietary guidelines recommend avoiding sugars added to foods, the NIP currently does not allow consumers to identify products containing or high in added sugars. The absence of added sugars in the NIP also undermines its inclusion in other policies, including HSR and reformulation initiatives. Prior work by FSANZ on added sugars offers guidance for refining the definition and presentation of added sugars information in the NIP but does not warrant abandoning this key priority for Food Ministers that will clearly support public health and consumer outcomes. Public health and consumer groups remain available to work through outstanding issues to support progress on added sugars labelling.

We also consider that consumers' interests would be best served by a simple NIP that does not include any interpretive information. Competing and potentially conflicting, confusing and misleading information can undermine the utility of the NIP, as well as the HSR. However, changes to the presentation of the NIP, such as minimum size and standardised or high-contrast (but non-interpretive) colour requirements, could facilitate consumer awareness and use. Equivalent, readily accessible displays of the NIP should also be required in any retail setting prior to purchase, including online.



## **Question 1:**

Do you have any information and/or evidence which may support FSANZ in undertaking the preparatory work on the Health Star Rating (HSR) system? For example, information or evidence on the following topics would be useful:

- (a) consumer use, understanding and trust in the HSR
- (b) influence of the HSR system on consumer perceptions of food and purchase intention
- (c) elements of the HSR that work well for consumers
- (d) elements of the HSR that work well for industry
- (e) challenges with consumer use of the HSR system
- (f) challenges with industry implementation of the HSR system
- (g) potential impact on consumers of mandating the HSR system
- (h) potential impact on industry of mandating the HSR system (including product reformulation)
- (i) potential impact on enforcement activities of mandating the HSR system.

The George Institute provides the following evidence to support FSANZ's preparatory work, using the provided examples as headings as far as practicable.

### (a) consumer use, understanding and trust in the HSR

Key messages from the evidence:

- Consumers can generally use and understand HSR
- Consumer trust must be supported by mandating and strengthening HSR

In 2019, to support the HSR five-year review, The George Institute systematically summarised evidence up until that point on consumer understanding and use of HSR (1). This included 26 peer-reviewed papers and government-commissioned reports, using a range of methods, examining the efficacy of the HSR label in supporting consumer choice. Most of this research identified the HSR graphic as easy for consumers to understand and use. The HSR graphic was found to be more likely to be understood and to influence product selection then the NIP, health and nutrient content claims, and alternative FOPNL designs including the Multiple Traffic Light (MTL) and industry-preferred Daily Intake Guide. Several studies confirmed these results in children. Experimental findings were consistent with government-commissioned monitoring, where between two-thirds and three-quarters of consumers consistently self-reported HSR was easy to understand and use.

More recent publications support these findings. Several more recent publications on HSR understanding and use are captured in a recent global systematic review (2) commissioned by the WHO to support draft guidelines on nutrition labelling (3). For example, many consumers support HSR as a tool to enable more informed and healthier choices and consider it simple and easy to use (4). In 2024, FSANZ also found that consumers consider HSR amongst the most important labels for making food choices (5).

Surveys conducted as part of official monitoring during the initial five-year implementation period showed trust in HSR in Australia increased from 38% to 61% between 2015 and 2018. In New Zealand, trust remained at 40% in June 2019 (all survey results synthesised in (1)). In 2024, FSANZ found trust was at 55%, although higher amongst lower income households, which is positive given the disproportionate burden of diet-related disease in this group (5).

Existing evidence provides clear suggestions for how trust could be addressed and improved, particularly by making HSR mandatory, improving transparency and enhancing government



leadership (6, 7). FSANZ has previously suggested that consumer distrust of HSR may be due to beliefs that it is not adequately regulated by government (5).

The transition to a mandatory scheme provides an ideal opportunity for refinements to HSR's governance structures to improve government leadership and continue to build consumer trust. Substantive measures to achieve this include increased public visibility of government leadership and reduced industry involvement (8), as part of overall improved governance processes. HSR is one of the few FOPNL systems globally that has allowed industry to be an active collaborator in policy development and decisions regarding design and implementation (9). Consistent with recent Codex Guidelines on FOPNL (10), HSR should be government-led in consultation (but not necessarily collaboration) with other stakeholders. A transition to a mandatory scheme under improved government leadership must be reflected in revised terms of engagement with other stakeholders. Changes that may be particularly important to restore consumer trust are ensuring that timely future reviews of the HSR algorithm are conducted by independent committees without industry representation or links, given the potential for real and perceived commercial conflicts of interest in decisions on how foods are scored. This shift is aligned with WHO recommendations for best-practice FOPNL (11).

### (b) influence of the HSR system on consumer perceptions of food and purchase intention

Key messages from the evidence:

- There is some evidence on HSR's impact on choice and purchasing, though real-world impacts are likely to have been constrained by HSR's limited uptake
- In particular, mandatory HSR is required to allow consumers to avoid unhealthy foods

Our 2019 synthesis of existing HSR evidence found that consumers consistently self-reported being influenced by HSR when shopping (1). It also included several studies that inferred a shift towards purchasing of more healthy food or beverage choices when compared to no FOPNL, and suggested HSR was a significant attribute driving product choice even where there were coexisting health-claims, or other forms of nutrition information and marketing on the label. However, randomised controlled trials examining the impact of FOPNL in the real world on purchases identified no effect of HSR on the healthiness of food purchases (2), despite participants' stated preference for the HSR label.

More recently, researchers have used Nielsen Homescan data to examine trends in product purchasing associated with HSR. A New Zealand study found that introduction of HSR was associated with lower sodium, lower protein and higher fibre purchases when purchased products carrying a HSR were compared with the same products prior to the introduction of the program, but did not find robust evidence of HSR labelling changing consumer purchasing behaviour; rather, this change was attributed to reformulation (12). In Australia, data from 2014-2018 purchases suggested that once a substantial number of packaged food products adopted HSR, there was an increasing trend in the healthiness of purchases. Households that purchased a higher proportion of HSR-labelled products had healthier purchases overall, and healthier purchases were more common in categories where HSR had higher rates of adoption (13).

These promising signs notwithstanding, real-world evidence of HSR impact has likely been constrained by poor uptake, particularly on low-scoring products. George Institute independent monitoring published in November 2024 found that HSR uptake remained at only 36% (14). In 2023, New Zealand independent monitoring found uptake of 30% only (15). These findings are broadly consistent with government's 2023 results of 32% and 30%, respectively (16).

The impact of HSR on consumer perceptions and purchase of unhealthy foods is further limited by particularly poor uptake on low-rated products. Only 24% of products displaying an HSR of 3 or less display the label, compared to 53% of products scoring 3.5 or more (17). Ongoing poor and uneven uptake of HSR limits consumers' ability to meaningfully use the label.



### (c) elements of the HSR that work well for consumers

Key messages from the evidence:

• Consumers generally like HSR and value its potential benefit as a tool to support more informed and healthier choices

As outlined in (a) above, consumers can generally understand and use HSR. They value it as a simple and easy to use tool, and consider it among the most important labels for making food choices. The value placed by consumers on HSR has also been shown to a lead to an increased willingness to pay more for products displaying the HSR label (18, 19).

### (d) elements of the HSR that work well for industry

The George Institute elects not to respond to this question.

#### (e) challenges with consumer use of the HSR system

Key messages from the evidence:

- Poor and uneven uptake of HSR has limited consumer use of the system, and will only be remedied by a mandatory system
- The HSR algorithm works well overall, but an independent process must be established as part of regulatory reforms to review the algorithm periodically to promote consumer trust and ongoing use
- The HSR graphic could be made more visible and salient to consumers by strengthening specifications for its display, including in online settings
- Consumer use and trust could be improved by refinements to HSR's governance arrangements to improve transparency and enhance visible government leadership

As noted above in (b), the biggest challenge to consumer use of the HSR system has been the fact that it remains missing from most foods. Evidence of slow and uneven uptake suggests this will only be remedied by mandating the system.

Another challenge to consumer use is confidence in the HSR algorithm. Systematic evidence suggests the HSR algorithm works well overall, despite sustained media attention on high profile "outliers" high in salt, sugars and unhealthy fats and/or that contain non-sugar sweeteners but receive high scores. There is some objective evidence of positive health outcomes associated with HSR (20). Other assessments of algorithm's performance depend greatly on the "pass" HSR set as a threshold, with some studies showing that HSR aligns reasonably well with both the Australian Dietary Guidelines (ADGs) (21) and NOVA classification of product processing (22), while others identify greater misalignment with the ADGs and NOVA under the current HSR nutrient profiling model (23, 24). Existing evidence provides recommendations on how to improve aspects of HSR's algorithm, including changes to include added sugars (25, 26) and ultraprocessing (27). It is also worth reconsidering some proposals raised during the HSR five-year review but not progressed due to industry concerns. In particular, the following have evidentiary merit: reverting the protein tipping point to the original NPSC threshold, aligning penalties for high sodium content to updated nutrient reference values, and reassessing the balance of points awarded for "positive" components to ensure these do not unduly offset high amounts of harmful components (28). Updating the relationship between points received under the algorithm and the final HSR score ("scaling") to reflect the more comprehensive product data now available, account for a changing food supply, and support HSR's public health and consumer objectives could also be further investigated as this was not adequately explored during the five-year review (28). The recent Nutri-Score update (29) provides guidance on updates to the HSR nutrient profiling model that could usefully improve its ability to achieve public health outcomes including



accounting for non-sugar sweeteners in beverages; notably, Nutri-Score is the only nutrient profiling model for which there is substantial criterion validation evidence (20).

While a full review of the algorithm may not be on FSANZ's agenda prior to mandating, it is essential that regulation for a mandatory HSR includes establishment of a process for independent, regular reviews of the algorithm post-transition to a mandatory system to ensure that the system remains up to date with a changing food supply and evolving nutrition science.

Display specifications for the HSR graphic could be improved to enhance salience, visibility and ease of interpretation for consumers. HSR remains the only FOPNL worldwide that does not specify a particular colour for use (9). This can result in industry selecting colours that are less visible, or placing less favourable HSRs on pack in a manner that conceals this info from consumers (e.g. choosing an insufficiently contrasting colour). Existing Australian evidence suggests display could be improved by using mandatory interpretive colours within the HSR star graphic and removing the additional 'tail' component to improve consumer understanding (30, 31). Other countries have also specified uniform placement requirements on pack (e.g. top half of pack in Canada, top right corner for Nutri-Score (9)), while the current draft FOPNL proposed by the US Food and Drug Administration would require placement of the label in the top third of the packaging, based on evidence showing this would improve consumer attention, reaction time, and label understanding (32). Many countries also signal government-ownership of the label within the label design (e.g. 'Ministry of Health' in Chile, 'Health Canada' in Canada's warning label, 'FDA.gov' in the USA's proposed label). This addition could be considered to improve visible government leadership and strengthen consumer trust.

The equivalent display of HSR should also be required in all relevant retail environments and visible prior to purchase. As per recently adopted Codex guidance on labelling in e-commerce settings (33), this should include online supermarkets, where currently the provision of HSR lags even further behind that of physical supermarkets (34).

As noted above in (a), consumer confidence in HSR could be enhanced with the improvements we have recommended in this submission.

### (f) challenges with industry implementation of the HSR system

Key messages from the evidence:

• Widespread and rapid labelling change is possible when required by law

Widespread and rapid labelling change is possible when required by legislation/regulation. In the same period that HSR uptake has stagnated, 93% of product labels were updated to apply a new mandatory Country of Origin label in Australia (35). Compliance reached 90% within three years of Country of Origin label implementation. Across the majority of these products, businesses elected not to update packaging to apply HSR at the same time. This suggests that the cost of any labelling change is not the primary determinant of whether industry will act, but rather it is a combination of regulatory requirements and commercial considerations.

In 2023, a government survey of industry found significant self-reported resistance to displaying the HSR system voluntarily, for reasons including that products would receive low scores and competitors were not displaying the label (16). Respondents noted that uptake could be effectively increased through mandating the system.

#### (g) potential impact on consumers of mandating the system

Key messages from the evidence:

- The majority of consumers support a mandatory HSR; mandating will provide them the benefit of improved information
- Mandating provides an opportunity to improve consumer understanding and use, particularly if supported by a well-funded and strategic campaign



Ensuring HSR/interpretive FOPNL is displayed on all products is widely supported the community (7, 36-38). A mandatory HSR will provide consumers the benefit of HSR information on a huge number of new products, particularly those with lower scores. It will enhance their capability to make meaningful comparisons between foods in all categories.

Mandating and strengthening HSR provides an opportunity to engage the public and improve consumer awareness, use, understanding and trust. Previous education campaigns have been limited by "modest" funding, leading to limited reach and improvement in awareness (1). The call to action of previous campaigns to use HSR to make healthier choices has also been problematic given the HSR remains missing from the majority of products. Education could include mass media campaigns as well as in-store advertising. Retailers may be ideal partners in these efforts given their wide reach and demonstrated commitment to HSR.

# (h) potential impact on industry of mandating the system (including product reformulation)

Key messages from the evidence

• There is already evidence of some reformulation in a voluntary HSR system, with modelling suggesting this would increase if the system were mandated

There is evidence that a voluntary HSR has led to some improvements in product composition (39-41), although impacts are likely constrained by HSR's limited uptake to date. Modelled estimates show the effectiveness and cost-effectiveness of reformulation occurring under a voluntary HSR, although it was also found that a mandatory HSR would result in considerably greater benefits (42). Additional data on estimated health impacts of reformulation due to HSR is due to be reported shortly (43).

### (i) potential impact on enforcement activities of mandating the HSR system

Key messages from the evidence

• Mandating HSR could require increased compliance activity and a coordinated approach across governments, but there are ways to do this in a feasible and efficient manner

An improved monitoring system has been identified as a key reform to improve the effectiveness of HSR (8), and coordinated and effective monitoring will support enforcement. Monitoring must be conducted independently, regularly and rigorously across the food supply to be effective. However, effective independent monitoring of uptake and compliance is resource-intensive. Reliance to date on industry self-reporting may undermine the utility of the data received (in terms of completeness and timeliness) while still requiring considerable resources for stakeholder engagement, infrastructure development, data entry and quality checks.

A centralised monitoring mechanism could support the efficiency of state and territory food authority responsibilities. Systems for monitoring could involve post-market surveillance through a central product database and the introduction of a pre-market registration and/or approval model.

An existing comprehensive, regularly updated and accurate system for monitoring labelling on packaged products in supermarkets is available in both Australia (FoodSwitch) and New Zealand (Nutritrack), which could be strategically used by monitoring and/or enforcing agencies to assess uptake overall and the accuracy and display of HSRs on individual products. Data from these sources could be integrated into FSANZ's Branded Food Composition Database to improve efficiencies given ongoing limitations with that dataset.

Examples of a pre-market registration scheme include Singapore's government-led FOPNL (44, 45) and Nutri-Score in the European Union (46).

The existence and demonstrated application of meaningful and timely enforcement measures (e.g. public notices of non-compliance, financial or other sanctions) will also incentivise



compliance. Enforcement of HSR could remain with the home jurisdictions of the manufacturer/distributor of non-compliant products under relevant Food Acts, with dedicated lines of responsibility for reporting and action clearly set.

### (j) other key insights not covered by FSANZ's suggested example headings

Key messages from the evidence:

- Front-of-pack nutrition labelling is a World Health Organization "best buy" policy
- At least 15 countries now have mandatory front-of-pack nutrition labels

Front-of-pack nutrition labelling (FOPNL) is listed as a WHO "best buy" policy for preventing and controlling non-communicable diseases (47). Global evidence indicates that interpretive FOPNLs (e.g. HSR) perform better than non-interpretive FOPNL, and that mandatory FOPNL are more likely to be effective than voluntary policies (2). A total of 15 countries currently have mandatory FOPNL, with mandatory FOPNL to shortly come into effect in another two countries and a further six countries having some other form of mandatory interpretive nutrition labelling (48). Best-practice principles for developing FOPNL that achieves public health and consumer outcomes have been developed by WHO (11).

# **Question 2:**

Are there specific areas you would like FSANZ to focus on for the HSR preparatory work?

- 1. Mandating and strengthening HSR will be essential to maintain and improve its performance and consumer use, to better ensure the system functions as a public health and consumer empowerment measure.
- 2. The significant existing body of high-quality evidence on HSR's performance and potential, as well as the considerable innovation in FOPNL globally in recent years, offers clear guidance for reform to ensure HSR better meets its public health and consumer objectives. Drawing on this evidence to identify improvements and their impacts will be critical to avoid unnecessary duplication and delay. Any further consumer research conducted or directed by FSANZ should focus on any gaps in the existing evidence base and not re-evaluate the performance of the HSR system overall.
- 3. We recommend the following focus areas for FSANZ to improve HSR's public health and consumer impacts:
  - a) Ensure that preparatory work required to mandate HSR progresses urgently and ahead of any review of the NIP. Within the broader package of work proposed by FSANZ, we believe the biggest potential benefits to consumers will be delivered by mandating the HSR. Changes to the current NIP format are not needed to mandate HSR.
  - b) Start work early on cost/benefit analysis, using the range of existing data available. This work must incorporate the ample existing evidence of the performance and potential of HSR, particularly the failures of a voluntary system and the benefits of a mandatory system. Cost/benefit analysis must recognise that even small shifts in dietary intakes can have considerable effects on risk of disease and associated costs at a population level. A break-even analysis similar to that recently used for infant formula and pregnancy warning labels may be appropriate. We advise caution when assessing industry self-reporting their potential costs, preferences and intentions given the inherent conflict between the objectives of HSR in providing transparency and promoting healthier options and the commercial imperatives of those who profit from the sale of unhealthy products.
  - c) Work with other relevant government stakeholders to revise and strengthen HSR governance. The available evidence, as well as recommendations from WHO and



Codex best-practice guidance, suggest that to renew consumer trust, these changes should increase visible government leadership and improve the independence of key scientific processes, particularly processes for review of the nutrient profiling model. Similar to the laudable process instituted by the for the review of the 2013 Australian Dietary Guidelines, any algorithm review committee must not include industry representation or links. It is also critical that new safeguards be introduced to protect the future operation of this important public health policy from being undermined by those with commercial conflicts of interest. While it remains appropriate to consult relevant parties on potential reforms, a mandatory HSR should be genuinely government-led without reliance on collaboration from other groups.

- d) Test and where appropriate update visual elements of the label to improve salience and visibility for consumers. Existing peer-reviewed evidence suggests improvements here would include mandating interpretive colours (green, orange and red) in the HSR star logo. They would also include removing the additional "tail" of nutrient icons, given the potential of these additional and selectively applied voluntary claims to mislead consumers and detract from HSR's overall goal of providing simple, summary information. Lessons from FOPNL developments in Europe and Canada suggest uniform placement and size requirements will also help consumers locate and use the HSR. Including a statement that HSR is government owned, similar to Chile's 'Ministry of Health' or Canada's 'Health Canada' labels, could better signal government leadership of the scheme through label design. Finally, ensuring that HSRs are displayed prominently in online retail environments will be important given the growth of this mode of shopping.
- e) Establish and embed a process for independent periodic review of the algorithm to ensure the system remains up to date with a changing food supply, scientific evidence and dietary guidance. Changes that address high-profile anomalies, particularly products high in salt, added sugars and unhealthy fats that dietary guidelines advise against but continue to receive high HSRs, would support public trust and public health outcomes. These reviews must be independent and transparent, led by government with input from independent experts without real or potential commercial conflicts of interest. Algorithm reviews should occur periodically e.g. every five years, and the regulatory instrument chosen must facilitate regular updates.
- f) Consider the appropriate legal frameworks or regulatory mechanisms to mandate and strengthen HSR, including to ensure that it can be periodically updated as necessary, as well as matters such as funding, enforcement and regulatory oversights. This should aim to support the capacity of the HSR system to achieve public health and consumer objectives into the future.



### **Question 3:**

Do you have any information and/or evidence which may support FSANZ in undertaking the holistic review of the NIP? For example, information or evidence on the following topics would be useful:

- (a) consumer use, understanding and trust in the NIP
- (b) elements of the NIP that work well for consumers
- (c) elements of the NIP that work well for industry
- (d) elements of the NIP that work well for enforcement purposes
- (e) challenges with consumer use of the NIP
- (f) challenges with industry implementation of the NIP

(g) challenges with enforcement of the NIP or its use to support enforcement of other labelling elements

The George Institute provides the following evidence to support FSANZ's preparatory work, using the provided examples as headings as far as practicable.

### (a) consumer use, understanding and trust in the NIP

Key messages from the evidence

- Consumers can understand the NIP and trust it
- There is some evidence that the NIP may improve the healthfulness of food choices

A recent, comprehensive systematic review of global evidence found nutrient declarations (NIPs) improved consumer understanding of the nutritional quality or contents of foods, and may also improve the healthfulness of food choices (49). In Australia and New Zealand specifically, FSANZ recently found that Australian and New Zealand consumers identify the NIP as the most trusted and important nutrition label (5).

### (b) elements of the NIP that work well for consumers

Key messages from the evidence:

 Through its role in promoting transparency in the food supply, the NIP provides important benefits to consumers beyond direct use

Beyond direct consumer use, the NIP is imperative to support FOPNL, diminish the promotional effects of marketing tactics including claims (49), and incentivise reformulation, all of which have benefits to consumers.

It also provides a mechanism to support monitoring and enforcement of policies intended to improve dietary patterns including HSR, the Healthy Food Partnership, school and hospital food retail policies, and potential restrictions on marketing (although some gaps remain, see below). These indirect uses of the NIP can provide substantial and more equitable benefits across the population, particularly for those consumers less likely to understand some aspects of nutrition labels. Any review should account for the value of the NIP as a foundation for these broader policy benefits.

### (c) elements of the NIP that work well for industry

Australia and New Zealand's NIP is currently aligned with existing Codex Guidelines on Nutrition Labelling (10), which facilitates trade.



### (d) elements of the NIP that work well for enforcement purposes

As noted above at (b) the NIP is an important transparency and accountability mechanism for a variety of policies that rely on data on product composition, however some gaps remain (see further below in challenges).

### (e) challenges with consumer use of the NIP

Key messages from the evidence:

- Consumers are currently not provided with information on added sugars to make informed choices in line with dietary guidelines. The omission of this information from the NIP also limits its inclusion in other relevant policies (e.g. HSR, reformulation).
- Current methods of displaying sub-components of macronutrients (e.g. saturated fat as a component of total fat, added sugars as a component of total sugars) could be enhanced
- Consumers are largely missing NIPs in online/digital environments
- Other existing labelling elements (e.g. recommended dietary intake amounts, voluntary claims) have potential to undermine understanding and use of the NIP
- Addition of further interpretive information in the NIP may undermine consumer understanding and trust

Work on added sugars labelling must be carried forward in this holistic review. In 2019, Food Ministers noted that quantifying added sugars in the NIP would best provide adequate contextual information about sugars to enable consumers to make informed choices in support of dietary guidelines (50). In 2021, FSANZ reported that quantifying added sugars in the NIP presented some complexities but no technical barriers were found (51)(Food Standards Australia New Zealand 2021), although subsequent "complexities and challenges" have delayed progress on incorporating added sugars in the NIP (52). Existing work by FSANZ on added sugars, including more recent consumer research (53), offers guidance for refining the definition and presentation of added sugars information in the NIP in the context of a broader review, but does not warrant abandoning this key priority for Ministers and public health and consumer groups. The inclusion of added sugars in back-of-pack nutrition information labels is mandated elsewhere, and some products available in Australia and New Zealand are already displaying this information, whether through inclusion in equivalent nutrition declarations for overseas markets or by choice through the NIP; some domestic products are including both added sugars and "natural sugars" in the NIP. Researchers from The George Institute have presented a sophisticated method for estimating added sugars content and applied it >25,000 products, including for different variations of a definition of added sugars (54). This work can support further refinement of the definition and could also potentially support jurisdictions with future enforcement. The use of the new added sugars definition for claims in the Food Standards Code leaves significant gaps and thus cannot be utilised for other policy initiatives.

Current methods of displaying sub-components of macronutrients e.g. saturated fat as a component of total fat, and potentially added sugars as a component of total sugars, may not be clear (53), and could be enhanced to improve consumer understanding and use. Back of pack nutrient declarations in the European Union and USA include the terms "of which"/"includes" (e.g. "Total sugars x grams, of which/includes added sugars x grams", "Total fats x grams, of which/includes saturated fats x grams") to address this.

Consumers are largely not provided with NIPs in online/digital environments, meaning people are not given this useful information prior to purchase (Maganja et al. 2023). Draft Codex guidance supports the provision of nutrition information prior to purchases in online retail settings (33).

Other existing labelling elements have potential to undermine use and understanding of the NIP by misleading or confusing consumers. Within the NIP these include recommended dietary intake/percentage daily intake (RDI/%DI) information, where inconsistent serving sizes create



difficulties in comparing products and extrapolating the information provided in the context of a full diet. The regulatory nutrient reference values that underpin this information are also out of date and not based on the best available scientific evidence, limiting their value to consumers. The issue of serving size was recognised by Heartward Strategic in their 2024 work for FSANZ (53). Other issues raised in that work included the display of small NIPs or NIPs that are not appropriately distinguished against background packaging, making them illegible to many (53); Codex guidance supports setting display requirements, including for size and contrast, to ensure legibility (55). Others have also previously noted the dual use of kilojoules (a metric measure used in dietary guidelines and nutrient reference values) and calories when quantifying energy content in the NIP (56), which may be a concern given industry propensity to highlight the smaller value (i.e. calories) in the NIP and associated product marketing.

Beyond the NIP, health, nutrition and generic product claims can interfere with consumer use and understanding of other labelling (49), while health claims or information about other desirable product characteristics can also be communicated to consumers through product names and branding. Such marketing, advertising and promotional tactics are a key barrier to consumers' ability to understand and interpret the NIP and make food choices that align with dietary guidance. This competing and prominent information is highly influential and can distract and mislead consumers about the full nutritional profile of the food.

Consideration of any additional interpretive elements in the NIP must be weighed against the potential for these to undermine existing high consumer understanding and trust. Additional interpretive elements can provide further, potentially conflicting, information that may undermine consumers' capacity to make quick, accurate assessments of product healthiness (57). Previous consumer research suggests that multiple sources of interpretive information can be difficult to reconcile, compared to a summary indicator such as HSR (58).

We believe a mandatory, strengthened HSR on the front-of-pack remains the priority action for strengthening the interpretive value of food labels.

### (f) challenges with industry implementation of the NIP

The George Institute elects not to respond to this question.

# (g) challenges with enforcement of the NIP or its use to support enforcement of other labelling elements

Little information is publicly available about enforcement activity related to the NIP or other labelling elements. While FSANZ provides information on calculating the NIP, little guidance on allowable tolerances and errors in these calculations is provided. No outcomes of recent assessments of compliance and/or irregularities have been publicly reported, but an earlier study identified considerable inaccuracies (59). While early incarnations of the Food Standards Code specified allowable tolerances of 10% and 20% for declarations in the NIP (depending on nutrient), these are no longer included, despite Codex guidance indicating that tolerances should be set for reasons including "public health concerns" (55). One clear challenge for using the NIP to enforce HSR is that the NIP does not include all elements relied upon by the HSR algorithm (particularly FVNL, sometimes fibre).

### **Question 4:**

Are there specific areas you would like FSANZ to focus on for the review of the NIP?

1. The retention of the NIP on packages is essential. The above points indicate that the NIP is not in need of fundamental reform, and should not be modified for use as an additional interpretive tool. Any potential changes must be able to demonstrate additional benefits



while supporting both high consumer trust and utility to other important consumer and public health policies.

- 2. At a minimum, the NIP must retain mandated information on the content per 100g/mL of energy (expressed as kilojoules only), protein, total fat, saturated fat, carbohydrates, total sugars and sodium. Recommended mandatory additions to improve transparency and support monitoring and enforcement of other policies include added sugars, dietary fibre and total trans fats. Standardised, appropriate and realistic serving sizes could be mandated if content per serve is permitted to be displayed. We propose removing permission to display energy expressed as calories, permission to voluntarily include additional information in the NIP (except where required to substantiate claims), and any RDI/%DI information.
- 3. The mandatory quantification of added sugars in the NIP is the key change supported by public health and consumer groups and we strongly call for this to be retained in any holistic review. Incorporating added sugars into the NIP will better help consumers to choose products in alignment with dietary guidelines and incentivise industry reformulation. Challenges and potential solutions identified by FSANZ to date in this work must be revisited in the refreshed context of the holistic review. Public health and consumer groups remain available to work with FSANZ on solutions to issues, including:
  - a) Single-ingredient foods, which constitute a very small proportion of the food supply
  - b) The policy implications of different added sugars definitions, and the imperative to adopt a comprehensive definition that provides relevant information to consumers, is future proof, avoids the creation of regulatory loopholes and gaps, and does not confer health haloes, to maximise public health and consumer benefits
  - c) Methods of improving presentation of added sugars information in the NIP to facilitate consumer understanding
- 4. Changes could be made to help improve consumer understanding of how subcomponents of macronutrients contribute to total contents. The addition of the terms "of which" or "includes" (e.g. "Total sugars x grams, of which/includes added sugars x grams", "Total fats x grams, of which/includes saturated fats x grams"), as used on back of pack nutrient declarations in the European Union and USA, would clarify and improve understanding of this critical information, and may be particularly important to support the inclusion of added sugars.
- 5. The purpose of HSR is explicitly to interpret the NIP. To avoid undermining this purpose, and in line with the NIP's primary utility in providing detailed nutrition information, we recommend FSANZ limit time and resources dedicated to investigating additional interpretive elements on the back of pack. We recommend against the addition of new interpretive elements in the NIP, and also recommend the removal of RDI/%DI information (as stated at 2.2 above). We would prioritise review and potential removal of other competing claims on pack over this work given the impact of these claims on disrupting consumer use, understanding and trust in HSR and the NIP.
- 6. Changes to the visual display of the NIP could facilitate consumer awareness and use. To improve salience and visibility, requirements for physical packaging could include a minimum size, larger fonts and standardised or high-contrast (but non-interpretive) colours. Equivalent, readily accessible and visible displays of NIPs should be required in any retail setting prior to purchase, including the growing online retail space.



7. Stipulating mandatory maximum tolerances for nutrient declarations in the NIP, and monitoring and enforcement of compliance with those requirements, would help ensure that the information provided in the NIP is reasonably accurate. Accurate NIPs are essential, for example, to accurate calculation of HSR. Public confidence in the NIP would also be supported by transparent reporting of the results of monitoring and enforcement of these requirements.

# **Question 5:**

Do you have any information or evidence that specifically considers how the HSR system and the NIP can complement and support each other?

- 1. The purpose of the NIP and HSR and the objectives of this review must be clarified and communicated. Our understanding is that HSR is intended to provide simple at-a-glance information on overall nutritional quality, interpreting the NIP. The NIP provides detailed nutrition information to those who elect to use it. These accord with WHO guidance on the purposes of different nutrition labels (3, 60). The NIP also provides a transparent foundation for implementing and monitoring HSR and other important policies to improve the healthiness of dietary patterns and reduce risks of diet-related disease.
- 2. A mandatory and improved HSR that appropriately interprets the information in the NIP to support consumers to follow diets in line with dietary guidelines should be the priority outcome of this package of work. While some changes to the NIP could improve motivated consumers' ability to understand and use it, summary information given on the front of the pack is more prominent and influential. As such, it is critical to improve consumer access to and trust in HSR through mandating and strengthening the system as suggested above.
- 3. Changes to the NIP are not required to mandate HSR as it currently operates. This review of the NIP should not delay implementation of a mandatory HSR.
- 4. Other issues discussed above that refer to both the NIP and HSR include:
  - a) Incorporating added sugars into both the NIP and HSR. There is evidence that including added sugars in the HSR algorithm would improve its performance, but doing so requires that added sugars be quantified in the NIP. Similarly, including added sugars in the NIP provides information that allows consumers to make choices in line with dietary guidelines.
  - b) Removing HSR variants that allow a voluntary "tail" of additional nutrient declarations, which duplicates information available in the NIP.
  - c) Stronger penalisation of high energy, sodium, saturated fat and (added) sugars content in HSR to ensure that products with high levels of these components, as reported in the NIP, do not receive high HSRs. This would reduce consumer confusion and distrust and thereby improve outcomes for both labels, while better supporting consumers to choose products according to dietary guidelines.
  - d) Ensuring the HSR star logo is the only interpretive nutrition labelling allowed on both the front and back of pack. The inclusion of interpretive aspects on pack beyond the HSR can undermine consumer use, understanding and trust in both the NIP and HSR.
  - e) Supporting any changes to the NIP and HSR through an appropriately designed and implemented educational communications campaign will enhance consumer use, trust and understanding as well as broaden nutrition literacy.



f) Introducing, monitoring and enforcing requirements regarding the accuracy of nutrient declarations in the NIP, as discrepancies could substantively affect the calculation of a HSR.

# **Question 6:**

### Other information or evidence

- Consumer engagement with and trust in labelling is important. Trust in labelling is undermined by distrust of industry motivations and perceived inconsistencies in labels or the display of misleading labels (61, 62). Importantly, consumer distrust of labels has been identified as affecting trust in the food system more broadly (62). Government leadership and intervention is key to trust in labelling and is expected by consumers (62). It is therefore imperative to enhance trust in labelling, including NIP, HSR and claims, including through the recommendations we have made in earlier sections.
- 2. We understand that FSANZ is proposing additional consumer research to support both the NIP and HSR work. We note ongoing discussions with FSANZ around best-practice consumer research, and in the context of HSR particularly note that any additional consumer research must build upon and be contextualised within the existing evidence base to add value. We strongly suggest that FSANZ consumer research design, implementation and analysis occurs in consultation with leading researchers from Australia, New Zealand and other jurisdictions leading labelling innovation globally (e.g. France, Mexico) to ensure best practice. Relevant expertise and resources can be identified by FSANZ's Consumer and Public Health Dialogue and Social Sciences and Economics Advisory Group, and may also be facilitated by appointment of new FSANZ Fellows to support this work. Engagement with this expertise, and ensuring that all FSANZ's research is safeguarded from commercial conflicts of interest, will help build public support for FSANZ's advice and decisions. Consumer research could also inform development of NIP and HSR education campaigns that recognise the varied health literacy and diverse needs of the community.
- 3. Australia and France were previously identified as co-convenors of a global network of WHO Member States on nutrition labelling (63). We recommend this group be refreshed and renewed to ensure that Australia and New Zealand can benefit from learnings of other jurisdictions that have recently updated their nutrition labels.



### References

1. Jones A, Thow AM, Ni Mhurchu C, Sacks G, Neal B. The performance and potential of the Australasian Health Star Rating system: a four-year review using the RE-AIM framework. Australian and New Zealand Journal of Public Health. 2019;43(4):355-65.

2. Kelly B, Ng SH, Carrad A, Pettigrew S. The Potential Effectiveness of Front-of-Pack Nutrition Labeling for Improving Population Diets. Annual Review of Nutrition. 2024;44(Volume 44, 2024):405-40.

3. World Health Organization. Online public consultation: draft guideline on nutrition labelling policies 2024 [Available from: <u>https://www.who.int/news-room/articles-detail/online-public-consultation-draft-guideline-on-nutrition-labelling-policies</u>.

4. Pelly FE, Swanepoel L, Rinella J, Cooper S. Consumers' Perceptions of the Australian Health Star Rating Labelling Scheme. Nutrients. 2020;12(3):704.

5. Food Standards Australia New Zealand. 2023 Consumer Insights. Canberra: FSANZ; 2024.

6. Talati Z, Pettigrew S, Hughes C, Dixon H, Kelly B, Ball K, et al. The combined effect of front-of-pack nutrition labels and health claims on consumers' evaluation of food products. Food Quality and Preference. 2016;53:57-65.

7. Pulker CE, Chew Ching Li D, Scott JA, Pollard CM. The Impact of Voluntary Policies on Parents' Ability to Select Healthy Foods in Supermarkets: A Qualitative Study of Australian Parental Views. International Journal of Environmental Research and Public Health. 2019;16(18):3377.

8. Ngqangashe Y, Friel S. Regulatory governance pathways to improve the efficacy of Australian food policies. Aust N Z J Public Health. 2022;46(5):710-5.

9. Jones A, Neal B, Reeve B, Ni Mhurchu C, Thow AM. Front-of-pack nutrition labelling to promote healthier diets: current practice and opportunities to strengthen regulation worldwide. BMJ Global Health. 2019;4(6):e001882.

10. Codex Committee on Food Labelling. XG 2-1985 Guidelines on Nutrition Labelling Rome: Codex Alimentarius Commission; 2021 [Available from: <u>https://www.fao.org/fao-who-</u> codexalimentarius/thematic-areas/nutrition-labelling/en/.

11. World Health Organization. Guiding principles and framework manual for front-of-pack labelling for promoting healthy diets. Geneva: World Health Organization; 2019.

12. Bablani L, Ni Mhurchu C, Neal B, Skeels CL, Staub KE, Blakely T. Effect of voluntary Health Star Rating labels on healthier food purchasing in New Zealand: longitudinal evidence using representative household purchase data. BMJ Nutr Prev Health. 2022;5(2):227-34.

13. Seenivasan S, Nagpal A, Thomas D, Sacks G. Trends (2014-2018) in the healthiness of packaged food purchases of Australian consumers before and after the introduction of voluntary Health Star Rating nutrition labels. Public Health Nutr. 2024;27(1):e144.

14. The George Institute for Global Health. Mandatory Health Star Ratings a must after 10 years of food industry inaction 2024 [Available from:

https://www.georgeinstitute.org/sites/default/files/media-release\_mandatory-health-star-ratings-amust-after-10-years-of-industry-inaction\_web\_final.pdf.

15. Mackay S, Pakenham L, Ni Mhurchu C. Health Star Rating Label Uptake in NZ: Analysis in 2023 relative to target. 2024.

16. Uptake of the Health Star Rating system as at November 2023 2024 [Available from: http://www.healthstarrating.gov.au/internet/healthstarrating/publishing.nsf/Content/01C15064FB523 27BCA25861D00364E60/\$File/Uptake%20of%20the%20Health%20Star%20Rating%20system.pdf.

17. Keaney M, Maganja D, Barrett E, Pettigrew S, Jones A. Selective industry adoption of a voluntary front-of-pack nutrition label results in low and skewed uptake: 10-year results for the Health Star Rating. European Journal of Clinical Nutrition. 2024.

18. Talati Z, Norman R, Pettigrew S, Neal B, Kelly B, Dixon H, et al. The impact of interpretive and reductive front-of-pack labels on food choice and willingness to pay. International Journal of Behavioral Nutrition and Physical Activity. 2017;14(1):171.

19. Cooper SL, Butcher LM, Scagnelli SD, Lo J, Ryan MM, Devine A, et al. Australian Consumers Are Willing to Pay for the Health Star Rating Front-of-Pack Nutrition Label. Nutrients. 2020;12(12):3876.

20. Barrett EM, Afrin H, Rayner M, Pettigrew S, Gaines A, Maganja D, et al. Criterion validation of nutrient profiling systems: a systematic review and meta-analysis. The American Journal of Clinical Nutrition. 2024;119(1):145-63.



21. Jones A, Rådholm K, Neal B. Defining 'Unhealthy': A Systematic Analysis of Alignment between the Australian Dietary Guidelines and the Health Star Rating System. Nutrients. 2018;10(4).

22. Barrett EM, Gaines A, Coyle DH, Pettigrew S, Shahid M, Maganja D, et al. Comparing product healthiness according to the Health Star Rating and the NOVA classification system and implications for food labelling systems: An analysis of 25 486 products in Australia. Nutrition Bulletin. 2023;n/a(n/a).

23. Dickie S, Woods JL, Baker P, Elizabeth L, Lawrence MA. Evaluating Nutrient-Based Indices against Food- and Diet-Based Indices to Assess the Health Potential of Foods: How Does the Australian Health Star Rating System Perform after Five Years? Nutrients. 2020;12(5):1463.

24. Lawrence MA, Dickie S, Woods JL. Do Nutrient-Based Front-of-Pack Labelling Schemes Support or Undermine Food-Based Dietary Guideline Recommendations? Lessons from the Australian Health Star Rating System. Nutrients. 2018;10(1).

25. Menday H, Neal B, Wu JHY, Crino M, Baines S, Petersen KS. Use of Added Sugars Instead of Total Sugars May Improve the Capacity of the Health Star Rating System to Discriminate between Core and Discretionary Foods. J Acad Nutr Diet. 2017;117(12):1921-30.e11.

26. Peters SAE, Dunford E, Jones A, Ni Mhurchu C, Crino M, Taylor F, et al. Incorporating Added Sugar Improves the Performance of the Health Star Rating Front-of-Pack Labelling System in Australia. Nutrients. 2017;9(7).

27. Barrett EM, Pettigrew S, Neal B, Rayner M, Coyle DH, Jones A, et al. Modifying the Health Star Rating nutrient profiling algorithm to account for ultra-processing. Nutrition & Dietetics. 2024;n/a(n/a).

28. mpconsulting. Health Star Rating System Five Year Review Report 2019 [Available from: http://www.healthstarrating.gov.au/internet/healthstarrating/publishing.nsf/Content/D1562AA78A574 853CA2581BD00828751/\$File/Health-Star-Rating-System-Five-Year-Review-Report.pdf.

29. Merz B, Temme E, Alexiou H, Beulens JWJ, Buyken AE, Bohn T, et al. Nutri-Score 2023 update. Nature Food. 2024;5(2):102-10.

Pettigrew S, Dana L, Talati Z. Enhancing the effectiveness of the Health Star Rating via presentation modifications. Australian and New Zealand Journal of Public Health. 2020;44(1):20-1.
Pettigrew S, Jongenelis MI, Jones A, Hercberg S, Julia C. An 18-country analysis of the

effectiveness of five front-of-pack nutrition labels. Food Quality and Preference. 2023;104:104691. 32. US Food and Drug Administration. Food Labeling: Front-of-Package Nutrition Information: A Proposed Rule by the Food and Drug Administration on 01/16/2025 2025 [Available from: <u>https://www.federalregister.gov/documents/2025/01/16/2025-00778/food-labeling-front-of-package-</u> nutrition-information.

33. Codex Committee on Food Labelling. Guidelines on the provision of food information for pre-packaged foods to be offered via e-commerce 2024 [Available from: <u>https://www.fao.org/fao-who-codexalimentarius/sh-</u>

proxy/fr/?lnk=1&url=https%253A%252F%252Fworkspace.fao.org%252Fsites%252Fcodex%252FM eetings%252FCX-714-48%252F%25E2%2598%2585Final%252520Report%252FREP24\_FLe.pdf.

34. Maganja D, Davies T, Sanavio L, Louie JCY, Huffman MD, Trieu K, et al. Current food labelling practices in online supermarkets in Australia. International Journal of Behavioral Nutrition and Physical Activity. 2023;20(1):105.

35. Jones A, Maganja D, Shahid M, Neal B, Pettigrew S. Voluntary versus mandatory food labels, Australia. Bull World Health Organ. 2024;102(10):691-8.

36. Talati Z, Egnell M, Hercberg S, Julia C, Pettigrew S. Consumers' Perceptions of Five Frontof-Package Nutrition Labels: An Experimental Study Across 12 Countries. Nutrients. 2019;11(8):1934.

37. Cullerton K, Baker P, Adsett E, Lee A. What do the Australian public think of regulatory nutrition policies? A scoping review. Obesity Reviews. 2021;22(1):e13106.

38. Yin E, Cameron AJ, Schultz S, White CM, Vanderlee L, Hammond D, et al. Public Support for Nutrition-Related Actions by Food Companies in Australia: A Cross-Sectional Analysis of Findings from the 2020 International Food Policy Study. International Journal of Environmental Research and Public Health. 2023;20(5):4054.

39. Morrison H, Meloncelli N, Pelly FE. Nutritional quality and reformulation of a selection of children's packaged foods available in Australian supermarkets: Has the Health Star Rating had an impact? Nutrition & Dietetics. 2019;76(3):296-304.



40. Bablani L, Ni Mhurchu C, Neal B, Skeels CL, Staub KE, Blakely T. The impact of voluntary front-of-pack nutrition labelling on packaged food reformulation: A difference-in-differences analysis of the Australasian Health Star Rating scheme. PLOS Medicine. 2020;17(11):e1003427.

41. Ni Mhurchu C, Eyles H, Choi Y-H. Effects of a Voluntary Front-of-Pack Nutrition Labelling System on Packaged Food Reformulation: The Health Star Rating System in New Zealand. Nutrients. 2017;9(8):918.

42. Mantilla Herrera AM, Crino M, Erskine HE, Sacks G, Ananthapavan J, Mhurchu CN, et al. Cost-Effectiveness of Product Reformulation in Response to the Health Star Rating Food Labelling System in Australia. Nutrients. 2018;10(5):614.

43. Cleghorn CL, Blakely T, Bablani L, C NM. Estimated health impacts of reformulation resulting from Health Star Rating nutrition labelling in Aotearoa New Zealand. forthcoming.

44. Singapore Ministry of Health. Make a Healthier Choice Today! 2024 [Available from: https://www.healthhub.sg/live-healthy/make\_healthier\_choice.

45. Health Promotion Board. Healthier Choice Symbol 2021 [Available from: https://www.hpb.gov.sg/food-beverage/healthier-choice-symbol.

46. Santé publique France. Nutri-Score 2024 [Available from:

https://www.santepubliquefrance.fr/en/nutri-score.

47. World Health Organization. Tackling NCDs: best buys and other recommended interventions for the prevention and control of noncommunicable diseases, second edition. Geneva: WHO; 2024.

48. World Health Organization. The Global database on the Implementation of Food and Nutrition Action (GIFNA): Front-of-pack and other interpretive nutrition labelling. 2024.

49. Kelly B, Ng SH, Carrad A, Pettigrew S. The Potential Effectiveness of Nutrient Declarations and Nutrition and Health Claims for Improving Population Diets. Annu Rev Nutr. 2024;44(1):441-70. 50. Australia and New Zealand Ministerial Forum on Food Regulation Communiqué 16 August 2019 2019 [Available from:

https://webarchive.nla.gov.au/awa/20230921130821/https://foodregulation.gov.au/internet/fr/publishing.nsf/Content/forum-communique-2019-August.

51. Food Standards Australia New Zealand. Review of nutrition labelling for added sugars Canberra: FSANZ; 2021 [Available from:

https://www.foodstandards.gov.au/sites/default/files/consumer/labelling/Documents/Review%20of% 20nutrition%20labelling%20for%20added%20sugars.pdf.

52. Food Ministers' Meeting communiqué – 28 July 2023 2023 [Available from: <u>https://www.foodregulation.gov.au/activities-committees/food-ministers-meeting/communiques/food-ministers-meeting-communique-28-july-2023</u>.

53. Heartward Strategic. Added Sugar Focus Groups 2024 [Available from: https://www.foodstandards.gov.au/sites/default/files/2024-

08/Added%20Sugar%20Focus%20Groups%20Report%20FINAL%20240618.pdf.

54. Coyle DH, Davies T, Taylor F, Howes K, Pettigrew S, Jones A. Assessing the Policy Implications of Different Definitions for Added Sugars: An Analysis Across the Australian Packaged Food and Beverage Supply. Current Developments in Nutrition. 2024;8(2).

55. Codex Alimentarius. Guidelines On Nutrition Labelling. FAO/WHO; 2021.

56. Watson WL, Chapman K, King L, Kelly B, Hughes C, Yu Louie JC, et al. How well do Australian shoppers understand energy terms on food labels? Public Health Nutr. 2013;16(3):409-17.

57. Talati Z, Pettigrew S, Ball K, Hughes C, Kelly B, Neal B, et al. The relative ability of different front-of-pack labels to assist consumers discriminate between healthy, moderately healthy, and unhealthy foods. Food Quality and Preference. 2017;59:109-13.

58. Talati Z, Pettigrew S, Kelly B, Ball K, Dixon H, Shilton T. Consumers' responses to front-ofpack labels that vary by interpretive content. Appetite. 2016;101:205-13.

59. Fabiansson SU. Precision in nutritional information declarations on food labels in Australia. Asia Pac J Clin Nutr. 2006;15(4):451-8.

