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# News coverage of Mexico's front-of-package food label policy

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## ABSTRACT

**Objectives** To examine news coverage of Mexico's front-of-package food labelling policy.

**Methods** We used Lexis Nexis to identify newspaper articles that mention the proposed law in four Mexican newspapers representing politically centre-left and centre-right perspectives. We coded for type and valence of arguments, sources and research evidence cited.

**Results** We identified N=361 relevant articles. Coverage of the front-of-package food label policy was primarily news (vs editorial/opinion). While most were neutral in tone, left-leaning newspapers had slightly more positive overall coverage compared with right-leaning newspapers, indicated by publishing more stories in favour of the policy, fewer in opposition, more propolicy arguments and more frequent inclusion of perspectives by government officials and public health advocates. Despite some evidence of bias, there was a general lack of credible opposition to the policy and mention of opponents across newspapers.

**Conclusions and policy implications** The relative absence of food and beverage industry stakeholders in news coverage of the food label policy is unexpected given their documented involvement in prior food policy debates. We discuss possible reasons for their conspicuous absence and lessons for public health advocates around the globe.

## INTRODUCTION

In August 2019, legislators from Mexico's left-leaning MORENA political party introduced what would become the world's strictest front-of-package labelling law (NOM-051)<sup>1</sup> for certain processed food and non-alcoholic beverage products. Intended to curb the country's dual epidemics of obesity and diabetes—referred to colloquially as 'diabesity'—the law's multiple components targeted the multinational food industry and were expected to benefit consumers by making nutrition information accessible to consumers while encouraging industry to reformulate products.<sup>2</sup> Public health advocates have increasingly recommended policy-based approaches to reduce and prevent obesity; policies that affect the marketing and sales of junk foods include restrictions on food advertising to children, product taxation

## WHAT IS ALREADY KNOWN ON THIS TOPIC

⇒ Front-of-package warning labels on processed foods are an increasingly popular strategy for combatting the spread of the 'Western diet' and influence of the global food industry.

## WHAT THIS STUDY ADDS

⇒ This study reveals how the news media framed the policy debate involving public health advocates, policy-makers, and the food and beverage industry throughout Mexico's front-of-package warning label policy debate.

## HOW THIS STUDY MIGHT AFFECT RESEARCH, PRACTICE AND/OR POLICY

⇒ Our study suggests approaches for advocates in other countries to combat the influence of the food industry.

and front-of-package food labeling.<sup>3–5</sup> For example, Mexico was the first country in the Americas to enact a nationwide tax on sugar-sweetened beverages; controversial at the outset, the law has had demonstrable public health impact and has been replicated around the world.<sup>6</sup> More recently, comprehensive food labelling as a health policy strategy has amassed currency as a viable approach, bolstered by its promise signalled by communication and public health theory and evidence.<sup>7</sup>

Front-of-package food warning labels are meant to benefit consumers by providing nutritional information that is easy to understand, and updated nutrition standards are meant to encourage corporations to reformulate products. Mexican public health scientists collaborated with counterparts across the region to develop these new labels, with the resulting policy taking advantage of lessons learnt about how the food and beverage industry was likely to react to new policies.<sup>2</sup> Indeed, the very premise of the Mexican front-of-package labels is to replace the Daily Dietary Guidelines (hereafter referred to by its Spanish-language acronym, GDA), an



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industry-supported label adapted in 2011 from a European industry organisation to avoid stricter regulation and peddled globally, despite having been discredited as ineffective at influencing consumer behaviour.<sup>8</sup> Moreover, since the GDA is industry-backed, there is no incentive for food companies to improve the nutritional quality of their products or to reduce the demand for food with high levels of sodium, sugar, or fat among consumers, as there is with front-of-package labels.

Mexico's black-and-white octagonal front-of-package warning labels were modelled after labels introduced in Chile in 2016. These labels have been adapted by other Latin American countries, including Peru, Uruguay, and Argentina, Colombia and Brazil.<sup>9–11</sup> The Chilean labels are the result of a multimethod research approach to test visualisation, understanding and ability to modify intended purchase—about 15 different prototypes were tested prior to the selection of the final warning label that would become law.<sup>12</sup> For the Mexican labels, researchers from the National Institute of Public Health conducted a series of experiments with various forms of front-of-package labels with different population samples. In one study, researchers compared the relative acceptability and understanding of three labels: the existing GDA, Ecuador's Multiple Traffic Lights and Chile's octagonal black-and-white labels among low-income and middle-income Mexicans. The GDA had the lowest ratings of acceptability and understanding, while labels with traffic lights and octagons were deemed acceptable and easier to understand.<sup>13</sup> Another study replicated the findings with respect to acceptance and comprehension, but found class disparities in purchasing intentions, suggesting the labels alone would be insufficient towards supporting behavioural change among low-income and less-educated consumers.<sup>14</sup> Another study with Mexican and US Latino and white consumers revealed the octagonal warning labels resulted in the highest comprehension relative to the GDA, traffic lights and two additional front-of-package labels (US' Nutrition Facts Panel, Australia's Health Star Rating System).<sup>15</sup>

Underpinning the labels are new nutrition standards that determine thresholds for calories and five specific nutrients (total sugar, saturated fats, other fats, sodium). For example, solid products that exceed 275 calories per 100 grams must be labelled 'high in calories'; a second warning label for 'excess sugar' would be added if 10% or more of the calories are from sugar. In addition, products that contain non-caloric sweeteners and caffeine must be labelled as such, along with warnings against children's consumption of these items. Prepackaged products may have from zero to seven front-of-package warning labels (five octagons and two rectangular black boxes)—the number of labels further serving as a cue to consumers that the product may be low in nutritional quality. The policy further mandates limits on advertising, marketing and sales of products whose formulations require a warning label to children and around school zones.

As a comprehensive food labelling law, NOM-051 was based on existing scientific evidence indicating the effectiveness of the policy, both in Mexico and around the world. Nonetheless, the passage of this law was not a forgone conclusion in a country where multinational corporations—and the food and beverage industry in particular—have historically had strong ties to government and have been involved in policy decision making.<sup>16 17</sup> We demonstrate this through examination of news coverage of the front-of-package food labelling policy in newspapers throughout the policymaking process, from its introduction to Congress through the final preimplementation court challenge ruling the policy constitutional. Using content analysis, we examine characteristics of news coverage, the overall valence towards the policy and the types of arguments, sources and evidence cited for/against the policy.

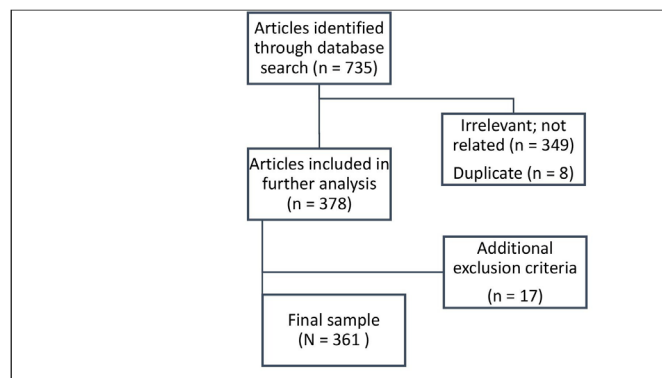
## METHODS

Traditional media, like newspapers, can serve as valuable repositories for policy advocacy and may be leveraged to advance specific policy positions. We conducted a content analysis<sup>18</sup> of four Mexican newspapers representing the centre-left (*El Universal*, *La Jornada*) and centre-right (*Reforma*, *El Economista*) political opinions. We used LexisNexis to identify all newspaper articles published on 1 January 2019–31 March 2020 that mentioned the proposed law using the search term 'etiquetado' ('label') (N=735). The relatively simple search term was developed following a validated search process from media research<sup>19</sup>: In preliminary work, we tested a number of different potential search terms, including (in Spanish) 'front-of-package label', 'warning label' and 'food label'. However, these terms all include the word 'label' and the preliminary searches had overlapping results. We compared the results of each search and found using 'label' yielded the most articles that were germane to the study and the fewest that were not. The time period was selected to capture any discussion of warning labels prior to the formal introduction of the proposed policy through the final major legal challenge after Congressional and Presidential approval.

We excluded irrelevant articles (eg, about tuna fishing practices, labels for other products such as milk or cars;) and duplicates (n=8) (figure 1). We further excluded articles where the term 'etiquetado' did not appear in the first paragraph because this indicated that the proposed policy was not the primary focus of the article. The final sample for the analysis consisted of N=361 unique newspaper articles.

## Patient and public involvement

This study focuses on analysis of the news coverage of a public policy debate intended to help improve population health through prevention strategies; there are no direct patient populations. As such, patients were not engaged in the design, recruitment or conduct of the



**Figure 1** Newspaper article data source search process, 2019–2020.

study. The development of the research question and measures was guided by prior research demonstrating the agenda-setting and framing effects of the media on support for public policies and ultimate decisions.

### Measures

We coded each article in the final sample for key features (type of article, length, section) and for substance: the overall valence, the types of evidence and sources cited, and type of argument.

For each, we examined: (1) whether it was a news article or opinion piece; (2) whether there was a byline (named journalist) and, if so, the author’s affiliation and (3) the overall valence of the article; that is, whether the typical reader would interpret the article as being largely in favour of the policy, opposed, or as balanced or unopinionated news.

Within each article, we also identified the types of sources cited and the use of research evidence.

### Sources

We coded for the presence of at least one of five main kinds of sources cited in each article, as they were identified and recognised for their expertise within the article: (1) Academics (scientists, researchers or academics, including individuals employed at government institutions); (2) Government Officials (elected, appointed or staff); (3) Food/Beverage Industry Representatives; (4) Public Health Advocate (individuals representing groups advocating for the food labels, obesity prevention or more generally citizens’, consumers’ or patients’ rights). A fifth code, citizens, consisted of individuals cited without a clear formal area of expertise or organisational affiliation; typically, as a consumer of food products. We further categorised government officials by government branch. Officials from ministries, whether appointed ministers or their staff and spokespersons, were considered sources from the Executive branch. Elected senators and representatives (and their staffs) were considered part of the legislative branch.

### Research evidence content

First, we coded whether the article mentioned any type of evidence for/against the food label policy. If so, we characterised the content of the evidence. A code for ‘obesity in Mexico’ captured epidemiological evidence about the scope of diabetes or obesity in Mexico while three separate codes captured evidence about the efficacy of food labels in Mexico, Chile, or elsewhere. Finally, we coded whether there was mention of a ‘lack of evidence for the efficacy of labelling.’

### Research evidence type

For articles that included scientific evidence, we further characterised the specific type of research evidence used the following principles of evidence-based public health.<sup>20</sup> Research evidence mentioned can vary, reflecting type 1 evidence which includes epidemiological data to describe the magnitude and severity of a public health problem, type 2 on the relative effectiveness of specific interventions (including policies) and type 3 focused on the context, design and implementation of an intervention.<sup>21</sup> Type 1 research evidence focuses on the magnitude, severity and preventability of a public health issue—typically, epidemiological research reporting on the scale of a problem. Type 2 research evidence provides information about the effectiveness of an intervention to address an issue and generally refers to research conducted in a university setting or lab. Type 3 refers to translational research and characterises the context under which interventions were implemented and their acceptability. Of note, type 1 research evidence overlapped with our code for ‘obesity in Mexico’ epidemiological research described above, while the type 2 code had substantial overlap with our three codes for food label efficacy research.

### Data collection and analysis

We used an iterative, inductive-deductive method to develop the codebook.<sup>22</sup> Each coder applied the pilot codebook to 10 news articles from a newspaper not included in the eventual sample (*El Sol*), identifying new categories that seemed relevant. The team met to discuss which additions were relevant and to revise categories that were too narrow and could be further integrated into a higher-level category. Once the codebook was finalised, two coders were assigned an equal number of articles. To ensure the validity, a random selection of 40% of all articles (n=151) were double-coded. An independent third coder who was uninvolved in the initial coding resolved disagreements. We used Stata SE V.17<sup>23</sup> to compute Cohen’s kappa, which adjusts for chance agreement between raters, as an assessment of interrater reliability.<sup>24</sup> Kappa values of 0.65–0.80 are considered ‘substantial agreement’ and values above 0.81 are considered ‘almost perfect’ agreement.<sup>25</sup> There were 21 substantive codes of interest and 5 descriptive codes. We established high levels of interrater reliability for most codes (range: K=0.63–1.0; mean K=0.81).

**Table 1** Characteristics of newspaper articles reporting on food warning labelling policy (N=361): 4 Mexican Newspapers, 1 January 2019–31 March 2020

| Newspaper            | Circulation | N   | Article length, words mean (SD) | 95% CI             |
|----------------------|-------------|-----|---------------------------------|--------------------|
| Centre left          |             | 129 | 416 (205)                       | (387.60 to 444.40) |
| <i>La Jornada</i>    | 287 000     | 58  | 432 (151)                       | (396.35 to 467.65) |
| <i>El Universal</i>  | 300 000     | 71  | 404 (238)                       | (354.31 to 453.69) |
| Centre right         |             | 232 | 422 (252)                       | (402.59 to 441.41) |
| <i>Reforma</i>       | 200 000     | 139 | 376 (215)                       | (347.93 to 404.07) |
| <i>El Economista</i> | Unavailable | 93  | 489 (285)                       | (439.02 to 538.98) |

Data were cleaned in Microsoft Excel and analysed in Stata SE V.17. For this descriptive analysis, we present counts, means and proportions. We compare 95% CIs surrounding means and proportions to test for statistical significance of mean differences and two-sample t-tests of proportion differences.

## RESULTS

A total of 361 newspaper articles were identified across the four sampled newspapers. Mean article length was 419 words, without significant difference by newspaper or political orientation. Both right-leaning newspapers published more articles about the front-of-package food label compared with the two left-leaning papers; however, this difference was not statistically significant (table 1). There was a statistically significant difference in the number of relevant articles published in the two right-leaning papers: *Reforma* published approximately 50% more articles about the label (n=139; (347.93, 404.07)) compared with *El Economista* (n=93; (439.02, 538.98)).

Most articles were published in main news sections (95.8%) and were written by staff journalists (96.1%) (table 2); these proportions were consistent across political orientation and individual newspapers (data not shown).

### How was the policy discussed?

While most articles were neutral in their view of the proposed policy (n=195), we characterised just over a quarter (26.6%; n=96) as being in favour of the policy, and one in five (19.4%; n=70) as being against the proposal (table 2). Left-leaning papers published slightly more articles in favour of the policy (28.7%) than did right-leaning papers (25.4%). Consistent with a more favourable disposition, left-leaning papers published slightly fewer articles opposing the policy (15.5%) compared with right-leaning papers (21.6%), but these differences were not statistically significant.

Four arguments dominated the news stories overall—two generally presented by advocates and government officials in favour of the policy and two in opposition to the policy. There were sharp differences across newspapers' political orientation. The most common type of argument, present in a third of the stories overall (37.9% left-leaning; 28.9% right-leaning, p=0.08), relate to the

value of the labels in terms of their ability to educate consumers. That is, it was argued that the labels would be a useful strategy for public health promotion by encouraging individual behaviour change through improved knowledge about the nutritional value of foods. The next most common argument was not about the labels themselves, but about the precedence of public health policies like NOM-051; these arguments were present in a quarter (24.8%) of the articles in left-leaning papers and more than a third (35.3%) of the articles in right-leaning papers (p=0.04). The most common argument against the policy was about equally represented in about a quarter of left-leaning (26.4%) and right-leaning papers (25.4%), namely, expressing industry concern about the potential economic consequences of the policy (p=0.85). An additional argument against the labels (ie, purported lack of scientific evidence about the proposed labels themselves) found traction primarily in the right-leaning papers.

### Whose voices were represented?

We identified four distinct expert voices represented to varying degrees in news coverage of the food label policy: food and beverage industry representatives (cited in 22.7% of all news stories); government officials (19.9%); advocates (17.2%) and academics (researchers; 13.3%) (table 2). There were stark differences in the voices represented in articles across the newspapers' political orientation—left-leaning newspapers were more likely to cite government officials (26.4%) and public health advocates (20.2%) compared with right-leaning papers (16.4%, 15.5%, respectively).

Overall, twice as many government sources came from the executive branch, including the ministries of health, the economy and others (n=50) compared with the legislative branch (n=25). However, while left-leaning papers represented elected officials and officials from the executive branch about equally (n=16 and 18, respectively), right-leaning papers cited ministries three and a half times more frequently than elected officials (n=32 and 9, respectively). Elected officials from the MORENA party—the President's party and the party who introduced the front-of-package food label legislation—were cited in nearly all articles (n=22/25; 88.0%) that included a legislative source, and in nearly one in three (n=22/72;

**Table 2** Valence, sources, arguments and use of research evidence in Mexican newspaper articles about the food labelling policy, overall and by newspaper political orientation: four Mexican Newspapers, 2019–2020

|                                      | Total (N=361)<br>n (%) | Centre left (N=129)<br>n (%) | Centre right (N=232)<br>n (%) | P value*    |
|--------------------------------------|------------------------|------------------------------|-------------------------------|-------------|
| Overall valence towards the policy   |                        |                              |                               |             |
| Neutral                              | 195 (54.0)             | 72 (55.8)                    | 123 (53.0)                    | 0.61        |
| In favour                            | 96 (26.6)              | 37 (28.7)                    | 59 (25.4)                     | <b>0.05</b> |
| Against                              | 70 (19.4)              | 20 (15.5)                    | 50 (21.6)                     | 0.16        |
| Sources                              |                        |                              |                               |             |
| Academic                             | 48 (13.3)              | 17 (13.2)                    | 31 (13.4)                     | 0.96        |
| Government                           | 72 (19.9)              | 34 (26.4)                    | 38 (16.4)                     | <b>0.02</b> |
| Food industry                        | 82 (22.7)              | 29 (22.5)                    | 53 (22.8)                     | 0.94        |
| Public health advocate               | 62 (17.2)              | 26 (20.2)                    | 36 (15.5)                     | 0.26        |
| Citizen                              | 0                      | 0                            | 0                             | --          |
| Arguments                            |                        |                              |                               |             |
| Lack of evidence                     | 21 (5.8)               | 5 (3.9)                      | 16 (6.9)                      | 0.24        |
| Labels are educational               | 116 (32.1)             | 49 (38.0)                    | 67 (28.9)                     | <b>0.08</b> |
| Economics                            | 93 (25.8)              | 34 (26.4)                    | 59 (25.4)                     | 0.85        |
| Policy precedence                    | 114 (31.6)             | 32 (24.8)                    | 82 (35.3)                     | <b>0.04</b> |
| Use of and type of research evidence |                        |                              |                               |             |
| None                                 | 278 (77.0)             | 105 (81.4)                   | 173 (74.6)                    | 0.14        |
| Any type†                            | 83 (23.0)              | 24 (18.6)                    | 59 (25.4)                     | 0.14        |
| Type 1                               | 48 (12.7)              | 18 (14.0)                    | 28 (12.1)                     | 0.61        |
| Type 2                               | 17 (4.7)               | 6 (4.7)                      | 11 (4.7)                      | 0.97        |
| Type 3                               | 23 (5.8)               | 3 (2.3)                      | 18 (7.8)                      | <b>0.03</b> |
| Food label research                  | 38 (10.5)              | 10 (7.8)                     | 28 (12.1)                     | 0.20        |

Bold indicates a statistically significant result.

\*Two-sample t-test.

†Note: Consistent with Brownson *et al*,<sup>20</sup> type 1 research is defined as epidemiological research, type 2 is lab-based or university-based research, and type 3 is policy implementation and context research. For these analyses, the unit of analysis is the type of research evidence cited within an article, and any single article may have included multiple types of research; as such, the total number of articles with any type of research is greater than the number of articles that had any type of research evidence (N=83).

30.5%) articles that included any government source. Nearly half of the articles that specified the political party affiliation of the source (n=11) included only MORENA affiliates, while the same number included MORENA and at least one other party.

### Towards evidence-based public health policy: use of scientific evidence

While the justification for the policy was grounded in a robust scientific evidence base, just one in five (23%; table 2) news article referred to any type of research evidence; left-leaning newspapers were less likely than right-leaning papers to cite any research evidence (18.6.9% vs 25.4%, p=0.14).

Among articles that cited research evidence (n=83), we further characterised the evidence according to principles of evidence-based public health. Type 1 research evidence—reporting on the magnitude, severity and preventability of a public health issue—was by far the most commonly mentioned, present in more than half

of the stories that referenced research evidence (n=46). Type 2 research evidence was evident in about one in five stories with research evidence (n=17); typically, these stories included reports of lab-based experimental studies testing the efficacy of different types of labels. Type 3 research evidence (focused on policy context, implementation and acceptability) was slightly more common, with one in four stories (n=21) reporting on the real-world effectiveness of similar policies, whether sugary beverage taxation policy in Mexico or front-of-package food labelling in Chile.

### DISCUSSION

Our analysis of the news coverage of Mexico's front-of-label food policy debate revealed a generally neutral-to-positive bias towards the policy. We found coverage of the front-of-package food label policy in Mexico was primarily reported on by staff journalists in the news sections of all newspapers; only a few were editorial or

opinion pieces. While most articles were neutral in tone towards the policy, left-leaning papers had slightly more positive overall coverage compared with right-leaning papers, indicated by publishing more stories in favour of the policy, with propolicy arguments, fewer opposing arguments and more frequent inclusion of perspectives by government officials and public health advocates. It is possible that efforts in Mexico to promote a population-level solution to a public health problem, rather than focus on the individual-level causes of obesity,<sup>26</sup> may have contributed to the neutral-to-positive bias in news coverage of the policy.

Despite some evidence of bias consistent with newspapers' political leanings, there was a general lack of credible opposition to the policy and limited mention of opponents across newspapers. This relative absence of the food and beverage industry in news coverage of the front-of-package food label policy is somewhat surprising given these opponents' power traditionally exerted over Mexican government. However, prior research<sup>27</sup> has documented this development as a deliberate strategy cultivated by the food and beverage industry who is wary of losing public credibility in the manner of the tobacco industry. Low representation of industry in news coverage of this particular debate, moreover, should not be considered willingness to cede to regulation on the issue. Researchers have demonstrated ongoing industry interference in policy implementation and, worryingly for global health, the diffusion of effective public health policies internationally.

In addition to analysing the nature of the news coverage, we examined its content and the use of scientific evidence in the media. This policy was heralded by its supporters as having been based on a strong scientific basis, and, while evidence-based policy-making is generally considered positive, the communication of the science underlying policies to the general public is often lacking or confusing.<sup>28</sup> This issue, compounded by industry efforts to influence science and obfuscate scientific findings,<sup>29,30</sup> can dilute the impact of evidence-based messaging of a policy, for example, on support for the policy. Our findings on the inclusion of epidemiological data about the prevalence of conditions like obesity and diabetes are thus important, for they indicate that the media, policy-makers and advocates are knowledgeable of the scope of the public health problem driving a need for policy intervention. However, while there were some references to research demonstrating the effectiveness of similar labels in other countries, higher use of epidemiological data in comparison indicates type 1 research evidence may be more accessible than type 2 policy effectiveness research—a finding similar to results from a state nutrition policy debate in the USA.<sup>31</sup> Moreover, industry's use of research evidence to misrepresent scientific evidence on the efficacy of the existing label and inefficacy of proposed label is consistent with industry tactics to block a soda tax in Mexico a few years earlier.

Consistent with other studies examining news coverage of health-related policies,<sup>32,33</sup> we found that Mexican news coverage of the food label policy tended to focus on qualities of the labels themselves—reflecting a bias on individual responsibility and consumer choice, rather than on the multiple levels of intervention embedded within the policy. For example, stories about the policy described how the warning labels' octagonal shape and clear language facilitate individual consumers' comprehension and faster, healthier decision making about food consumption. Yet to a large extent, the policy governing the label includes provisions meant to preempt individual consumer decision-making; namely, the revised nutrition standards are also meant to encourage supply-side changes (ie, industry product reformulation).

Additionally, we found that left-leaning papers more frequently invoked the labels' educational benefits and individual-level behavioural effects, whereas right-leaning papers more frequently mentioned this kind of industry regulation. These results initially appear paradoxical given traditional understanding of a leftist orientation towards recognition of structural factors and support for government intervention and social policies, and a rightist orientation opposing such government intervention in favour of individual rights. However, in Mexico, public health advocates have deliberately framed some components of public health policies in individual consumer terms, arguing, for example, that citizens deserve consumer protections and the right to make informed decisions.<sup>34</sup> This messaging approach also is consistent with the informed decision-making messaging promoted by a US public health coalition that combined individual responsibility and environmental arguments during a menu labelling debate.<sup>35</sup> Combining these policy narratives may also reduce counterarguments and activate empathy to increase support for policies to address obesity-related disease.<sup>36</sup> Such framing strategies may be leveraged by public health advocates intentionally because they make it easier to engender policy support. But it is worth asking if the benefits of such an approach outweigh the costs.

Our analysis suggests that the ideology of capitalism dominates public health policy discussion, even among those who could be considered public health advocates. In answer to 'At what cost?',<sup>37</sup> then, in Mexico, the cost of a policy ostensibly focused on public health promotion was acceptance of the language of corporations reducing citizens to consumers and focusing on individuals' responsibility for behaviours.

We understand not all voices or arguments might be reflected in the newspapers we analysed. A growing critique of this form of policy intervention for chronic disease prevention is the idea that any labelling normalises consumption of processed and prepackaged foods, signalling they may be healthy, or at least healthier, despite broad consensus that ultraprocessed foods are inherently less nutritious than whole foods.<sup>38,39</sup> Other essential arguments, including those from public health advocates, were not present in our analyses. For example, advocates interviewed

during the sugary beverage tax policy debates—publicly lauded worldwide—lamented the limitations of the policy and overall approach to public health.<sup>40</sup> Likewise, a 2015 report by a leading public health advocacy organisation, the Alianza por la Salud Alimentaria, critically evaluated the federal government's approach to public health and identified a set of comprehensive strategies that could address the social, ecological and economic constraints on individual behaviours.<sup>34</sup> While the 2020 policy addressed some of these constraints, most remain stubbornly in place.

Future research should examine the structure and composition of the advocacy coalitions involved in the front-of-package labelling policy debate in Mexico, in addition to other policy advocacy strategies employed by stakeholders that are less publicly visible (eg, financial contributions, lobbying efforts like direct communication with policy-makers). The composition of these coalitions and the broader set of strategies employed may be similar to the sugar-sweetened beverage tax debate in Mexico.<sup>41</sup> Moreover, it would be important to replicate this study with other nutrition policy debates in Mexico for comparative purposes and to assess similarities and differences in terms of media coverage and framing.

In addition, future research should consider testing combined policy-based and values-based narratives outside of the USA to examine how such frames impact policy support and countering among distinct populations with differing levels of individualistic and collective orientations.<sup>42</sup> It is also essential to examine the long-term impacts of such combined strategies beyond specific policy support, for example, on generalised support for policy interventions to support population health. In addition, future research should examine the specific ways in which public health advocates use individual-level and rights-centred language, and compare these with the ways in which industry uses this language.

Finally, the fate of this policy and its potential to improve the health of the Mexican public remains to be seen: While the policy is current being implemented, the food and beverage industry has time and again demonstrated an ability to adapt to regulations in ways that favour their continued financial success and disfavour public health. Ongoing monitoring of the political, legal and marketing based strategies employed by industry should remain a priority for public health researchers and policy-makers.

## CONCLUSIONS AND POLICY IMPLICATIONS

In this study, we analysed news coverage of Mexico's front-of-package food labelling policy debate from 2019 to 2020. Prior studies have demonstrated the effects of news coverage on policy support and individuals' behavioural intentions as well as on policy decisions. This study focused on the public debate, as covered by the news media, throughout the policy process from proposal through the food industry's unsuccessful legal challenge, which cleared the way for its implementation. While the policy was ultimately adopted and implemented—a

success for Mexican public health advocates—our analysis reveals limited reference to effectiveness research in the media along with the use of a combined policy narrative that blends individual responsibility and environmental considerations by advocates. Future research should consider the long-term implications of ceding important philosophical ground—the public policy debate frames—to corporations. Our findings may inform global health advocates' efforts to shape nutrition and diet-related policy debates.

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**Contributors** ASR conceptualised the study, supervised data collection and analysis, conducted statistical testing, and wrote a complete draft of the manuscript. KKG conducted data analysis and drafted the methods and results section. DDP contributed to the instrument development and data analysis and interpretation. VCG and YMS collected and cleaned the data, conducted preliminary analyses, and contributed to writing the background and methods sections. All authors reviewed and approved the final manuscript. ASR accepts full responsibility as guarantor of the work, conduct of the study, access to the data, and controlling the decision to publish.

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## REFERENCES

- 1 Especificaciones Generales de Etiquetado para Alimentos Y Bebidas no Alcohólicas Preenvasados-Información Comercial Y Sanitaria 2020;2010 [http://dof.gob.mx/2020/SEECO/NOM\\_051.pdf](http://dof.gob.mx/2020/SEECO/NOM_051.pdf)
- 2 White M, Barquera S. Mexico adopts food warning labels, why now? *Health Syst Reform* 2020;6:e1752063.
- 3 Carriedo A, Koon AD, Encarnación LM, et al. The political economy of sugar-sweetened beverage taxation in Latin America: lessons from Mexico, Chile and Colombia. *Global Health* 2021;17:5.
- 4 Jensen ML, Carpentier FD, Adair L, et al. Examining Chile's unique food marketing policy: TV advertising and dietary intake in preschool children, a pre- and post- policy study. *Pediatr Obes* 2021;16:e12735.
- 5 Story M, Kaphingst KM, Robinson-O'Brien R, et al. Creating healthy food and eating environments: policy and environmental approaches. *Annu Rev Public Health* 2008;29:253–72.



- 6 Madsen KA, Krieger J, Morales X. Sugar-Sweetened beverage taxes: emerging evidence on a new public health policy. *JAMA* 2019;321:1777–9.
- 7 Song J, Brown MK, Tan M, *et al*. Impact of color-coded and warning nutrition labelling schemes: a systematic review and network meta-analysis. *PLoS Med* 2021;18:e1003765.
- 8 Talati Z, Egnell M, Hercberg S, *et al*. Food choice under five front-of-package nutrition label conditions: an experimental study across 12 countries. *Am J Public Health* 2019;109:1770–5.
- 9 Krieger J, Bleich SN, Scarmo S, *et al*. Sugar-Sweetened beverage reduction policies: progress and promise. *Annu Rev Public Health* 2021;42:439–61.
- 10 Mialon M, Gaitan Charry DA, Cediel G, *et al*. 'I had never seen so many lobbyists': food industry political practices during the development of a new nutrition front-of-pack labelling system in Colombia. *Public Health Nutr* 2021;24:2737–45.
- 11 Popkin BM, Barquera S, Corvalan C, *et al*. Towards unified and impactful policies to reduce ultra-processed food consumption and promote healthier eating. *Lancet Diabetes Endocrinol* 2021;9:462–70.
- 12 Reyes M, Garmendia ML, Olivares S, *et al*. Development of the Chilean front-of-package food warning label. *BMC Public Health* 2019;19:906.
- 13 Vargas-Meza J, Jáuregui A, Contreras-Manzano A, *et al*. Acceptability and understanding of front-of-pack nutritional labels: an experimental study in Mexican consumers. *BMC Public Health* 2019;19:1751.
- 14 Jáuregui A, Vargas-Meza J, Nieto C, *et al*. Impact of front-of-pack nutrition labels on consumer purchasing intentions: a randomized experiment in low- and middle-income Mexican adults. *BMC Public Health* 2020;20:463.
- 15 Nieto C, Jáuregui A, Contreras-Manzano A, *et al*. Understanding and use of food labeling systems among whites and Latinos in the United States and among Mexicans: results from the International food policy study, 2017. *Int J Behav Nutr Phys Act* 2019;16:87.
- 16 Gómez EJ. The politics of ultra-processed foods and beverages regulatory policy in upper-middle-income countries: industry and civil society in Mexico and Brazil. *Glob Public Health*. 2021:1–19.
- 17 Kickbusch I, Allen L, Franz C. The commercial determinants of health. *Lancet Glob Health* 2016;4:e895–6.
- 18 Neuendorf KA. *The content analysis guidebook*. 2nd edn. Sage, 2016.
- 19 Stryker JE, Wray RJ, Hornik RC, *et al*. Validation of database search terms for content analysis: the case of cancer news coverage. *J Mass Commun Q* 2006;83:413–30.
- 20 Brownson RC, Fielding JE, Maylahn CM. Evidence-based public health: a fundamental concept for public health practice. *Annu Rev Public Health* 2009;30:175–201.
- 21 Rychetnik L, Hawe P, Waters E, *et al*. A glossary for evidence based public health. *J Epidemiol Community Health* 2004;58:538–45.
- 22 Kondracki NL, Wellman NS, Amundson DR. Content analysis: review of methods and their applications in nutrition education. *J Nutr Educ Behav* 2002;34:224–30.
- 23 StataCorp LP. *Stata statistical software: release 12*, 2017.
- 24 Cohen J. A coefficient of agreement for nominal scales. *Educ Psychol Meas* 1960;20:37–46.
- 25 Landis JR, Koch GG. The measurement of observer agreement for categorical data. *Biometrics* 1977;33:159–74.
- 26 Weishaar H, Dorfman L, Freudenberg N, *et al*. Why media representations of corporations matter for public health policy: a scoping review. *BMC Public Health* 2016;16:899.
- 27 Crosbie E, Carriedo A, Schmidt L. Hollow threats: transnational food and beverage companies' use of international agreements to fight front-of-pack nutrition labeling in Mexico and beyond. *Int J Health Policy Manag* 2020.
- 28 Goulbourne T, Yanovitzky I. The communication infrastructure as a social determinant of health: implications for health Policymaking and practice. *Milbank Q* 2021;99:24–40.
- 29 Lauber K, McGee D, Gilmore AB. Commercial use of evidence in public health policy: a critical assessment of food industry submissions to global-level consultations on non-communicable disease prevention. *BMJ Glob Health* 2021;6:e006176.
- 30 Oreskes N, Conway EM. *Merchants of doubt*, 2010.
- 31 Payán DD, Lewis LB. Use of research evidence in state health policymaking: menu labeling policy in California. *Prev Med Rep* 2019;16:101004.
- 32 Ares G, Bove I, Díaz R. Food industry arguments against front-of-package nutrition labels in Uruguay. *Argumentos da indústria alimentícia contra a rotulagem frontal de advertência nutricional no Uruguai TT - Argumentos de la industria alimentaria en contra del etiquetado frontal. Revista panamericana de salud publica = Pan American journal of public health* 2020;44:e20.
- 33 Gollust SE, Baum LM, Niederdeppe J, *et al*. Local television news coverage of the Affordable care act: emphasizing politics over consumer information. *Am J Public Health* 2017;107:687–93.
- 34 *et al* Calvillo A, Espinoza F, Marcari M. Contra La Obesidad Y La diabetes: Una Estrategia Secuestrada. Análisis de la Estrategia Nacional para La Prevención Y El control de Sobrepeso, La Obesidad Y La diabetes, 2015. Available: [https://alianzasalud.org.mx/wp-content/uploads/2015/04/Contra-la-Obesidad-y-Diabetes\\_Una-Estrategia-Secuestrada.pdf](https://alianzasalud.org.mx/wp-content/uploads/2015/04/Contra-la-Obesidad-y-Diabetes_Una-Estrategia-Secuestrada.pdf) [Accessed 16 Jan 2022].
- 35 Payán DD, Lewis LB, Cousineau MR, *et al*. Advocacy coalitions involved in California's menu labeling policy debate: exploring coalition structure, policy beliefs, resources, and strategies. *Soc Sci Med* 2017;177:78–86.
- 36 Niederdeppe J, Roh S, Shapiro MA. Acknowledging individual responsibility while emphasizing social determinants in narratives to promote obesity-reducing public policy: a randomized experiment. *PLoS One* 2015;10:e0117565.
- 37 Freudenberg N. *At what cost: modern capitalism and the future of health*. Oxford University Press, 2021.
- 38 Scrinis G, Parker C. Front-of-pack food labeling and the politics of nutritional Nudges. *Law Policy* 2016;38:234–49.
- 39 Julia C, Fialon M, Galan P. Are foods 'healthy' or 'healthier'? Front-of-pack labelling and the concept of healthiness applied to foods. *Br J Nutr* 2021:1–5.
- 40 Gálvez A. *Eating Nafta: trade, food policies, and the destruction of Mexico*. University of California Press, 2018.
- 41 James E, Lajous M, Reich MR. The politics of taxes for health: an analysis of the passage of the sugar-sweetened beverage Tax in Mexico. *Health Syst Reform* 2020;6:e1669122.
- 42 Thompson EE, Ofori-Parku SS. Advocacy and mobilizing for health policy change: Ghanaian news media's framing of a prescription opioid crisis. *Health Commun* 2021;36:1909–20.