

[Download full-text](#)[Export citation](#)[Overview](#) [Citations \(12\)](#) [References \(39\)](#)[DOI: 10.1017/S158090023002493](#)License: [CC BY 4.0](#) Lana Vanderlee ·  Gary SacksCitations 12Reads  111

Abstract



No abstract

The abstract for this research is not available.

ResearchGate

Discover the world's research

- 25+ million members
- 160+ million publication pages
- 2.3+ billion citations

[Join for free](#)[I already have an account](#)Ad 

We and our partners use cookies

By using this site, you consent to the processing of your personal data, the storing of cookies on your device, and the use of similar technologies for personalization, ads, analytics, etc. For more information or to opt out, see our [Privacy Policy](#)



[Download full-text](#)[Export citation](#)

Available via license: [CC BY 4.0](#)

Content may be subject to copyright.

Page 1

We and our partners use cookies

By using this site, you consent to the processing of your personal data, the storing of cookies on your device, and the use of similar technologies for personalization, ads, analytics, etc. For more information or to opt out, see our [Privacy Policy](#)

[Download full-text](#)[Export citation](#)

¹École de Nutrition, Centre NUTRISS (Nutrition, santé et société), Institute of Nutrition and Functional Foods (INAF), Université Laval

²Deakin University, Geelong, Australia, Institute for Health Transformation, Global Centre for Preventive Health and Nutrition, VIC 3220.

Corresponding author: Lana Vanderlee, 2440 boulevard Hochelaga, Québec, QC G1V 0A6

Keywords: online food delivery, public policy, digital food environment, nutrition policy, food away from home

Running title: Practices of online food delivery companies

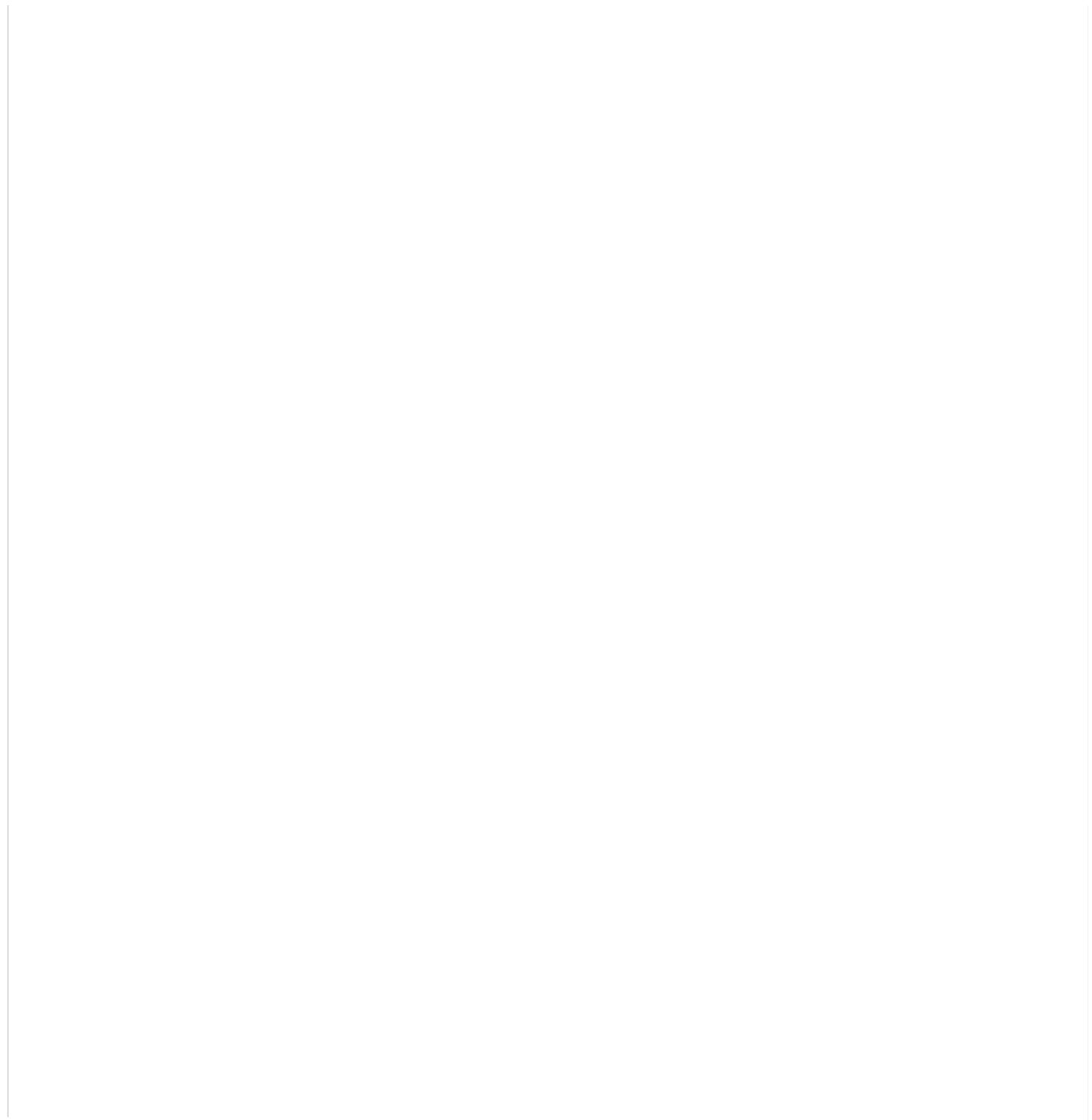


This is an Accepted Manuscript for Public Health Nutrition. This peer-reviewed article has been accepted for publication but not yet copyedited or typeset, and so may be subject to change during the production process. The article is considered published and may be cited using its DOI 10.1017/S1368980023002495

Public Health Nutrition is published by Cambridge University Press on behalf of The Nutrition Society. This is an Open Access article, distributed under the terms of the Creative Commons Attribution licence (<http://creativecommons.org/licenses/by/4.0/>), which permits unrestricted re-use, distribution and reproduction, provided the original article is properly cited.

We and our partners use cookies

By using this site, you consent to the processing of your personal data, the storing of cookies on your device, and the use of similar technologies for personalization, ads, analytics, etc. For more information or to opt out, see our Privacy Policy

[Download full-text](#)[Export citation](#)**We and our partners use cookies**

By using this site, you consent to the processing of your personal data, the storing of cookies on your device, and the use of similar technologies for personalization, ads, analytics, etc. For more information or to opt out, see our [Privacy Policy](#)

[Download full-text](#)[Export citation](#)

patterns of use, a multi-country study from 2018 estimated that 15% of consumers had used OFD in the past seven days, with higher use in particular population groups, such as younger adults and those living with children.²

From a public health perspective, OFD has been identified as a potential contributor to unhealthy diets and a threat to the achievement of the United Nations (UN) Sustainable Development Goals (SDGs).^{3,4} Firstly, the rise in OFD has increased the availability and ease of access to food prepared away from home (FAFH)^{5,6}, which is known to be associated with poorer quality diets and higher BMI.^{7,8} Secondly, concerns have been raised about the role of OFD companies in consolidating power in the restaurant industry, including amongst the most dominant fast food chains,^{9,10} which may contribute to diet-related disease and health inequity more generally.¹¹

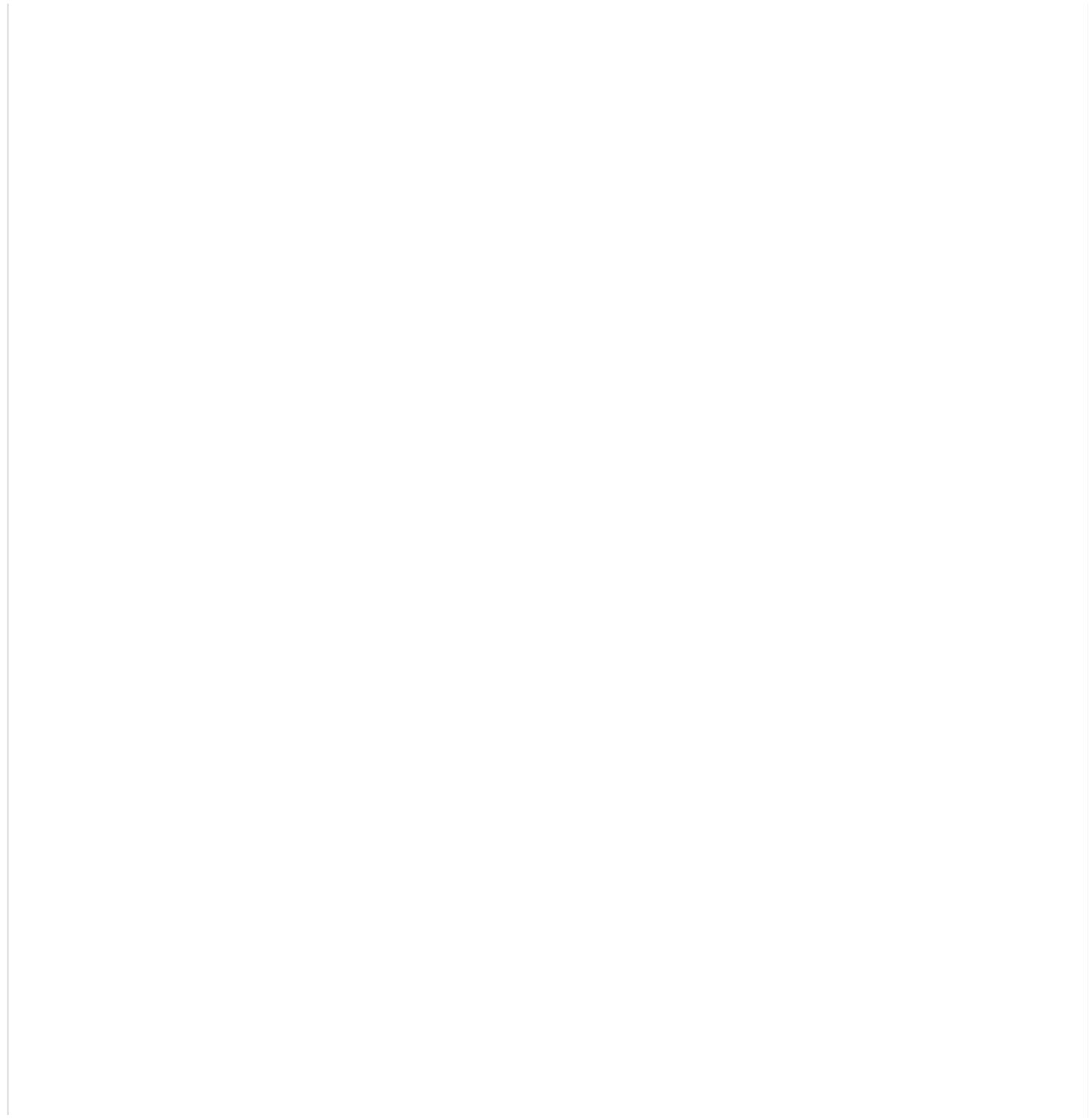
At the same time, the increased prominence of OFD presents an opportunity for public health. OFD companies could, theoretically, promote consumption of healthier FAFH, and incentivize restaurant companies to adopt practices that are health promoting.¹²⁻¹⁴ At present, there is limited regulation of OFD practices related to nutrition and public health, and limited monitoring of OFD practices from a nutrition perspective.^{4,12,15}

In this commentary, we propose recommended nutrition-related practices for OFD companies, based on a previously applied framework, the BIA-Obesity (Business Impact Assessment – Obesity and population nutrition) tool, for assessing the nutrition-related commitments and actions of food companies in various sectors (including manufacturers, retailers and restaurants).¹⁶ We contextualized the indicators in the BIA-Obesity tool to the OFD setting, taking into account extant peer-reviewed and grey literature regarding best practice and recommended industry actions. We categorized recommended policies and actions across five domains: *corporate strategy; nutrition information; promotions and pricing; product and outlet availability; and product formulation*. A summary of the recommendations can be found in

Table 1.

We and our partners use cookies

By using this site, you consent to the processing of your personal data, the storing of cookies on your device, and the use of similar technologies for personalization, ads, analytics, etc. For more information or to opt out, see our [Privacy Policy](#)

[Download full-text](#)[Export citation](#)**We and our partners use cookies**

By using this site, you consent to the processing of your personal data, the storing of cookies on your device, and the use of similar technologies for personalization, ads, analytics, etc. For more information or to opt out, see our [Privacy Policy](#)

[Download full-text](#)[Export citation](#)

businesses that provide online platforms that link consumers to food available for delivery or pickup within their geographic area.⁴ OFD companies act as third-party intermediaries, with restaurant companies able to elect to make their products available through particular platforms for a fee, often a percentage of each order, with additional fees to improve marketing opportunities (e.g., prioritized placement, improved appearance in search results) within the platform. Restaurants are responsible for entering information into the platform's 'back end' related to the products on offer, prices, and the use of some symbols or logos for a product (such as "vegetarian" and/or "healthy"). In addition, a restaurant chooses descriptors (i.e., restaurant types) under which the restaurant will be categorized (e.g., "sandwich", "healthy", "Asian"). At present, it seems as though provision of nutrition information on OFD platforms is provided at the discretion of the restaurateur. The selection of restaurants available to a consumer on an OFD platform is based on a range of factors, including their proximity to restaurant outlets, outlet operating hours, and availability of delivery drivers. OFD platforms use proprietary algorithms to tailor the list of available restaurants to individual consumers based on marketing arrangements with restaurants, and using machine learning techniques that draw on customer characteristics and previous purchase behaviour.¹⁷

Corporate strategy

In line with nutrition-related recommendations for all major food companies, we recommend that major OFD companies include public commitments to nutrition and health as part of their corporate strategies, with a focus on targets related to the proportion of revenue generated from healthier restaurants and/or healthier food items. Such commitments can provide an overarching framework to guide company policies and actions. We also recommend that OFD companies routinely report on a range of nutrition-related metrics, including actions taken and progress against commitments and targets. Furthermore, we recommend that OFD companies are transparent about their external relationships (e.g., with governments and community groups) and policy positions (e.g., related to major policy issues, such as nutrition labelling and food-related taxes). Best practice in this area includes policies that limit corporate lobbying and political donations.

We and our partners use cookies

By using this site, you consent to the processing of your personal data, the storing of cookies on your device, and the use of similar technologies for personalization, ads, analytics, etc. For more information or to opt out, see our [Privacy Policy](#)

[Download full-text](#)[Export citation](#)**We and our partners use cookies**

By using this site, you consent to the processing of your personal data, the storing of cookies on your device, and the use of similar technologies for personalization, ads, analytics, etc. For more information or to opt out, see our [Privacy Policy](#)

[Download full-text](#)[Export citation](#)

some products on their platforms are meeting existing government regulations (e.g., related to provision of information about energy content). Empirical research suggests that, in some contexts, obligations are not being met.^{18,19} We recommend that OFD companies ensure that their platforms provide both detailed and summary nutrition information for all items available for sale, and facilitate restaurants to provide this information in a consistent manner that is easily and predictably available to consumers in prominent ways.

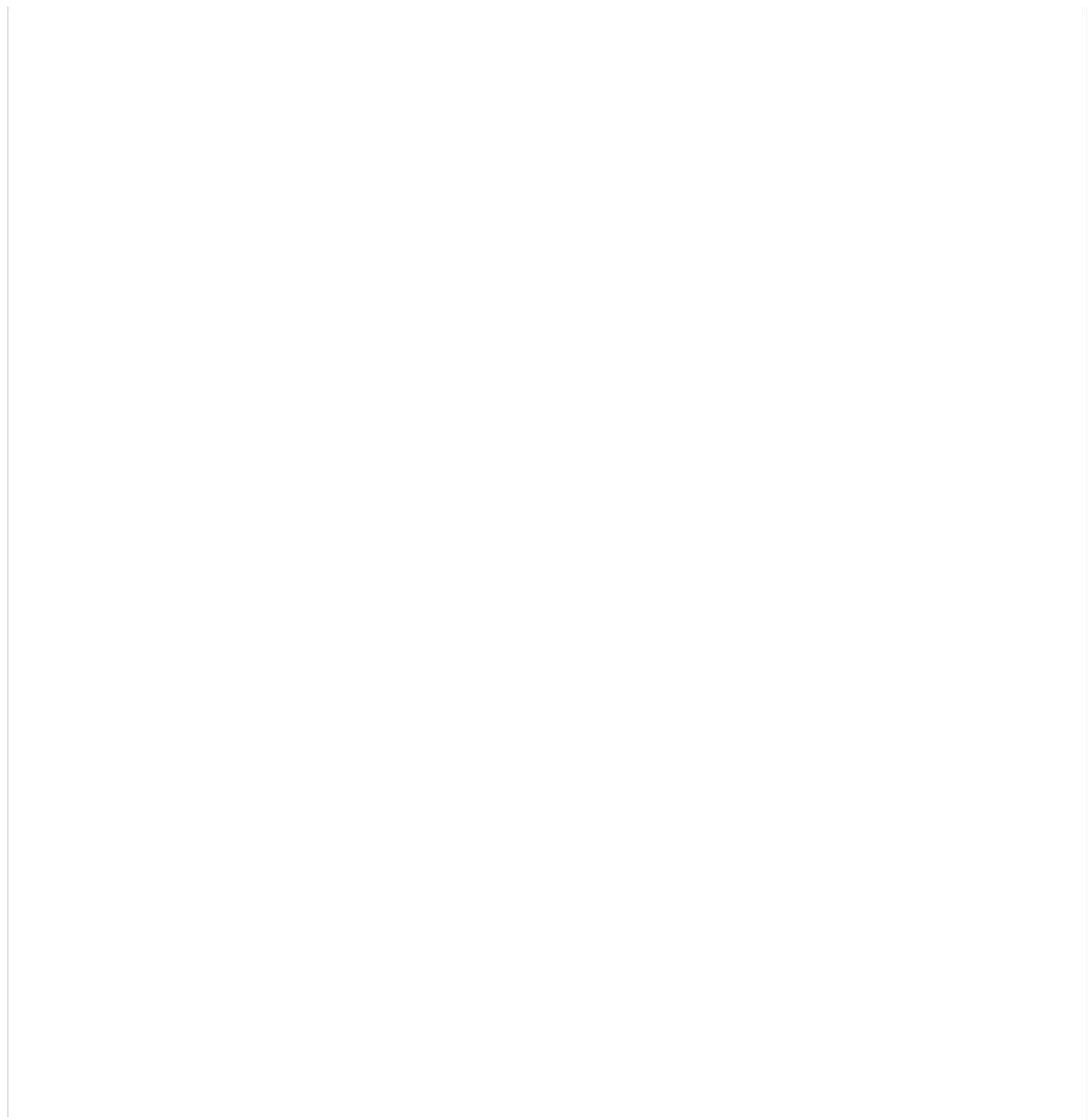
If OFD companies are using symbols, descriptors or logos that have health connotations, clear and transparent criteria are required, and should align with and support government-led programs or policies when possible. For example, OFD companies could help promote the provision of country-specific interpretative nutrition indicators, such as traffic lights, health star ratings or 'high in' symbols, that are based on government-endorsed criteria. We recommend that OFD companies also provide tools, such as automated nutrition calculators, that help consumers track and understand the nutritional composition of orders placed. Use of such tools and their effectiveness from a nutrition perspective should be routinely evaluated.²⁰

Promotions and pricing

In line with World Health Organization recommendations,^{21,22} we recommend that OFD companies restrict the exposure of children (under 18 years of age) to the marketing of unhealthy foods and related brands. Given the strong association of FAFH consumption and unhealthy diets⁸, and the predominance of unhealthy fast-food chains on most major OFD platforms^{9,23}, restrictions likely need to apply comprehensively across a range of promotion strategies used by OFD companies. In particular, we recommend that OFD companies avoid promotion techniques, such as partnerships with celebrities, that appeal to young people, as well as sponsorships and branding related to settings and events popular with children and families. In addition, we recommend OFD companies restrict promotions that feature unhealthy products and related brands, and only enter into joint marketing campaigns with restaurants that have healthy product profiles overall.

We and our partners use cookies

By using this site, you consent to the processing of your personal data, the storing of cookies on your device, and the use of similar technologies for personalization, ads, analytics, etc. For more information or to opt out, see our [Privacy Policy](#)

[Download full-text](#)[Export citation](#)**We and our partners use cookies**

By using this site, you consent to the processing of your personal data, the storing of cookies on your device, and the use of similar technologies for personalization, ads, analytics, etc. For more information or to opt out, see our [Privacy Policy](#)

[Download full-text](#)[Export citation](#)

exclusively to incentivize healthier selections.

More broadly in the area of marketing, and in recognition of emerging issues related to data privacy and digital marketing²¹ and concerns regarding the way in which particular population groups are targeted by the marketing strategies of food companies,²⁴ we recommend that OFD companies commit to transparency in the methods used for target marketing, and responsible use of consumer data, in line with relevant regulations.

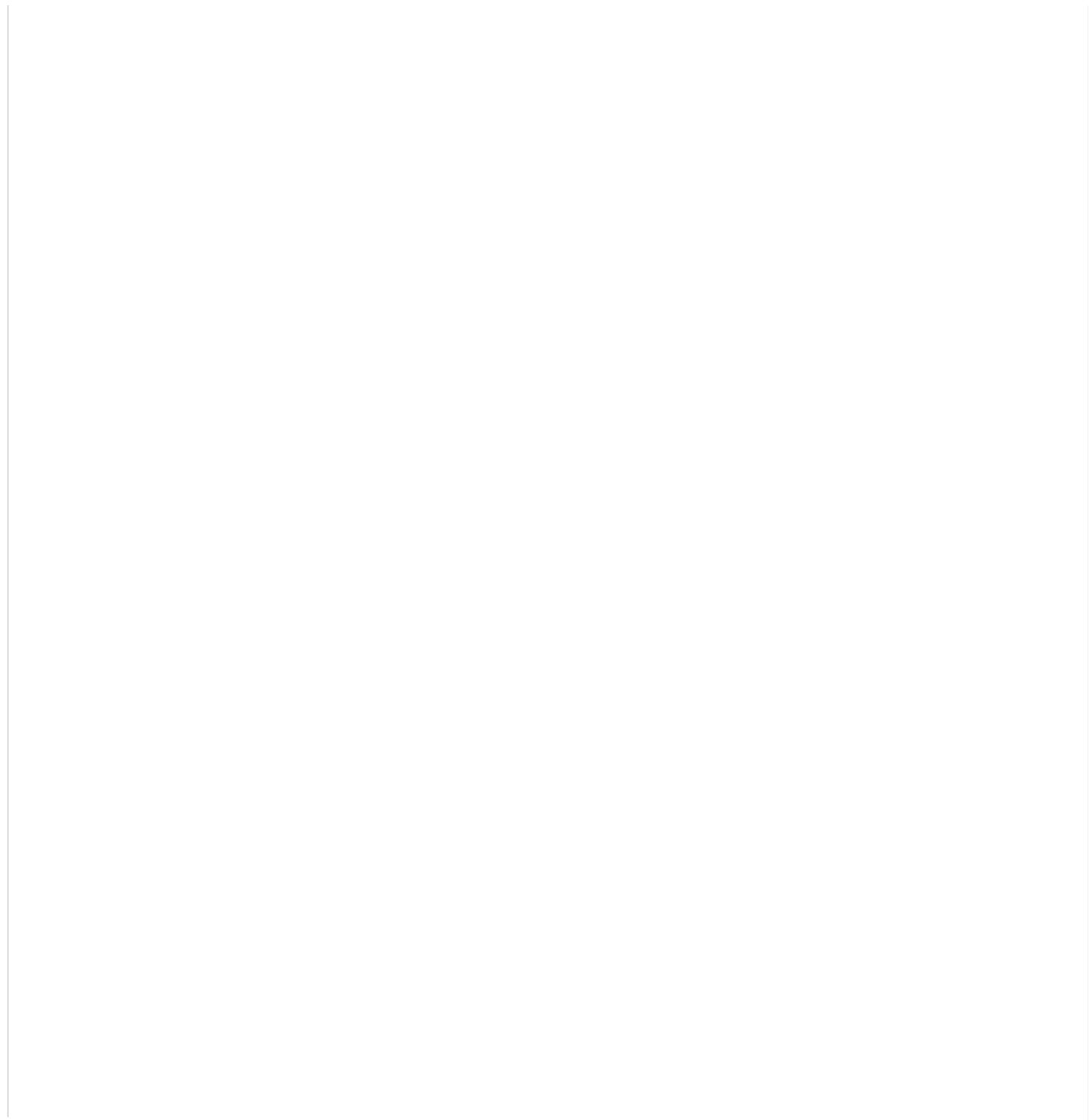
Product and outlet availability

We recommend that OFD companies increase the visibility and accessibility of healthier products on their platforms. Choice architecture in online food environments has been identified as an opportunity to nudge consumers in a healthier direction.^{14,25} OFD companies can do this in a range of ways, such as prioritizing the position and presentation of healthier options on landing pages and within search results. In addition, OFD companies can actively promote healthier product selection by ensuring vendors make healthier options, such as low or no-calorie beverages and salad or fresh vegetables, the default in meal combinations (e.g. children's meals). OFD companies can also promote healthier purchases by limiting the selection of 'add-on' options (e.g. a prompt of "Would you like to add...") to healthier products.

Lastly, OFD companies can take steps to encourage greater diversity of restaurant participation in their platforms, which may reduce the dominance of unhealthy fast-food chains and support the development of healthier food systems. In this area, we recommend that OFD companies adopt policies and practices that reduce barriers to entry into the OFD market and support increased participation from smaller restaurant companies.

We and our partners use cookies

By using this site, you consent to the processing of your personal data, the storing of cookies on your device, and the use of similar technologies for personalization, ads, analytics, etc. For more information or to opt out, see our [Privacy Policy](#)

[Download full-text](#)[Export citation](#)**We and our partners use cookies**

By using this site, you consent to the processing of your personal data, the storing of cookies on your device, and the use of similar technologies for personalization, ads, analytics, etc. For more information or to opt out, see our [Privacy Policy](#)

[Download full-text](#)[Export citation](#)

increase the healthfulness of their offerings. OFD companies could also directly incentivize restaurants to offer healthier products, by requiring restaurants to use healthier frying oils or to meet category-specific nutrient targets (e.g. in relation to sodium and sugar), as a pre-condition to being listed on the platform. We recommend that all company actions in this area are underpinned by clear and transparent criteria for assessing the healthfulness of foods and restaurants, based on government-endorsed guidelines and/or nutrient profiling schemes. We recommend that OFD companies set goals for the proportion of healthier restaurants on their platform, and prioritize the presentation of healthier restaurants within existing structures.

Towards health-promoting online food delivery environments

In this commentary, we have identified a range of actions that OFD companies can take to contribute to efforts to improve population diets. While the recommendations are primarily directed towards OFD aggregators, we recognize that their ability to provide healthier foods is largely dependent on the practices and products offered by the restaurants selling products on their platforms. Accordingly, improvements to the healthfulness of FAFH will rely on restaurant companies improving the healthfulness of their food items and the way in which they are marketed. Critically, given the substantial market power that major OFD companies hold and their contractual agreements with restaurants, OFD companies have a substantial opportunity to influence the practices of restaurants related to nutrition.

Despite limited monitoring of the OFD sector related to nutrition, it's clear that very few of the recommended actions have been implemented in practice. While the field is growing rapidly and OFD company practices are likely to evolve quickly, experience from other areas of the food industry shows that voluntary actions in the area of nutrition often fall far short of recommendations.²⁶⁻²⁸ As such, it is likely that government regulation will be needed to establish a 'level playing field' for all companies, and ensure that online food environments are health promoting. Apart from limited regulations related to menu labelling in some jurisdictions, there is currently a lack of nutrition-related regulations that apply in the FAFH space. The recommendations proposed in this commentary may help identify areas for regulation, including

[Download full-text](#)[Export citation](#)**We and our partners use cookies**

By using this site, you consent to the processing of your personal data, the storing of cookies on your device, and the use of similar technologies for personalization, ads, analytics, etc. For more information or to opt out, see our [Privacy Policy](#)

[Download full-text](#)[Export citation](#)

Importantly, some of the recommended actions for OFD companies, such as prioritizing healthier options within proprietary algorithms, may prove challenging to regulate. In these cases, OFD companies are only likely to be driven to change by consumer demand, actions by competitors and/or pressure from other stakeholders (such as public health groups, the media and investors).^{20,29} OFD companies can take steps towards implementation of the recommendations by focusing on giving their customers more autonomy in shaping their online food environment. For example, OFD users could be given a choice to prioritize healthier restaurants or meals within their own algorithms, to apply filters to include only healthier restaurants and/or options, or to limit the promotions related to less healthful foods to which they are exposed. Several of the recommendations we have made rely on a clear definition of healthy foods and brands. While multiple systems and approaches have been identified for classifying the healthfulness of FAFH and restaurants³⁰⁻³⁴, the strengths and weaknesses of applying existing nutrient profiling algorithms in this space, and the applicability of existing systems in diverse contexts is not well established and should be the focus of future research. Lastly, while this commentary has focused on nutrition, the rise of OFD has been noted as having potential negative impacts on other aspects of health and society, including environmental sustainability and workers' rights.^{3,4,15,35,36} Future research should consider integrating these considerations into a broader set of recommendations for the sector.

Acknowledgements: None

Financial Support: LV is supported by a Canada Research Chair in Health Food Policy. GS is a recipient of a National Health and Medical Research Council (NHMRC) Emerging Leadership Fellowship (2021/GNT2008535).

Conflict of Interest: LV and GS often interact with food industry actors as part of their broader research programs, but do not receive any funding or support from any industry-affiliated groups.

Authorship: LV and GS co-formulated the research question and co-wrote and edited the commentary.

We and our partners use cookies

By using this site, you consent to the processing of your personal data, the storing of cookies on your device, and the use of similar technologies for personalization, ads, analytics, etc. For more information or to opt out, see our [Privacy Policy](#)

[Download full-text](#)[Export citation](#)

<i>Corporate strategy</i>	<i>Develop an overall strategy related to nutrition and health</i>	<ul style="list-style-type: none"> As part of the overall corporate strategy and mission statement, recognize the role the company plays in efforts to improve population diets and achieving the Sustainable Development Goals Establish targets for the proportion of revenue generated from healthier restaurants and the proportion of healthy food sold on platforms Implement routine reporting on a range of nutrition-related metrics (e.g., overall nutrient profile of products available for sale, provision of nutrition information), including progress against commitments and targets Provide transparency related to nutrition-related algorithms and practices Transparently report relationships with external groups (including governments, industry groups, universities and community organizations) and policy positions (e.g. related to major policy issues, such as nutrition labelling and food-related taxes) Limit political lobbying and donations
<i>Nutrition information</i>	<i>Provide nutrition information in a consistent manner that is easily and predictably available to consumers</i>	<ul style="list-style-type: none"> Ensure that vendors selling products on their platforms are meeting existing government nutrition labelling regulations (e.g., related to provision of information about energy content and associated contextual statements) For all items available for sale, provide both detailed (e.g., ingredients lists, nutrition information panels) and summary nutrition information in a consistent manner that is easily and predictably available to consumers in prominent ways (e.g., summary information next to the item name or price, in equivalent size) Publish clear criteria for use of symbols, descriptors and logos that have health connotations (such as logos depicting 'healthy' items or 'healthy' restaurants) that are in line with locally-relevant government-led programs or policies, when available Provide tools, such as automated nutrition calculators, that help consumers track and understand the nutritional composition of orders placed, and routinely evaluate their effectiveness from a nutritional perspective.

<https://doi.org/10.1017/S1368980023002495> Published online by Cambridge University Press

Page 9

We and our partners use cookies

By using this site, you consent to the processing of your personal data, the storing of cookies on your device, and the use of similar technologies for personalization, ads, analytics, etc. For more information or to opt out, see our Privacy Policy

[Download full-text](#)[Export citation](#)

		<ul style="list-style-type: none"> • Limit premium offers and price discounts (including promotion codes, loyalty discounts, and free delivery offers) for unhealthy products and brands, and use premium offers exclusively to incentivize healthier selections • Adopt transparency regarding methods (and related algorithms) used for target marketing (e.g. to particular population groups and individual characteristics) • Responsibly use consumer data so as not to inequitably target vulnerable groups
<i>Product and outlet availability</i>	<i>Increase the visibility and accessibility of healthier products on OFD platforms</i>	<ul style="list-style-type: none"> • Prioritize the position and presentation of healthier options on landing pages and within search results, actively promoting healthier options • Ensure vendors make healthier options, such as low or no-calorie beverages and salad or fresh vegetables, the default in meal combinations (e.g. children's meals) • Limit the selection of 'add-on' options to healthier products • Reduce barriers to entry into the OFD market, and support increased participation from smaller restaurant companies
<i>Product formulation</i>	<i>Incentivize development of healthier foods / menu offerings from vendors using OFD platforms</i>	<ul style="list-style-type: none"> • Develop clear, consistent and transparent criteria for determining and communicating the healthfulness of individual foods, brands and restaurants, based on government-endorsed guidelines and/or nutrient profiling schemes • Set goals for the proportion of healthier restaurants on each platform • Prioritize the presentation of healthier restaurants within existing structures • Offer incentives to suppliers for making product improvements (e.g. use of healthier frying oils)

<https://doi.org/10.1017/S1368980023002495> Published online by Cambridge University Press

Page 10

We and our partners use cookies

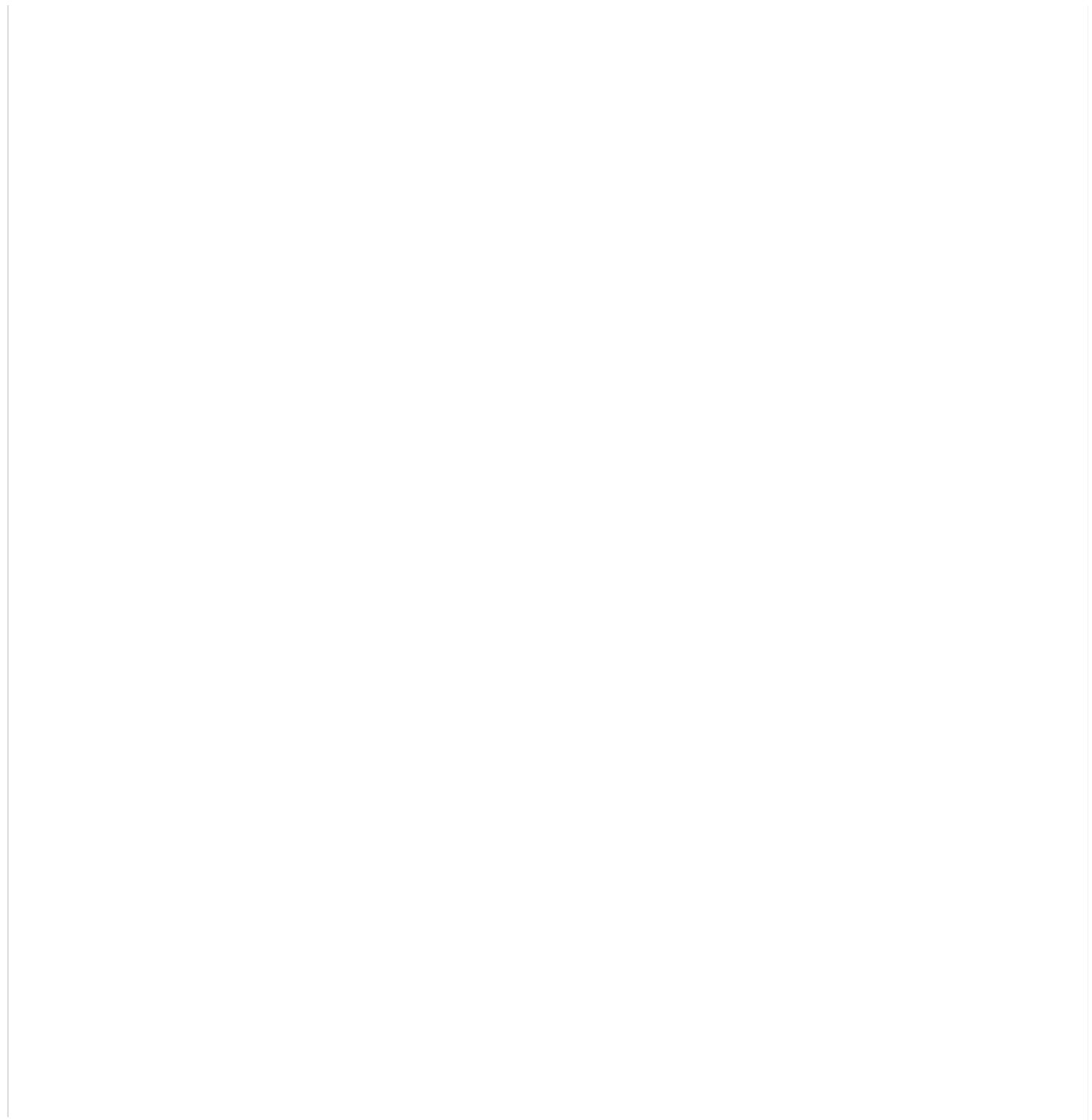
By using this site, you consent to the processing of your personal data, the storing of cookies on your device, and the use of similar technologies for personalization, ads, analytics, etc. For more information or to opt out, see our [Privacy Policy](#)

[Download full-text](#)[Export citation](#)

2. Keeble M, Adams J, Sacks G, Vanderlee L, White CM, Hammond D, Burgoine T. Use of online food delivery services to order food prepared away-from-home and associated sociodemographic characteristics: a cross-sectional, multi-country analysis. *International Journal of Environmental Research and Public Health*. 2020;17:16.
3. Jia SS, Gibson AA, Ding D, et al. Perspective: Are online food delivery services emerging as another obstacle to achieving the 2030 United Nations Sustainable Development Goals? *Frontiers in Nutrition*. 2022:295.
4. WHO European Office for the Prevention and Control of Noncommunicable Diseases. *Slide to order: a food systems approach to meals delivery apps*: . Copenhagen2021.
5. Brar K, Minaker LM. Geographic reach and nutritional quality of foods available from mobile online food delivery service applications: novel opportunities for retail food environment surveillance. *BMC Public Health*. 2021;21(1):458.
6. Keeble M, Adams J, Vanderlee L, Hammond D, Burgoine T. Associations between online food outlet access and online food delivery service use amongst adults in the UK: a cross-sectional analysis of linked data. *BMC Public Health*. 2021;21(1):1968.
7. Lachat C, Nago E, Verstraeten R, Roberfroid D, Van Camp J, Kolsteren P. Eating out of home and its association with dietary intake: a systematic review of the evidence. *Obesity reviews*. 2012;13(4):329-346.
8. Wellard-Cole L, Davies A, Allman-Farinelli M. Contribution of foods prepared away from home to intakes of energy and nutrients of public health concern in adults: a systematic review. *Critical Reviews in Food Science and Nutrition*. 2021:1-12.
9. Partridge SR, Gibson AA, Roy R, et al. Junk food on demand: a cross-sectional analysis of the nutritional quality of popular online food delivery outlets in Australia and New Zealand. *Nutrients*. 2020;12(10).
10. Van Dam I, Wood B, Sacks G, Allais O, Vandevijvere S. A detailed mapping of the food industry in the European single market: similarities and differences in market structure across countries and sectors. *International Journal of Behavioral Nutrition and Physical Activity*. 2021;18(1):54.

We and our partners use cookies

By using this site, you consent to the processing of your personal data, the storing of cookies on your device, and the use of similar technologies for personalization, ads, analytics, etc. For more information or to opt out, see our [Privacy Policy](#)

[Download full-text](#)[Export citation](#)**We and our partners use cookies**

By using this site, you consent to the processing of your personal data, the storing of cookies on your device, and the use of similar technologies for personalization, ads, analytics, etc. For more information or to opt out, see our [Privacy Policy](#)

[Download full-text](#)[Export citation](#)

12. Bates S, Reeve B, Trevena H. A narrative review of online food delivery in Australia: challenges and opportunities for public health nutrition policy. *Public Health Nutr.* 2023;26(1):262-272.
13. Delaney T, Wolfenden L, Wyse R. Online food delivery systems and their potential to improve public health nutrition: a response to 'A narrative review of online food delivery in Australia'. *Public Health Nutr.* 2023;26(1):273-274.
14. Wyse R, Jackson JK, Delaney T, et al. The effectiveness of interventions delivered using digital food environments to encourage healthy food choices: a systematic review and meta-analysis. *Nutrients.* 2021;13(7).
15. Meemken E-M, Bellemare MF, Reardon T, Vargas CM. Research and policy for the food-delivery revolution. *Science.* 2022;377(6608):810-813.
16. Sacks G, Vanderlee L, Robinson E, et al. BIA-Obesity (Business Impact Assessment—Obesity and population-level nutrition): A tool and process to assess food company policies and commitments related to obesity prevention and population nutrition at the national level. *Obesity Reviews.* 2019;20:78-89.
17. Deliverect. How does the food delivery apps algorithm work? 2023; <https://www.deliverect.com/en-ca/blog/online-food-delivery/how-does-food-delivery-apps-algorithm-work>.
18. Greenthal E, Sorscher S, Pomeranz JL, Cash SB. Availability of calorie information on online menus from chain restaurants in the USA: current prevalence and legal landscape. *Public Health Nutr.* 2023;1-8.
19. Vanderlee L, Gaucher-Holm A, Lê-Brassard M, Vaillancourt C. Availability of calorie information on online food delivery service platforms among major chain restaurants in Canadian provinces with different calorie labelling policies. *Can J Public Health.* 2023.
20. United Nations Children's Fund (UNICEF). *Guidance Framework to Support Healthier Food Retail Environments for Children: A practical tool for nutrition and children's rights in the food retail sector.* New York2023.

We and our partners use cookies

By using this site, you consent to the processing of your personal data, the storing of cookies on your device, and the use of similar technologies for personalization, ads, analytics, etc. For more information or to opt out, see our [Privacy Policy](#)

[Download full-text](#)[Export citation](#)**We and our partners use cookies**

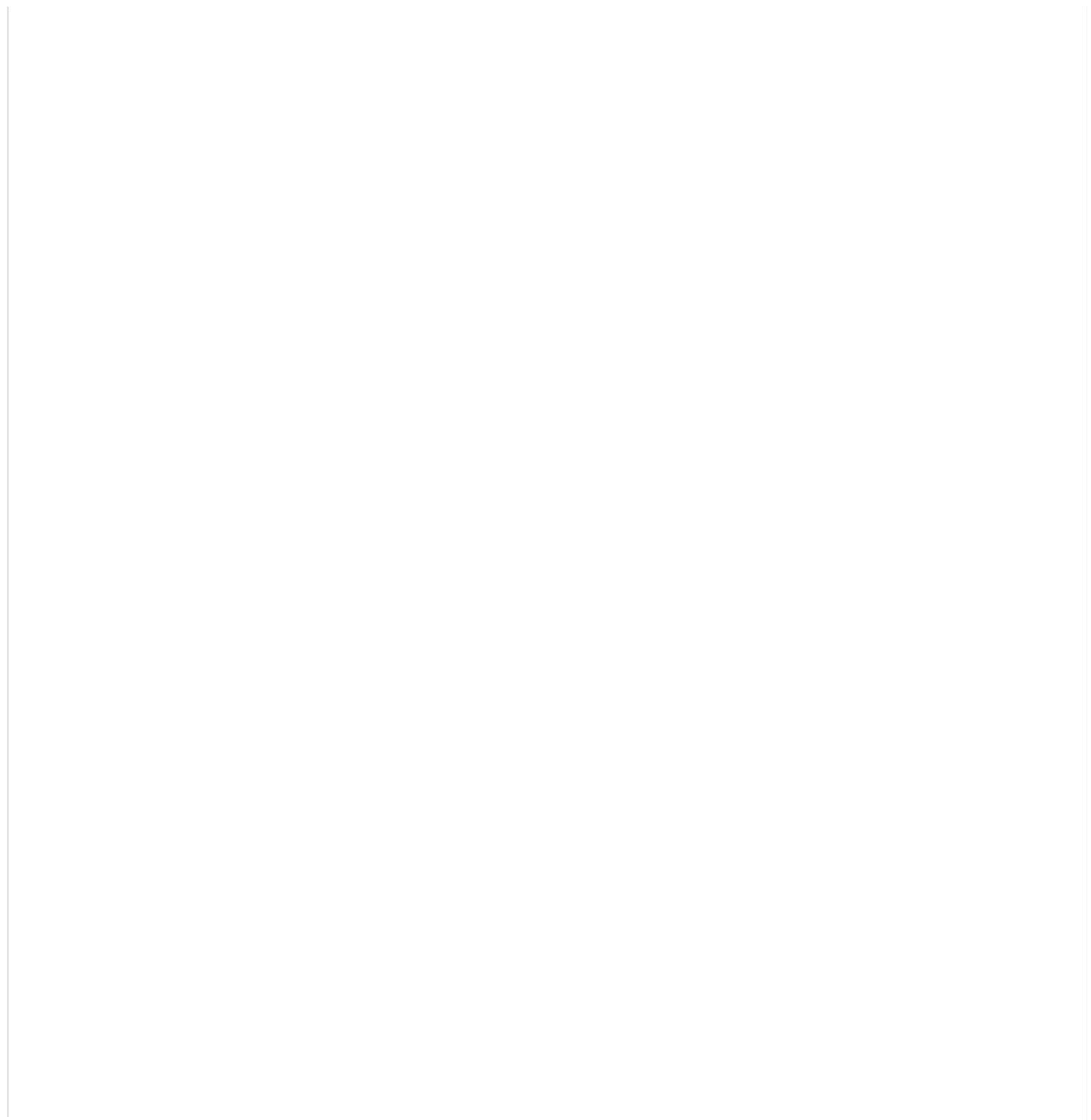
By using this site, you consent to the processing of your personal data, the storing of cookies on your device, and the use of similar technologies for personalization, ads, analytics, etc. For more information or to opt out, see our [Privacy Policy](#)

[Download full-text](#)[Export citation](#)

22. World Health Organization and the United Nations Children's Fund (UNICEF). Taking action to protect children from the harmful impact of food marketing: a child rights-based approach. . 2023; <https://www.who.int/publications/i/item/9789240047518>.
23. Poelman MP, Thornton L, Zenk SN. A cross-sectional comparison of meal delivery options in three international cities. *EurJClinNutr.* 2020;74(10):1465-1473.
24. Bragg MA, Miller AN, Kalkstein DA, Elbel B, Roberto CA. Evaluating the influence of racially targeted food and beverage advertisements on Black and White adolescents' perceptions and preferences. *Appetite.* 2019;140:41-49.
25. Bucher T, Siegrist M. Children's and parents' health perception of different soft drinks. *BrJNutr.* 2015;113(3):526-535.
26. Erzse A, Karim SA, Foley L, Hofman KJ. A realist review of voluntary actions by the food and beverage industry and implications for public health and policy in low- and middle-income countries. *Nature Food.* 2022;3(8):650-663.
27. Vergeer L, Vanderlee L, Potvin Kent, M, Mulligan, C, L'Abbe MR. The effectiveness of voluntary policies and commitments in restricting unhealthy food marketing to Canadian children on food company websites. *Applied Physiology, Nutrition, and Metabolism.* 2019;44(1):74-82.
28. Vergeer L, Ahmed M, Vanderlee L, et al. The relationship between voluntary product (re) formulation commitments and changes in the nutritional quality of products offered by the top packaged food and beverage companies in Canada from 2013 to 2017. *BMC Public Health.* 2022;22(1):1-17.
29. White M, Aguirre E, Finegood DT, Holmes C, Sacks G, Smith R. What role should the commercial food system play in promoting health through better diet? *Bmj.* 2020;368:m545.
30. Trapp GSA, Reid N, Hickling S, Bivoltis A, Mandzufas J, Howard J. Nutritional quality of children's menus in restaurants: does cuisine type matter? *Public Health Nutr.* 2023;26(7):1451-1455.

We and our partners use cookies

By using this site, you consent to the processing of your personal data, the storing of cookies on your device, and the use of similar technologies for personalization, ads, analytics, etc. For more information or to opt out, see our [Privacy Policy](#)

[Download full-text](#)[Export citation](#)**We and our partners use cookies**

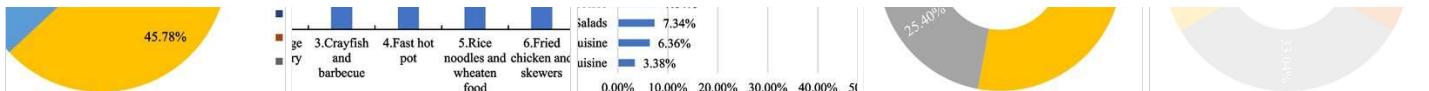
By using this site, you consent to the processing of your personal data, the storing of cookies on your device, and the use of similar technologies for personalization, ads, analytics, etc. For more information or to opt out, see our [Privacy Policy](#)

[Download full-text](#)[Export citation](#)

32. Pulker CE, Aberle LM, Butcher LM, et al. Development of the menu assessment scoring tool (mast) to assess the nutritional quality of food service menus. *International Journal of Environmental Research and Public Health*. 2023;20(5):3998.
33. Pulker CE, Trapp GSA, Fallows M, Hooper P, McKee H, Pollard CM. Food Outlets Dietary Risk (FODR) assessment tool: study protocol for assessing the public health nutrition risks of community food environments. *Nutrition Journal*. 2020;19(1):122.
34. Dunford EK, Wu JH, Wellard-Cole L, et al. A comparison of the Health Star Rating system when used for restaurant fast foods and packaged foods. *Appetite*. 2017;117:1-8.
35. Li C, Mirosa M, Bremer P. Review of online food delivery platforms and their impacts on sustainability. *Sustainability*. 2020;12(14):5528.
36. Taufik D, Bouwman EP, Reinders MJ, Dagevos H. A reversal of defaults: Implementing a menu-based default nudge to promote out-of-home consumer adoption of plant-based meat alternatives. *Appetite*. 2022;175:106049.

We and our partners use cookies

By using this site, you consent to the processing of your personal data, the storing of cookies on your device, and the use of similar technologies for personalization, ads, analytics, etc. For more information or to opt out, see our [Privacy Policy](#)

[Download full-text](#)[Export citation](#)

Nutritional quality and consumer health perception of online delivery food in the context of China

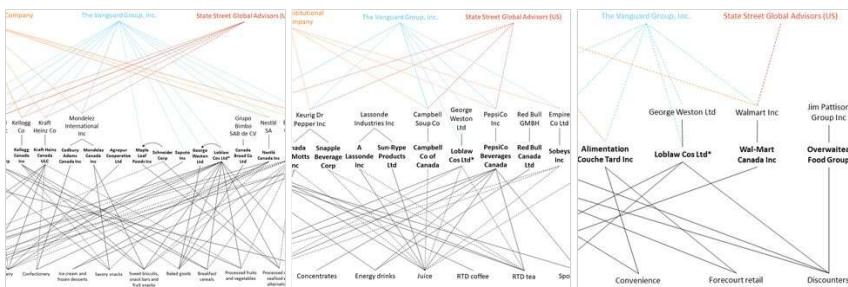
Article [Full-text available](#)

November 2022 · 541 Reads · 27 Citations

BMC Public Health

Xiaoting Dai · Linhai Wu · Wuyang Hu

Background Today, the popularization of mobile internet technology has enabled the public's need for food convenience and diversity arising from modern fast-paced lifestyles to be met at a relatively low cost. The digital age of the restaurant industry has arrived. Online food delivery (OFD) is rapidly developing globally. However, the public's awareness of the nutritional quality of food through OFD and their knowledge of...

[Read more](#)[View](#)

The structure of the Canadian packaged food and non-alcoholic beverage manufacturing and grocery retailing sectors through a public health lens

Article [Full-text available](#)

March 2023 · 451 Reads · 5 Citations

Globalization and Health

Alexa Gaucher-Holm · Benjamin Wood · Gary Sacks · Lana Vanderlee

Background Corporate power has been recognized as an important influence on food environments and population health more broadly. Understanding the structure of national food and beverage markets can provide important insight into the power held by leading corporations. This study aimed to descriptively analyze the structure of the Canadian food and beverage manufacturing and grocery retailing sectors as of...

[Read more](#)[View](#)

Use of online food delivery services among adults in five countries from the International Food Policy Study 2018–2021

We and our partners use cookies

By using this site, you consent to the processing of your personal data, the storing of cookies on your device, and the use of similar technologies for personalization, ads, analytics, etc. For more information or to opt out, see our [Privacy Policy](#)

[Download full-text](#)[Export citation](#)

Availability of calorie information on online food delivery service platforms among major chain restaurants in Canadian provinces with different calorie labelling policies

Article

June 2023 · 33 Reads · 11 Citations

Canadian journal of public health. Revue canadienne de santé publique

 Lana Vanderlee ·  Alexa Gaucher-Holm ·  Maggie Lê-Brassard ·  Caroline Vaillancourt

Objective: This study aimed to characterize the availability of calorie labelling on major online food delivery (OFG) platforms for the largest restaurant brands in Canada to examine differences in provinces with and those without mandatory calorie labelling regulations. Methods: Data were collected for the 13 largest restaurant brands with locations in Ontario (with mandatory menu labelling) and Alberta and Quebec (with no...)

[Read more](#)

[View](#)

OP49 Dark kitchens and rapid grocery delivery services: A rapid analysis of the digital food environment in a London local authority

Conference Paper

August 2023 · 47 Reads

Journal of Epidemiology and Community Health

 Chiara Rinaldi ·  Marlene D'Aguilar ·  Matt Egan

Background Unhealthy diets are important risk factors for obesity and non-communicable diseases and are influenced by food environments. In recent years, food purchasing has shifted to online spaces, highlighting the importance of studying digital food environments. This study explores two relatively new developments in online food delivery in a London local authority, namely delivery-only 'dark kitchens' and rapid...

[Read more](#)

[View](#)

ResearchGate

ResearchGate



Company

We and our partners use cookies

By using this site, you consent to the processing of your personal data, the storing of cookies on your device, and the use of similar technologies for personalization, ads, analytics, etc. For more information or to opt out, see our Privacy Policy

[Download full-text](#)[Export citation](#)[Terms](#) [Privacy](#) [Copyright](#) [Imprint](#) [Consent preferences](#)

© 2008-2025 ResearchGate GmbH. All rights reserved.

We and our partners use cookies

By using this site, you consent to the processing of your personal data, the storing of cookies on your device, and the use of similar technologies for personalization, ads, analytics, etc. For more information or to opt out, see our [Privacy Policy](#)