

Front-of-Package Labelling (FOPL) of Pre-packaged Foods and Beverages: An Evidence-based Strategy for Reducing Diet-related Non-communicable Diseases (NCDs) in the Caribbean

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DIET-RELATED NON-COMMUNICABLE DISEASES (NCDs) IN THE CARIBBEAN

Non-communicable diseases (NCDs), including obesity, hypertension, and type 2 diabetes, constitute significant, growing and costly challenges to individuals, households, health systems and national economies throughout the Caribbean. Recent reports starkly indicate the serious scale of these challenges. In Jamaica, for instance, nearly four out of every five deaths are attributed to NCDs, with one in two (54%) Jamaicans 15 years or older either overweight or obese (1, 2). Moreover, between 2010 and 2017, obesity rates among Jamaican children aged 13–15 increased by 68% (3). Similar worrying patterns and trends in NCDs are seen throughout the Caribbean, comprising what can be viewed as a regional NCD epidemic (4). The NCD epidemic also imposes severe financial strains and incurs enormous economic costs. The latest figures estimate that Jamaica spends approximately 15% of its health budget on four main NCDs—cardiovascular diseases, diabetes, chronic respiratory diseases and cancers; these direct costs are accompanied by reductions in labour productivity along with other indirect impacts (1, 5, 6).

Non-communicable diseases in the Caribbean have been linked epidemiologically to the proliferation and increased consumption of processed and ultra-processed convenience foods, which are high in saturated fats, *trans* fats, sodium and sugars (7, 8). In addition, this diet-related NCD epidemic is intertwined with the COVID-19 pandemic. Patients who present with COVID-19 plus one or more underlying NCDs do not only have a higher risk of developing severe virus-related symptoms, but additionally have a higher risk of dying (9). Moreover, preliminary findings indicate that

dietary choices during a period punctuated by curfews, lockdowns and quarantines have led to an increased consumption of those very energy-dense, nutrient-poor diets most commonly linked to NCDs (10). In fact, disruptions attributed to the COVID-19 pandemic have been linked to marked declines in health service use throughout the globe, with potentially devastating effects on health systems and national economies (11). This suggests the COVID-19 pandemic might have exacerbated the regional NCD epidemic, an epidemic that already had been large and growing. These concurrent and inter-related non-communicable and communicable disease challenges therefore threaten to overwhelm health systems throughout the Caribbean, occasioning grim and ultimately unsustainable health and economic consequences. These challenges make it imperative to utilize effective, feasible, nutritionally sound and evidence-based population-level health promotion strategies.

FRONT-OF-PACKAGE LABELLING (FOPL): A NUTRITION-CENTRED HEALTH-PROMOTION STRATEGY

Front-of-package labelling represents one such strategy. Located on the front of pre-packaged foods and beverages, FOPL is designed to deliver clear, readily recognized, simply understood, and easily followed nutritional information to consumers, who are thereby assisted in making healthier dietary choices (12, 13). Front-of-package labelling also supplements food labelling information contained in the form of nutrient declarations, such as the Nutrition Facts Panel that can be found on the backs and sides of packaged foods and drinks (14).

Front-of-package labelling, notably, receives authoritative support from leading global and regional public

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health organizations. The World Health Organization, the World Cancer Research Fund (WCRF), the Pan-American Health Organization (PAHO) and the Healthy Caribbean Coalition (HCC) each recommends that governments lead the introduction and implementation of FOPL as an integral component of comprehensive policy approaches to promote healthier diets (15, 16). Front-of-package labelling was first implemented in Sweden in 1989 and to date over 30 countries have adopted FOPL systems in their marketplaces, the most recent being Argentina in October 2021 (17).

Over the years, several distinctive FOPL formats have been developed (18); these can be categorized into six main systems—endorsement systems, summary systems, monochromatic guidelines for daily amounts (GDAs), colour-coded GDAs, nutrient-specific colour-coded systems, and front-of-package warning labels (FOPWLs). Each FOPL system emphasises different nutritional aspects. For example, endorsement systems, such as the Nordic Keyhole, highlight the presence of selected micronutrients and other so-called positive nutrients. Front-of-package warning labels, on the other hand, emphasize the presence of *trans* fats, saturated fats, sodium and added sugars—‘critical nutrients’ of public health concern associated with increased risk of developing NCDs—that exceed set thresholds, as designated by ‘High In’ octagonal warning labels (19). Nutrient thresholds, in turn, are established through an underpinning nutrient profile system; this selects which products are covered by FOPL regulation and defines the criteria for translation of nutrient content information into messages imparted to consumers (20, 21).

STRATEGICALLY DEPLOYING FOPL TO REDUCE NCDs

Front-of-package labelling as a public health promotion measure yields several beneficial outcomes. To begin with, this strategy can raise consumer awareness and facilitate consumer decision-making. Indeed, preliminary findings from real-world settings suggest that FOPL, by itself, might guide up to 2% of shoppers to make healthier food purchases (22). This change at the population level, though small, is likely to translate into a much larger reduction in adverse health outcomes, as posited by Geoffrey Rose’s population approach to prevention (23). Of course, an ultimate public health goal is to reduce appreciably the Caribbean’s heavy burden of NCDs. That is why public health authorities, such as PAHO, recommend the implementation of a robust FOPL system as but one component of a comprehensive

policy framework. A multi-pronged framework would encompass a suite of complementary nutrition-centred health promotion measures, such as levying taxes on unhealthy foods and drinks and regulating the marketing and advertising of such products to children and other vulnerable groups (24). Furthermore, use of these and other FOPL-incorporating approaches can encourage product reformulation by the food and beverage industry, so as to expand the availability of healthier alternatives across entire food environments (12, 25).

Pan-American Health Organization and other public health bodies also recommend the selection of one FOPL format for any single national or cross-national marketplace. The principal justification for this is straightforward. Shoppers in everyday marketplaces seek to minimize extended cognitive effort and typically make rapid and repeated food purchasing choices (26, 27). However, presenting multiple FOPL designs can lead to confused consumers, conflicting with a fundamental tenet of FOPL—the clear communication of simple-to-understand nutritional information. Nevertheless, choosing a single FOPL system requires addressing a pivotal question—which is the best performing format?

THE EVIDENCE-BASED CASE FOR A ROBUST FOPL SYSTEM

As a pair of overarching principles, it is prudent for nutritional policies to be both contextually grounded in national and regional health priorities and guided by the best prevailing locally generated scientific evidence (28). Accordingly, an increasing number of recent surveys and experimental studies from Latin America and the Caribbean speak to the benefits of implementing policy measures that utilize the black octagonal FOPWL design—the standard that has been adopted in Chile, Peru, Mexico, Uruguay, and, most recently Argentina. As a case in point, a 2020 study reports significantly reduced sugary drink purchases in Chile following the mandatory implementation of FOPWL in combination with bans on the sale of foods and drinks with excessive sugars, sodium, or saturated fats along with restrictions in child-directed marketing. Calories that were obtained from beverages classified as ‘high-in’ decreased by 11.9 kcal/capita/day or 27.5% (29). Similar compelling evidence demonstrating the effective performance of this standard as a tool for guiding consumer purchasing intentions and choices has been obtained from other Latin American settings, including Peru, Mexico and Uruguay (30, 31).

Within the context of the Caribbean NCD epidemic, and emphasising the importance of compiling local scientific evidence, a comparative evaluation of several FOPL designs was recently conducted in Jamaica (32). This randomized controlled study assessed the relative efficacies of four FOPL formats—FOPWL, the magnifying glass, the traffic light, and the nutrition facts-up-front scheme—among a sample of 1206 adult Jamaican shoppers. Overall, FOPWL consistently emerged as the best performing design. Compared with a control group of products using the facts-up-front label, the employment of the black octagon significantly facilitated participant decision making. Consumers were two times more likely to correctly select the least healthy products and nine times more likely to identify products containing excessive amounts of sodium, sugar, and saturated fats. In summary, although data on the anticipated beneficial effects of policies incorporating FOPWL on reducing the NCD epidemic have yet to be obtained, an accumulating body of evidence from real-world surveys and experimental studies does suggest FOPWL is the most effective format for assisting consumers in making healthier dietary choices.

Why, then, hasn't any FOPL system already been introduced in the Caribbean? In part, this reflects the fact that revisions to existing packaging standards involve region-spanning consultations within CARICOM that cover both nutrient declarations and FOPL. It also reflects concerns expressed by some members of the regional food and beverage industry, who suggest that there may be possible trade and investment law infringements and projected detrimental impacts on sales and employment. An FOPWL standard, it has been claimed, would not be suitably aligned with the markets of the Caribbean's major trading partners in the United Kingdom and North America, and so would adversely affect exports from the region. Similar concerns have been raised in Latin America (33), but evidence of corresponding effects on actual real-world trade indicators has yet to be presented to substantiate those concerns. In fact, recent findings from Chile show no deleterious effects on employment, real wages or business profits following the implementation of health promotion measures incorporating FOPWL (34). Indeed, while it is legitimate for the food and beverage industry to attend to the potential implications of FOPL on sales, employment, trade, and other related aspects, it is crucial that policy priorities remain clear. To be sure, financial metrics have to be considered whenever public policy is developed. However, promoting health and protecting against chronic and acute

disease must take precedence in policy decisions where the public health is paramount, with other factors necessarily assuming lesser importance (35). We believe, however, that the financial and public health objectives need not be at odds, as with well-intentioned dialogue, reformulation, and appropriate marketing strategies for healthy products we could have win-win solutions. Nonetheless, when adopting FOPL as explicit health policy, economic considerations should not override public health concerns.

SUMMARY AND CONCLUSION

The growing Caribbean NCD epidemic requires urgent and effective action. Encouragingly, accumulating evidence demonstrates the utility of FOPL as a population level health-promotion measure to provide such a response. Deployed in a strategic manner in conjunction with other nutrition-centred approaches, FOPL elevates nutritional awareness among consumers of differing levels of literacy and numeracy and guides them in making healthier point-of-purchase and point-of-consumption decisions. In conclusion, the current and mounting NCD crisis signals that the time has already arrived for the prompt introduction and implementation of a robust FOPL system in Caribbean marketplaces. In so doing, a necessary and significant step would have been taken in the direction of enhancing Caribbean food environments, aimed at reducing the current NCD epidemic and reshaping the regional public health landscape.

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