



Government of **Western Australia**
Department of **Health**

WA Healthy Food and Drink School Principal Survey 2022 Report

Prepared by the Chronic Disease Prevention Directorate
Public and Aboriginal Health Division
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Executive Summary

Each year principals are required to complete the Western Australian (WA) Department of Education Healthy Food and Drink School Principal Survey (the Survey). The primary purpose of the Survey is to evaluate compliance with the Department of Education *Healthy Food and Drink in Schools Policy* (HFD Policy), the findings of the survey to inform development and delivery of services provided to schools through programs funded by the Department of Health to support implementation of the HFD Policy.

Two different programs were funded by the Department of Health during 2022. For the first half of the year, 1 January to 30 June 2022, the Department of Health funded the WA School Canteen Association Inc. (WASCA) to provide support to schools to implement the HFD Policy through the Healthy Food and Drink Project (HFD Project). Following a competitive open tender process, Nutrition Australia (VIC) was awarded Department of Health funding to implement a comprehensive whole of school healthy eating program, the Fresh School Nutrition Advisory Program (FreshSNAP), effective as of 1 July 2022.

The mandatory HFD Policy applies to the whole school setting, and all public-school principals are responsible for ensuring their school complies. Canteens, food services, classroom rewards and activities, excursions, camps, and fundraising are all included under the HFD Policy.

In term 4, 2022, the Department of Education sent an electronic communication to all 808 WA public school principals, which sought feedback on the implementation of the HFD Policy and food service practices across the school environment. Eighty-four per cent of schools responded, which was a 5 per cent increase from 2021 and a 12 per cent increase from 2020.

Key findings

Eight hundred and eight schools were invited to complete the 2022 WA HFD School Principal Survey, and 681 schools responded (84 per cent response rate).

Schools with a written policy for the provision of healthy food and drink

- Almost two-thirds of schools (62 per cent) reported having a written policy for the provision of healthy food and drink, 19 per cent were in the process of developing a written policy for the provision of healthy food and drink, 3 per cent were unsure whether they had a policy, and 16 per cent of schools did not have a written policy for the provision of healthy food and drink.
- Five hundred and twelve schools (75 per cent) reported having a canteen/food service. These schools were more likely to have written policy for the provision of healthy food and drink than schools with no canteen/food service (65 per cent compared to 51 per cent respectively; p -value < 0.001). The finding was statistically significant.

Provision of food and drink

- Nearly half (43 per cent) of the schools with a canteen/food service met all requirements of the HFD Policy traffic light criteria, which requires schools to have a menu that offers at least 60 per cent Green food and drink, no more than 40 per cent Amber food or drink (savory commercial Amber foods offered on no more than two days per week) and no Red food or drink.
- Primary schools (22 per cent) were significantly less likely to report offering Red food or drink than high schools (34 per cent; p -value = 0.006) and other schools (33 per cent; p -value = 0.012).
- Regional schools were significantly more likely than metropolitan schools to offer Red food and drink even on an occasional basis (30 per cent and 23 per cent respectively; p -value = 0.044).

Staff training

- Most schools (71 per cent) reported that canteen/food service supervisors had completed traffic light training. Metropolitan schools had higher completion

rates than regional schools (80 per cent compared to 55 per cent; p -value < 0.001). The findings were statistically significant.

- Schools reported that FoodSafe training was completed by 79 per cent of canteen/food service supervisors and 57 per cent of volunteers. Supervisors from high schools were significantly more likely to have completed FoodSafe training compared to primary schools (86 per cent compared to 77 per cent; p -value =0.025).

Promoting healthy eating in schools

- Most schools employed a variety of methods to encourage healthy eating. Only a small portion (3 per cent) did not prioritise or implement specific measures to promote healthy eating.
- The most popular approach adopted by schools, was the implementation of 'healthy eating initiatives such as *Crunch&Sip*® and school kitchen gardens'.

Conclusions

The 2022 WA HFD School Principal Survey results are encouraging; a 5 per cent increase in survey response rates was also observed. Despite changes to the service provider during 2022, 43 per cent of responding schools (with a canteen/food service) met all HFD Policy requirements, which is consistent with 2021 (44 per cent). As only 60 per cent of responding schools participated in 2020 and 2021, direct comparison of previous years is outside the scope of this analysis. While the 2022 survey results are positive, there is room for improvement across all schools to increase compliance. Recommendations are made in the final section of this report.

Background

Childhood obesity is a global issue that has major public health, economic, and social impacts. In Western Australia, over a quarter of children aged 5 to 15 are above a healthy weight ¹. Children develop lifelong dietary patterns from early childhood; the attitudes, beliefs and behaviours they form during this time persist into adulthood ^{2, 3}. Consequently, children who are above a healthy weight are more likely to remain above a healthy weight across the life course. Overweight and obesity can contribute to an increased risk of developing chronic disease, such as heart disease, stroke, type 2 diabetes and several cancers ^{4,5}. Schools have been identified as a key setting to introduce, support, and teach children about healthy eating ^{6,7}. For Australian children, school canteens are the most common source of

¹ Epidemiology Directorate; Department of Health, Western Australia. Health and Wellbeing of Children in Western Australia in 2022, Overview and Trends. 2023. Sourced from:

<https://www.health.wa.gov.au/~media/Corp/Documents/Reports-and-publications/Population-surveys/Health-and-Wellbeing-of-children-in-WA-2021.pdf>

² Pyle SA, Sharkey J, Yetter G, Felix E, Furlong MJ, Poston WC. Fighting an epidemic: the role of schools in reducing childhood obesity. *Psychology in the Schools*. 2006 Mar;43(3):361-76. Sourced from:

<https://onlinelibrary.wiley.com/doi/abs/10.1002/pits.20146>

³ Nicklaus S, Remy E. Early origins of overeating: tracking between early food habits and later eating patterns. *Current obesity reports*. 2013 Jun;2:179-84. Sourced from: <https://link.springer.com/article/10.1007/s13679-013-0055-x>

⁴ Global Burden of Disease 2016 Risk Factors Collaborators. Global, regional, and national comparative risk assessment of 84 behavioural, environmental and occupational, and metabolic risks or clusters of risks, 1990-2016: a systematic analysis for the Global Burden of Disease Study 2016. *Lancet*. 2017;390(10100):1345-422. Sourced from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5614451/>

⁵ Australian Institute of Health and Welfare. Impact of overweight and obesity as a risk factor for chronic conditions: Australian Burden of Disease Study. Canberra: AIHW, 2017. Sourced from:

<https://www.aihw.gov.au/reports/burden-of-disease/impact-of-overweight-and-obesity-as-a-risk-factor/summary>

⁶ COAG Health Council and COAG Education Council. The Good Practice Guide: Supporting healthy eating and drinking at school Published. 2019. Sourced from:

<https://www.health.gov.au/sites/default/files/documents/2022/07/the-good-practice-guide-supporting-healthy-eating-and-drinking-at-school.pdf>

⁷ Commonwealth of Australia 2022. The National Obesity Strategy 2022-2032. Health Ministers Meeting. Sourced from: [National Obesity Strategy 2022-2032 \(health.gov.au\)](https://www.health.gov.au/national-obesity-strategy-2022-2032)

food prepared outside of the home, with children consuming an average of 37 per cent of their daily energy while at school ^{8,9}.

Food and drink available through the school canteen can influence diet and nutrition-related health outcomes including: physical and psychological health, cognitive development, concentration, academic performance and school attendance ^{10, 11}. Providing healthy food options in schools, especially canteens, can play a crucial role in shaping dietary intake and influence children, parents and staff member's knowledge, attitudes and behaviours toward food ¹².

The World Health Organization (WHO) *Taking Action on Childhood Obesity* report identifies childhood obesity as a significant public health issue globally. It recognises the school environment as a crucial setting to improve nutrition-related health outcomes and reduce childhood overweight and obesity ¹³. In June 2021, the WHO released guidance on ways of making every school a health-promoting school, emphasising the importance of using multiple strategies to implement a whole of school approach. The WHO highlights school settings as an essential opportunity to

⁸ Wyse R, Delaney T, Gibbins P, Ball K, Campbell K, Yoong SL, et al. Cluster randomised controlled trial of an online intervention to improve healthy food purchases from primary school canteens: a study protocol of the 'click & crunch' trial. *BMJ Open*. 2019; 9(9): e030538. Sourced from:

<https://bmjopen.bmj.com/content/bmjopen/9/9/e030538.full.pdf>

⁹ Bell AC, Swinburn BA. What are the key food groups to target for preventing obesity and improving nutrition in schools?. *European journal of clinical nutrition*. 2004 58(2): 258-63. Sourced from:

<https://www.nature.com/articles/1601775>

¹⁰ Yoong SL, Nathan NK, Wyse RJ, Preece SJ, Williams CM, Sutherland RL, et al. Assessment of the School Nutrition Environment: A Study in Australian Primary School Canteens. *Am J Prev Med*. 2015; 49(2): 215-22.

Sourced from: <https://www.sciencedirect.com/science/article/abs/pii/S0749379715000525>

¹¹ Lawlis T, Knox M, Jamieson M. School canteens: A systematic review of the Policy, perceptions and use from an Australian perspective. *Nutrition & Dietetics*. 2016; 73(4): 389-98. Sourced from:

<https://onlinelibrary.wiley.com/doi/abs/10.1111/1747-0080.12279>

¹² Aydin G, Margerison C, Worsley A, Booth A. Parents' and teachers' views of the promotion of healthy eating in Australian primary schools. *BMC Public Health*. 2021; 21: 1788. Sourced from:

<https://link.springer.com/content/pdf/10.1186/s12889-021-11813-6.pdf>

¹³ World Health Organization. Taking action on childhood obesity. Geneva. 2018. Sourced from: [WHO-NMH-PND-ECHO-18.1-eng.pdf](https://www.who.int/nmh/publications/2018/taking-action-on-childhood-obesity)

provide healthy meals, improve nutritional intake and foster healthy dietary patterns amongst children whilst reducing intake of unhealthy food items ¹⁴.

The Council of Australian Governments (COAG) Health Council *The Good Practice Guide: Supporting healthy eating and drinking at school* was developed in consultation with Australian, state, and territory government health and education agencies and has been endorsed by Health Ministers. Similarly, the guide supports a whole of school approach that includes improved policies in schools, integration of nutrition into the school curriculum, and stronger partnerships to support the implementation of healthy food and drink practices in schools ¹⁵. Both the WHO and COAG guide emphasise the importance of establishing healthy school environments that enable and support informed, healthy food choices.

The WA Department of Education's mandatory HFD Policy applies to all WA public schools. It utilises a traffic light system to classify food and drink based on nutrient criteria ¹⁶. The aim is to promote and encourage healthy (Green) food and drink, limit less healthy (Amber) food and drink, and restrict the availability of the least healthy (Red) food and drink provided in school canteen/food services and on school premises:

- Green food and drink are excellent sources of nutrients, contain less saturated fat and/or sugar and/or salt, help to avoid excess energy intake (kJ) and must comprise at least 60 per cent of the menu.
- Amber food and drink have some nutritional value but also contain moderate salt, and/or sugar and/or saturated fat levels. Amber food should be eaten in moderation and may comprise at most 40 per cent of the menu. Savoury commercial Amber products may be offered on the menu at most twice per week.
- Red food and drink lack adequate nutritional value, are high in saturated fat and/or added sugar and/or salt and contribute to excess energy. Red food

¹⁴ World Health Organisation. Making every school a health-promoting school - Implementation guidance. 2021. Sourced from: <https://www.who.int/publications/i/item/9789240025073>

¹⁵ Council of Australian Governments Health Council. The Good Practice Guide: Supporting healthy eating and drinking at school. 2019. Sourced from: <https://www.health.gov.au/sites/default/files/documents/2022/07/the-good-practice-guide-supporting-healthy-eating-and-drinking-at-school.pdf>

¹⁶ The Department of Education. Healthy Food and Drink in Public Schools Policy. 2018.

and drink are off the menu in the canteen/food services and must only be provided to students if essential to the learning program.

The Department of Health funds programs to assist schools in maintaining and strengthening policies and practices that support the provision and promotion of healthy food and drink in schools across the state. The Department of Health funded programs seek to improve nutrition-related health outcomes in children by utilising strategies and approaches underpinned by evidence and standards drawn from international, national and state policies.

School principals have reported annually on the canteen/food service environment and HFD policy via the School Principal Survey since 2012. Information from the survey is an integral component of the HFD Policy, HFD Project and FreshSNAP evaluation, providing critical information to the Department of Education and Department of Health about policy implementation and compliance. Furthermore, the survey is a valuable resource for service providers. It informs strategies, activities and objectives to support healthier food and drink choices in schools.

The School Principal Survey questions were first updated in 2016. They remained unchanged until 2021 when they were revised and updated following thorough consultation with the HFD reference group and a formal request to the Department of Education by the WASCA. The 2022 survey questions were the same as the 2021 survey.

Methods

Survey

Consistent with the previous years, the Department of Education sent the WA HFD School Principal Surveys via electronic communication to all (808) WA public schools in term 4, 2022. All school principals are responsible for implementing the HFD Policy in the school setting each year. The survey contained six questions relating to the HFD Policy and food service practices in the school and are outlined below:

1. Does your school have a written policy for the provision of healthy food and drinks?

- No, our school does not have a policy
- Our school is in the process of developing a policy
- Yes, our school has a policy
- Unsure

2. What does your school do to promote healthy eating? (check all that apply)

- Include nutrition advice or information in the school newsletter at least once per term
- Conduct healthy P&C fundraising events (i.e., do not use 'red' items such as chocolates)
- Organise whole school events such as a health/nutrition campaign/event, theme day etc.
- Run healthy eating programs such as *Crunch&Sip*[®] or a school kitchen garden
- Invites qualified guest speakers to address students, parents and/or staff about healthy eating
- Works with the school canteen to adopt the Health Promoting Schools Framework
- Not a priority, do nothing specific
- Other, please specify

3. *What model is used to operate the food service in your school?*

- P&C operated
- School council/board operated
- Outsourced to another school
- Outsourced to an external provider i.e., deli, shop
- Licensing agreement with external contractor
- No canteen/food service offered in my school

4. *Does your school canteen/food service menu (answer choices Yes, No, or Unsure):*

- consist of a minimum of 60 per cent 'green' food and drinks?
- consist of a maximum of 40 per cent 'amber' food and drinks?
- offer savoury commercial amber products no more than two days per week?
- contain 'red' food and drinks, even on an occasional basis?

5. *Have the following people in your school community completed Traffic Light Training provided by the WA School Canteen Association Inc.? (answer choices: Yes, No, or Unsure)*

- Canteen/food service supervisor?
- Employer (e.g., P&C representative)?

6. *Have the following people participated in FoodSafe training (or its equivalent)? (answer choices Yes, No, Unsure)*

- Canteen/food service supervisor?
- Canteen/food service volunteers?

Responses to the above questions were de-identified by Department of Education before providing the raw data to the Department of Health for analysis and reporting.

Data analysis

Frequency tables were prepared in Microsoft Excel to describe the proportion of schools meeting each HFD Policy requirement. As part of this, schools were asked

'does your school have a written policy for the provision of healthy food and drinks'. Schools that responded 'No, our school does not have a policy' and 'our school is in the process of developing a policy' were combined under 'do not have a policy' for significance testing.

Survey responses were compared in Excel using a Chi-Square test of independence to examine whether compliance with the HFD Policy varied by school location or type. To provide balanced groups of schools operating a canteen/food service for Chi-Square test comparisons and to be consistent with previous years, P&C operated (n=287), outsourced to an external provider (n=92), licensing agreement with an external contractor (n=75), outsourced to another school (n=40) and school council/board operated (n=18) were combined as 'Schools with a canteen/food service'.

As with previous years, secondary (n=86) and district (n=47) high schools were combined as 'High Schools', and education support schools (n=51), specialist schools (n=2), and K-12 schools (n=5) were combined as 'Other Schools' for Chi-Square test comparisons. Responses of 'Unsure' were included in analyses of proportions but were excluded from all Chi-square statistical comparisons. Where contingency (frequency) tables contained less than five values, a Fisher exact probability value was calculated using SAS. Probability values of less than 0.05 were accepted as being statistically significant. All data are presented as unweighted percentages.

Results

- Completed surveys were returned by 681 schools (84 per cent response rate). Of these, 411 schools (60 per cent) completed the survey in 2020 and 2021.
- Response rates to the survey have increased steadily, from 72 per cent in 2020 to 79 per cent in 2021 and 84 per cent in 2022.

School type and location (Table 1)

- Four hundred and twenty-six (63 per cent) of completed surveys were from metropolitan schools, and 255 (37 per cent) were from regional schools. This proportion is similar to surveys conducted in 2020 and 2021.
- A similar proportion of each school type also completed the survey in 2020, 2021, and 2022.

Table 1: Location and types of schools

| Schools (n=681) | Metro schools (n=426) n (%) | Regional schools (n=255) n (%) |
|-----------------------------|-----------------------------------|--------------------------------------|
| Primary school (n=490) | 319 (65.1%) | 171 (34.9%) |
| Secondary school (n=86) | 61 (70.9%) | 25 (29.1%) |
| District high school (n=47) | 2 (4.3%) | 45 (95.7%) |
| Education support (n=51) | 40 (78.4%) | 11 (21.6%) |
| Specialist school (n=2) | 2 (100.0%) | 0.0 (0%) |
| K-12 schools (n=5) | 2 (40.0%) | 3 (60.0%) |
| Total | 426 (62.6%) | 255 (37.4%) |

Written policy for the provision of healthy food and drink (Table 2)

- More than half of schools (62 per cent) reported having a written policy for the provision of healthy food and drink, 19 per cent were in the process of developing a policy, 3 per cent were unsure whether they had a policy, and 16 per cent of schools did not have a policy.
- Five hundred and twelve schools (75 per cent) reported having a canteen/food service. These schools were significantly more likely to report having a written policy for the provision of healthy food and drink than schools with no canteen/food service (65 per cent compared to 51 per cent, respectively; p -value = 0.001).
- A similar proportion of metropolitan and regional schools reported having a written policy for the provision of healthy food and drink (63 per cent compared to 59 per cent).
- High schools (65 per cent) were significantly more likely to report having a written policy for the provision of healthy food and drink in place at their school compared to primary schools (62 per cent; p -value < 0.001).

Table 2: Proportion of schools with a written policy for the provision of healthy food and drink

| | Have a Policy | No Policy |
|--|--------------------------------|--------------------------------|
| All schools (n=681) | 419 (61.5%) | 240 (35.2%) |
| All schools with a canteen/food service[^] (n=512) | 333 (65.0%)^a | 163 (31.8%)^a |
| P&C operated (n=287) | 196 (68.3%) | 84 (29.3%) |
| Outsourced to an external provider (n=92) | 62 (67.4%) | 26 (28.3%) |
| Licensing agreement with an external contractor (n=75) | 50 (66.7%) | 23 (30.7%) |
| Outsourced to another school (n=40) | 18 (45.0%) | 21 (52.5%) |
| School council/board operated (n=18) | 7 (38.9%) | 9 (50.0%) |
| Schools without a canteen/food service (n=169) | 86 (50.9%)^a | 77 (45.6%)^a |
| Location of school | | |
| Metropolitan (n=426) | 268 (62.9%) | 147 (34.5%) |
| Regional (n=255) | 151 (59.2%) | 93 (36.5%) |
| Type of school | | |
| Primary (n=490) | 302 (61.6%)^b | 171 (34.9%)^b |
| High schools* (n=133) | 86 (64.7%)^b | 42 (31.6%)^b |
| Secondary (n=86) | 56 (65.1%) | 27 (31.4%) |
| District high school (n=47) | 30 (63.8%) | 15 (31.9%) |
| Other** (n=58) | 31 (53.4%) | 27 (46.6%) |
| Education support (n=51) | 26 (51.0%) | 25 (49.0%) |
| Specialist school (n=2) | 2 (100.0%) | 0 (0.0%) |
| K-12 school (n=5) | 3 (60.0%) | 2 (40.0%) |

^aIn the process of developing a 'Policy' was combined with 'No Policy' for statistical comparisons; Responses of 'Unsure' were included in analyses of proportions but were excluded from statistical comparisons; ^a statistically significant according to a Chi Squared Test (p<0.05) comparing schools that have a written policy with a canteen/food service vs. without a canteen/food service; ^b statistically significant according to a Chi Squared Test (p<0.05) comparing schools that have a written policy with primary school vs. high school; [^]Schools with a canteen/food service include 'P&C operated', 'school council/board operated', 'outsourced to another school', 'outsourced to an external provider', and 'licensing agreement with an external contractor'; *High schools include secondary and district high schools, combined for Chi Squared test; **Other schools include schools identified as 'education support schools', 'specialists' schools' and 'K-12 schools', combined for Chi Squared test.

Schools that met canteen/food service HFD Policy requirements (Table 3)

Provision of food and drink

- Most schools reported their canteen/food service menu consisted of at least 60 per cent Green and 40 per cent Amber food and drink (87 per cent and 83 per cent respectively). There were no significant differences in schools reporting meeting the Green and Amber requirements by school location or school type.
- Nearly three-quarters (73 per cent) of all schools reported offering savoury commercial Amber products no more than two days per week. Any differences between school location or school type were not statistically significant.
- A total of 25 per cent of schools reported their canteen/food service menus contained Red items, even occasionally. The proportion of regional schools reporting Red items on their canteen/food service menu was significantly higher than metropolitan schools (30 per cent compared to 23 per cent; p -value = 0.044).
- The proportion of primary schools (22 per cent) reporting Red items on the canteen/food service menu, even occasionally, was significantly lower than high schools (34 per cent; p -value = 0.006) and other schools (33 per cent; p -value = 0.012).

Overall compliance

- **Forty-three per cent** of responding schools with a canteen/food service **met all the HFD Policy traffic light criteria requirements** for a canteen, that is: having at least 60 per cent Green food or drink, no more than 40 per cent Amber food or drink, offering savoury commercial Amber food no more than two days per week and no Red food or drink, even on an occasional basis.
- An additional 24 per cent of schools with a canteen/food service menu reported meeting all of the requirements of the HFD Policy traffic light criteria except for not offering Red food or drink.
- Primary schools are significantly less likely to report meeting all requirements of the HFD Policy traffic light criteria than high schools (20 per cent compared to 29 per cent; p -value = 0.016), and other schools (42 per cent; p -value = 0.038). However,

primary schools were also less likely to report Red food and drink on the menu, compared to high schools (22 per cent compared to 34 per cent; p -value = 0.006), and other schools (33 per cent; p -value = 0.012).

Table 3: Proportion of schools with a canteen/food service meeting the traffic light criteria

| | Proportion of schools meeting traffic light criteria | | | | | |
|---|--|---|--|--|--|---|
| | The menu has a minimum of 60% Green food and drinks | Menu has maximum of 40% Amber food and drinks | Offer savoury commercial Amber products no more than two days per week | Menu contains Red food and drink even on an occasional basis | Menu meets all traffic light criteria [^] | Menu meets traffic light criteria except no Red food and drinks ^{^^} |
| | n (%) | n (%) | n (%) | n (%) | n (%) | n (%) |
| All schools with a canteen/food service | 445 (86.9%) | 425 (83.0%) | 376 (73.4%) | 129 (25.2%) | 221 (43.2%) | 121 (23.6%) |
| School location | | | | | | |
| Metropolitan schools with a canteen/food service (n=331) | 296 (89.4%) | 278 (84.0%) | 239 (72.2%) | 75 (22.7%)^a | 152 (45.9%) | 73 (22.1%) |
| Regional schools with a canteen/food service (n=181) | 149 (82.3%) | 147 (81.2%) | 137 (75.7%) | 54 (29.8%)^a | 69 (38.1%) | 48 (26.5%) |
| Type of school | | | | | | |
| Primary schools with a canteen/food service (n=361) | 316 (87.5%) | 299 (82.8%) | 263 (72.9%) | 78 (21.6%)^{bc} | 166 (45.9%) | 73 (20.2%)^{de} |
| High schools * with a canteen/food service (n=118) | 102 (86.4%) | 98 (83.1%) | 91 (77.1%) | 40 (33.9%)^b | 47 (39.8%) | 34 (28.8%)^d |
| Secondary schools with a canteen/ food service (n=82) | 72 (87.8%) | 69 (84.1%) | 60 (73.2%) | 32 (39.0%) | 30 (36.6%) | 26 (31.7%) |
| District high school schools with a canteen/food service (n=36) | 30 (83.3%) | 29 (80.6%) | 31 (86.1%) | 8 (22.2%) | 17 (47.2%) | 8 (22.2%) |
| Other schools ** with a canteen/food service (n=33) | 27 (81.8%) | 28 (84.8%) | 22 (66.7%) | 11 (33.3%)^c | 8 (24.2%) | 14 (42.4%) ^e |
| Education support schools with a canteen/food service (n=29) | 24 (82.8%) | 25 (86.2%) | 19 (65.5%) | 7 (24.1%) | 8 (27.6%) | 11 (37.9%) |
| K-12 school with a canteen/food service (n=4) | 3 (75.0%) | 3 (75.0%) | 3 (75.0%) | 4 (100.0%) | 0 (0.00%) | 3 (75.0%) |

^a 'Unsure' responses were included in analysis of proportions, however excluded from statistical comparisons; ^a statistically significant according to a Chi Squared Test (p<0.05) comparing the proportion of metropolitan schools to regional schools that have a menu that contains red food, even on an occasional basis; ^b statistically significant according to a Chi Squared Test (p<0.05) comparing the proportion of primary schools to high schools that have a menu that contains red food, even on an occasional basis; ^c statistically significant according to a Chi Squared Test (p<0.05) comparing the proportion of primary schools to other schools that have a menu that contains red food, even on an occasional basis; ^d statistically significant according to Chi Squared Test (p<0.05) comparing the proportion of primary schools to high schools with menus that meet all traffic light criteria except no Red foods or drinks even on an occasional basis; ^e statistically significant according to the Fishers Exact Test (p<0.05) comparing the proportion of primary schools to other schools with menus that meet all traffic light criteria except no Red foods or drinks, even on an occasional basis. [^] Meeting all traffic light criteria was defined as having at least 60% Green foods or drinks, no more than 40% Amber foods or drinks, no more than two days per week of savoury commercial Amber foods and no Red foods or drinks. ^{^^} menu meets all traffic light criteria except no Red foods or drinks was defined as having at least 60% Green foods or drinks, no more than 40% Amber foods or drinks, no more than two days per week of savoury commercial Amber foods, but the menu containing Red food or drinks even on an occasional basis. * 'high schools' include secondary and district high schools; ** 'other schools' includes education support schools and K-12 schools.

Schools with a canteen/food service that completed staff training (Table 4)

- Most schools reported their canteen/food service supervisors had completed traffic light training (71 per cent) and FoodSafe training (79 per cent).
- Over half (55 per cent) of all responding schools reported their canteen/food service employers (e.g., P&C representative) had completed traffic light training and 57 per cent reported their canteen volunteers had completed FoodSafe training.
- Metropolitan schools were significantly more likely to have canteen/food service supervisors (80 per cent) who had completed traffic light training compared to regional schools (55 per cent; p -value < 0.001).
- Similarly, metropolitan schools (63 per cent) were significantly more likely to have employers who had completed traffic light training compared to regional schools (41 per cent; p -value < 0.001).
- Supervisors in metropolitan schools were significantly more likely to complete FoodSafe training compared to regional schools (85 per cent and 68 per cent, respectively p -value = 0.035).
- High schools reported higher completion of traffic light and FoodSafe training for supervisors, employers and volunteers in comparison to primary schools. However, the difference was only statistically significant for supervisors completing FoodSafe Training (86 per cent compared to 77 per cent; p -value = 0.040).

Table 4: Proportion of schools with a canteen/food service that have completed staff training

| | Traffic light training completed | | FoodSafe training Completed | |
|--|----------------------------------|--------------------------------|----------------------------------|----------------------------------|
| | Canteen/ food service supervisor | Employer | Canteen/ food service supervisor | Canteen/ food service volunteers |
| | n (%) | n (%) | n (%) | n (%) |
| All schools with a canteen/food service | 364 (71.1%) | 282 (55.1%) | 403 (78.7%) | 294 (57.4%) |
| School location | | | | |
| Metropolitan schools with a canteen/food service | 264 (79.8%)^a | 208 (62.8%)^b | 280 (84.6%)^c | 207 (62.5%) |
| Regional schools with a canteen/food service | 100 (55.2%)^a | 74 (40.9%)^b | 123 (68.0%)^c | 87 (48.1%) |
| Type of school | | | | |
| Primary schools with a canteen/food service | 255 (70.6%) | 196 (54.3%) | 278 (77.0%)^d | 198 (54.8%) |
| High schools * with a canteen/food service | 87 (73.7%) | 70 (59.3%) | 102 (86.4%)^d | 78 (66.1%) |
| Secondary schools with a canteen/ food service | 68 (82.9%) | 55 (67.1%) | 77 (93.9%) | 62 (75.6%) |
| District high school schools with a canteen/food service | 19 (52.8%) | 15 (41.7%) | 25 (69.4%) | 16 (44.4%) |
| Other schools ** with a canteen/food service | 22 (66.7%) | 16 (48.5%) | 23 (69.7%) | 18 (54.5%) |
| Education support schools with a canteen/food service | 18 (62.1%) | 13 (44.8%) | 19 (65.5%) | 15 (51.7%) |
| K-12 school with a canteen/food service | 4 (100.0%) | 3 (75.0%) | 4 (100%) | 3 (75.0%) |

^a'Unsure' responses were included in analysis of proportions, however excluded from statistical comparisons; ^a Statistically significant according to a Chi Squared Test (p<0.05) comparing metropolitan schools to regional schools canteen/foodservice supervisor trained in traffic light training; ^b Statistically significant according to a Chi Squared Test (p<0.05) comparing metropolitan schools to regional schools with employers (e.g. P&C rep) trained in traffic light training; ^c Statistically significant according to a Chi Squared Test (p<0.05) comparing metropolitan schools to regional schools canteen/foodservice supervisor trained in FoodSafe training; ^d Statistically significant according to a Fishers Exact Test (p<0.05) comparing high schools to primary school canteen/foodservice supervisors trained in FoodSafe training; *High schools includes secondary and district high schools, combined for Fisher Exact test; **Other schools includes schools identified as 'education support schools' and 'K-12 schools', combined for Fisher Exact test.

Activities conducted by schools to promote healthy eating (Table 5)

- Most schools use multiple strategies to promote healthy eating. Few schools (3 per cent) reported promoting healthy eating was not a priority or that they were doing nothing specific to promote healthy eating.
- The two most popular strategies to promote healthy eating in schools were to 'run healthy eating programs such as *Crunch&Sip*[®] or a school kitchen garden' (82 per cent of all schools) and 'work with the school canteen to adopt the Health Promoting Schools Framework' (50 per cent of all schools).
- Similar proportions of metropolitan and regional schools 'ran healthy programs such as *Crunch&Sip*[®] or a school kitchen garden' (80 per cent and 85 per cent, respectively), 'conducted healthy P&C fundraising events' (45 per cent and 38 per cent, respectively) or 'organised whole school events such as health/nutrition campaign/event or theme days' (35 per cent and 31 per cent, respectively).
- There was a substantial difference between the proportion of primary and other schools (including Education Support, K-12 schools and Specialist schools) who reported running healthy eating programs such as *Crunch&Sip*[®] or a school kitchen garden compared to high schools (90 per cent, 85 per cent and 50 per cent, respectively).
- 'Inviting qualified guest speakers to address students, parents and/or staff about healthy eating' was the least used strategy (31 per cent of all schools).
- Twelve per cent of schools reported using 'other activities' on an ad-hoc basis to promote healthy eating in schools and incorporate them into the school curriculum (*Appendix 1*).

Table 5: Activities conducted by schools to promote healthy eating, 2022 WA HFD School Principal Survey

| Activity * | Total schools (%) n=681 | Metropolitan (%) n=426 | Regional (%) n=255 | Primary school (%) n=490 | Secondary school (%) n=86 | District High school (%) n=47 | Education Support school (%) n=51 | K-12 Schools (%) n=5 | Specialist (%) n=2 |
|--|----------------------------|---------------------------|-----------------------|-----------------------------|------------------------------|----------------------------------|--------------------------------------|-------------------------|-----------------------|
| Run healthy eating programs such as <i>Crunch&Sip</i> ® or a school kitchen garden | 556 (81.6%) | 340 (79.8%) | 216 (84.7%) | 441 (90.0%) | 21 (24.4%) | 45 (95.7%) | 44 (86.3%) | 4 (80.0%) | 1 (50.0%) |
| Work with the school canteen to adopt the Health Promoting Schools Framework | 341 (50.1%) | 234 (54.9%) | 107 (42.0%) | 236 (48.2%) | 64 (74.4%) | 22 (46.8%) | 16 (31.4%) | 3 (60.0%) | 0 (0.0%) |
| Conduct healthy P&C fundraising events | 287 (42.1%) | 190 (44.6%) | 97 (38.0%) | 235 (48.0%) | 14 (16.3%) | 20 (42.6%) | 16 (31.4%) | 2 (40.0%) | 0 (0%) |
| Include nutrition advice or information in the school newsletter at least once per term | 235 (34.5%) | 142 (33.3%) | 93 (36.5%) | 186 (38.0%) | 14 (16.3%) | 18 (38.3%) | 15 (29.4%) | 2 (40.0%) | 0 (0.0%) |
| Organise whole school events such as a health/nutrition campaign/ event, theme day etc. | 230 (33.8%) | 150 (35.2%) | 80 (31.4%) | 160 (32.7%) | 34 (39.5%) | 18 (38.3%) | 15 (29.4%) | 2 (40.0%) | 1 (50.0%) |
| Invite qualified guest speakers to address students, parents and/or staff about healthy eating | 208 (30.5%) | 113 (26.5%) | 95 (37.3%) | 141 (28.8%) | 35 (40.7%) | 22 (46.8%) | 6 (11.8%) | 2 (40.0%) | 2 (100.0%) |
| Not a priority, do nothing specific | 19 (2.8%) | 12 (2.8%) | 7 (2.7%) | 10 (2.0%) | 4 (4.7%) | 1 (2.1%) | 3 (5.9%) | 1 (20.0%) | 0 (0.0%) |

* Multiple responses permitted; therefore, percentages will not add up to 100

Discussion

The Healthy Food and Drink Policy (HFD Policy) aims to enhance the capacity of WA public schools to establish, maintain, and reinforce policies and procedures that facilitate the provision and promotion of nutritious food and drinks across the school environment.

The 2022 WA HFD School Principal Survey (Survey) results reveal most schools have a written policy for the provision of healthy food and drink in place. This pattern is consistent with the outcome observed in the 2020 and 2021 Surveys, which reported that those offering canteen or food services are considerably more likely to implement a written policy for the provision of healthy food and drink.

Of the 681 schools that participated in the 2022 Survey, 43 per cent fully complied with all traffic light criteria outlined in the HFD Policy. The results are consistent with the 2021 results (44 per cent), however, direct comparison against prior Survey data is difficult, due to variations in school participation each year.

During the first six months of 2022 the Department of Health funded the WA School Canteen Association Inc (WASCA) to deliver the HFD Project and provide a range of support to schools, including an advisory service, menu, recipe, and product assessments, training, resources and online/face to face support. From the 1 July 2022, following a competitive open tender process, the Department of Health awarded funding to Nutrition Australia (VIC) to implement a comprehensive whole of school healthy eating program, the FreshSNAP. WASCA continues to offer support to schools via a range of free tools and resources as well as a fee-for-service model.

The FreshSNAP represents the integration of two previous Department of Health funded programs, the K-10 School Food and Nutrition Curriculum Support Materials project (Refresh.ED), delivered by Edith Cowan University and the HFD Project, delivered by the WASCA. The whole of school approach, central to the FreshSNAP, emphasises promoting healthy dietary choices across all areas of the school setting, including the curriculum, the school canteen, and the wider school environment. The FreshSNAP closely aligns with international best practices for preventing obesity, as recommended by the World Health Organization (WHO), the WHO Health Promoting Schools (HPS) framework and the COAG Health Council's *The Good Practice Guide: Supporting healthy eating and drinking at school*.

In the second half of 2022, the FreshSNAP focused on establishing the new whole of school healthy eating program. The initial set-up phase of the program included

recruitment of a WA team, building a new website, program planning, extensive stakeholder consultation and networking with key government and non-government organisations.

In transitioning to the new service provider, a brief gap in Department of Health funded services were observed while Nutrition Australia (VIC) established the FreshSNAP service and recruited a WA team. During the initial development period, the Department of Health and Department of Education ensured processes and procedures were implemented to support schools during the change in delivery. From the 1 July 2022 until the beginning of term 1, 2023, the following free services were available to schools:

- WASCA HFD Project web-based resources and access to online traffic light training
- Refresh.ED nutrition education curriculum resources
- email support for Refresh.ED nutrition curriculum materials for teachers provided by the Department of Health
- free phone and email support delivered by FreshSNAP from 31 August 2022. During the interim phase, email support was available from Nutrition Australia (VIC).

During this time, in addition to a range of free online materials, schools were able to seek paid support from the WASCA via membership and customised service delivery.

The anticipated interruption in service provision experienced during the change in service provider only resulted in minor disruptions to schools, with no discernible impact on overall compliance with the HFD Policy traffic light criteria, as evidenced by the 2022 Survey results.

School location

Metropolitan schools were significantly more likely to report compliance with the HFD Policy traffic light criteria than regional schools. These metropolitan-regional variations in compliance may be partly due to differences in traffic light training across the regions. Like previous years, regional canteen supervisors were significantly less likely to have completed traffic light training than their metropolitan counterparts. This disparity reflects the additional barriers regional schools experience in accessing training and support due to their geographical location.

In 2019, the WASCA investigated barriers, enablers, and support strategies for implementing the HFD policy in regional and high schools. To improve outcomes in these schools the WASCA have continued to provide tailored services in 2022, including online training, and canteen consultancies via phone and video conference. The FreshSNAP also recognises the importance of establishing strong regional partnerships and has identified region-specific resources and tailored training sessions as a key priority area to improve the reach of the program.

To increase support, all components of the FreshSNAP will be available online to ensure all schools have access to the resources and services the FreshSNAP offers. Additionally, the FreshSNAP team plans to undertake road shows throughout regional Western Australia each year to reach schools outside of the metropolitan area. The roadshows will enable the FreshSNAP team to build strong networks and community relationships with regional schools to support their compliance with the HFD Policy and traffic light training.

School type

High schools were significantly more likely than primary schools to have a written policy for the provision of healthy food and drink. However, primary schools were more likely to report meeting all the HFD Policy traffic light requirements. This is due to a significantly larger proportion of high schools and other schools offering Red food and drink, even occasionally, on their canteen/food service menu compared to primary schools. When the requirement to not have any Red food and drink on the menu was removed, an additional 29 per cent of high schools and 42 per cent of other schools met the other three requirements.

Like previous years, secondary schools were less likely to run 'healthy eating programs such as *Crunch&Sip*® and school kitchen gardens, instead 'working with the school canteen to adopt the Health Promoting Schools Framework' was the preferred approach. This may be due to the limited number of healthy eating programs tailored for secondary students, as well as difficulty implementing programs in a larger school setting with more structured timetables.

Survey limitations

The Survey relies on data collected from WA school principals via email. Self-reported data has been shown to overestimate policy compliance compared to menu audits and other independent assessments ¹⁷. Similarly, the Survey questions ask principals to report whether canteen supervisors, employees, and employers in their school community have completed relevant training. They do not measure training completion at the individual staff level.

Although the response rate to the 2022 Survey was 5 per cent higher than the previous year, one in six principals invited to complete the Survey did not respond. Furthermore, it is not possible, from the information provided, to determine if the principal completed the Survey or whether it was delegated to other staff members. Lastly, variations between schools may have impacted the results, reducing the generalisability and accuracy of the report findings.

Conclusion

Response rates for the WA School Principal Survey have been increasing steadily. Despite changes to the service provider in mid-2022, the proportion of schools reporting traffic light compliance was consistent with the previous year. Metropolitan schools, and primary schools were more likely to meet all traffic light criteria requirements compared to regional schools and high schools. Service providers should prioritise support for these schools in meeting the traffic light criteria and HFD Policy requirements. Based on the findings of the report, a detailed list of recommendations has been outlined below.

¹⁷ Reilly K, Nathan N, Wolfenden L, Wiggers J, Sutherland R, Wyse R, et al. Validity of four measures in assessing school canteen menu compliance with state-based healthy canteen policy. *Health Promot J Austr.* 2016; 27(3): 215-21.

Recommendations

Based on the report findings, the following recommendations are encouraged.

- The Department of Education continues to:
 - administer the annual WA HFD School Principal Survey to schools
 - invite the Department of Health to analyse the results, and make them publicly available on the Department of Education website
 - work with the DOH to encourage uptake of, and in ongoing development of the FreshSNAP program and services to schools to support implementation of the HFD Policy.

- Stakeholders working with schools:
 - increase in person support to regional schools to build relationships and capacity (i.e., regional road shows)
 - encourage regional schools to utilise online menu, recipe, and product classification tools such as FoodChecker to improve compliance with the traffic light criteria
 - ensure adequate traffic light and FoodSafe training is available online for canteen supervisors and staff to increase compliance in regional areas
 - prioritise phone, online, and in person support for principals and staff to increase the number of schools implementing a written policy for the provision of healthy food and drink, focusing on primary schools
 - focus on providing strategies for canteen staff, in particular in high schools, to increase compliance with the traffic light criteria and reduce the sale of Red items
 - engage with a range of stakeholders to improve service delivery and support, where applicable.

- School canteens and food services:
 - remove Red food and drink from the canteen/food service menus
 - limit the sale of savoury commercial Amber products to two days per week

- increase the number of Green food and drinks available on the menu
- encourage canteen supervisors and staff to complete traffic light and FoodSafe training (specifically in regional areas).

Appendix 1. 'Other activities' used by schools to promote healthy eating

- Include as part of some student's Individual Education Plans. Talk to parents individually if their child is at risk
- 5STARCAP winner eight years
- A class through the health program. No canteen at our school
- Breakfast Club
- Breakfast Club - healthy food choices
- Breakfast club - healthy foods, we give students free fruit at break/ lunchtime as part of the program to ensure all children have eaten
- Breakfast club, fruit available all-day
- Breakfast, recess, and lunch are provided to the students, and healthy options are only available. This includes fruit platters, sandwiches and salads, and some select cereals. Healthy practices are encouraged in all cooking lessons at school, albeit not
- Canteen options of fruit, vegetables and healthy pizza from the canteen for birthdays - no cakes
- Canteen provides fresh fruit and vegetables for free every day open
- Classroom teachers work individually with parents, all students have special needs
- Cooking Program, Deadly Koolingka's with Murdoch Uni
- Cooking programs follow healthy food and drink guidelines
- Cooking programs to encourage students to try healthy food
- Currently do not have a canteen - P&C run special lunches a few times a year
- Curriculum healthy eating programs
- Delivery direct and specific lessons in the technologies, science, health and physical education areas promoting and developing understandings regarding healthy eating and health physically
- Department policy and school guidelines
- Embed healthy eating and nutrition info in Home Ec and HPE Health curriculum
- Embedded within the curriculum

- Encourage parents to provide healthy food for children's morning tea and lunch. We don't run a school canteen or provide food
- Ensure lunches provided at school are healthy and provide nutritional value
- EON gardening and cooking program every second Thursday for the whole year
- Explicit teaching in Health Curriculum
- Focus on Health classes, Clontarf Academy and Stars Foundation
- Foodbank Food Sensations program
- Generally, make good choices in line with parental expectations
- Growing foods and promoting the use of composting and natural pest control
- Had healthy cooking lessons as a part of our program
- Have chickens, fruit trees and vegetable gardens
- Health Curriculum
- Health Education Curriculum
- Health Education curriculum; School Nurse initiatives
- Health lessons and incidental teaching
- Health lessons, Breakfast Club, camps and special events promote healthy foods and drinks
- Healthy Breakfast Club food
- Healthy eating and diet are included in our Health Education program
- Hospitality Program
- In transition to find another service provider, we will adopt a new Healthy Food and Drink Policy
- Independent Living programs, Cooking programs and Health programs all form part of our core curriculum
- Kindy orientation Healthy lunch box ideas and information packs; on camps monitor food and have healthy options
- Make comments while on duty about healthy lunch choices in student's lunch boxes. Relate back to the food groups
- Mealtime Management Plans for students with complex needs
- Messages to parents from teachers regarding "healthy eating" choices
- No Canteen - One day only for ordering lunch from IGA. They provide Good Eating Choices

- Nutrition and healthy eating are promoted through the school newsletter and
- Nutrition lessons during Health and Home Economics classes
- Offer breakfast club
- Parents provide soup in cooler weather and salads in warmer as Fundraising for P & C. Kids in Kitchen Garden program prepare shared lunch for all students while others in the Garden and or other aligned projects. Kitchen coordinator chooses healthy recipes based on garden /seasonal produce
- Part of health programming
- Part of our bespoke timetabled health and wellbeing program - Anchor, operates Breakfast Club with the support of Foodbank and promotes healthy eating through support of Second Bite, make fruit/vegetables available to students and our parent
- Provide explicit guidelines for class parties. Ensure children take Christmas lollies etc, home for parents to decide if /when children can eat them (not at school). Discuss P & C fundraising and the Healthy Food Policy
- Provide a healthy breakfast club weekly and talk about healthy diet at assemblies
- Provide new Kindy parents with information and include School Health Nurse talk about healthy lunchboxes
- Regular cooking lessons in classes
- Remind staff about no sweet rewards, and request healthy food donations
- Role model and explicitly teach healthy nutrition through Health and Wellbeing
- Run breakfast club - free breakfast
- Run Health Expo
- Run a healthy breakfast program each morning
- Runs a Kitchen Garden, has healthy food tokens as rewards
- The school board has a school policy in this area on the agenda for 2023
- School breakfast program - low sugar choices
- Students engage in cooking programs to establish life skills and healthy habits
- Students involved in planning, purchasing and cooking for the nutrition program, which has a focus on healthy food
- Support families to understand good food choices, including alternatives to pre-prepared meals and fast food

- Talk about healthy lunchboxes at Kindy Orientation
- Teachers and support staff provide students with a healthy breakfast, fruit, and cooked healthy lunch daily
- Thriving Minds program with Health and Wellbeing elements
- Waste Free Wednesday to reduce packed food
- We are currently working with a parent who is completing a Public Health Nutrition degree to develop a policy and change some of our practices
- We do Nude Food on a Friday
- We don't have a canteen in operation, so we do classroom nutritional lessons throughout the year
- We only provide a range of healthy foods :)
- We run a breakfast program (Weetabix and milk) and provide fruit during recess. We have an arrangement with the local store not to sell cool drinks and lollies before school
- We run a healthy eating program for our autistic students called Nglakoo (Noongar word for eat)
- We use the Canteen Association video for packing healthy lunchboxes on our Kindy orientation day. Also, the P & C explain the TL system for the canteen menu
- Work with the community clinic shop and women's centre to increase healthy eating
- Work with the offsite provider to adopt a health-promoting menu
- Worked with canteen regarding Healthy Eating Policy

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