

Editorial

Towards comprehensive global monitoring of food environments and policies to reduce diet-related non-communicable diseases

In July we featured the food environment in our journal, and it emerges as our hot topic in the last issue of the year as well.

Food environments have been defined^(1–3) and studied^(4–8) in many different ways, but most broadly they include a combination of physical, economic, policy and socio-cultural surroundings, opportunities and conditions that influence an individual's food choices. In general, food environments are considered to be unhealthy rather than healthy, as energy-dense, nutrient-poor processed food products, usually containing high levels of salt, sugar and fat, are increasingly more available, less expensive and more heavily promoted than healthy foods⁽⁹⁾. Thus, current food environments seem to play a major role in shaping unhealthy diets and driving energy over-consumption⁽¹⁰⁾. This issue of *Public Health Nutrition* highlights several articles that deal with food environments, broadly defined.

Physical and economic access

Current evidence is suggestive of an association between retail food environments and dietary outcomes; however, substantial heterogeneity in study designs, methods and measurement tools makes it difficult to draw firm conclusions^(6,11). Studies in the current issue reflect this heterogeneity. In a study conducted in Melbourne, Australia, for example, women who lived further from the nearest supermarket were less likely to consume low amounts of fast food⁽¹²⁾, but living in a food desert in Detroit, USA, was not significantly associated with residents' BMI⁽¹³⁾. Food cost is another important aspect of the food environment, and in this issue Holm *et al.*⁽¹⁴⁾ found a moderate reduction in the incidence of cardiovascular diseases and some cancers in Denmark when the rate of value-added tax on fruit and vegetables was halved and the tax on fats was increased.

Food labelling

Food labelling is an aspect of the food environment that may affect food purchase decisions. In this issue, Beeken and Wardle⁽¹⁵⁾ found that policy support for labelling of foods was relatively high among UK adults, while

Auchincloss *et al.*⁽¹⁶⁾ qualitatively explored how responsiveness of US consumers to menu labelling might be improved. Food labels are futile if they are inaccurate, however, and other studies in this issue suggest the need for monitoring and regulation. A survey of foods sold in a supermarket in Brazil indicated that nutrition facts labels or no *trans*-fat claims on food product packages were unreliable⁽¹⁷⁾. In Australia 31% of non-alcoholic beverages, breakfast cereals and cereal bars carrying health claims did not meet the nutrient profiling criteria of the proposed Australian health claim regulation⁽¹⁸⁾.

Children's food environments

To the extent that childhood behaviours can have measurable and lasting effects on health, food environments of children and policies affecting these are worth close examination. Ensaff *et al.*⁽¹⁹⁾ and Nicklas *et al.*⁽²⁰⁾, for example, demonstrate that improving school food standards is critical, as current food choices are predominantly unhealthy and portion sizes excessive. Indeed, school food policies might be among the best food environment-related policies to target for change. In a study in Washington State, USA, researchers, policy experts and other stakeholders ranked policies regarding nutrition standards in schools and child-care facilities as having higher political and implementation feasibility and impact compared with other food policies⁽²¹⁾. Apart from the foods served at schools, however, food environments for children outside schools can be quite unfavourable as well and less easily amenable to change. Studies by Manganello *et al.*⁽²²⁾, Pettigrew *et al.*^(23,24) and Mchiza *et al.*⁽²⁵⁾ in this issue show that food advertising through parenting magazines, sports sponsorships, Internet and television were predominantly for foods of poor nutritional quality. Moreover, according to Lythgoe *et al.*⁽²⁶⁾, a significant number of products marketed towards children in UK supermarkets were higher in fat, sugar and salt than their non-children's equivalents marketed to the general population.

No monitoring, no action

The food environment is increasingly recognized as a primary influence on dietary behaviour and on people's

abilities to maintain their health and well-being. Its importance is recognized among the general public as well. In a study in the UK⁽¹⁵⁾, the majority of adults sampled attributed obesity to the food environment. In the USA⁽²⁷⁾, caregivers of African-American children rated lower pricing of less healthy foods, limited access to healthier food retailers and targeted advertisements as particularly influential of children's food choices and consumption.

Yet no country to date has implemented a systematic and comprehensive approach to survey its food environments, and 'no monitoring' translates into 'no action'. The main obstacle to improving food environments to date has been the slow and insufficient development and implementation of strong government policies, largely hindered by food industry practices^(9,28). In Europe, for example, the Confederation of Food and Drink Industries successfully lobbied against the introduction of a front-of-pack traffic light labelling system⁽²⁹⁾. In Latin America, healthy food laws introduced by several nations lag in implementation due to powerful lobbying by the food and advertising industries⁽³⁰⁾. Such instances led Moodie *et al.* in their recent paper⁽²⁸⁾ to refer to these industries as 'corporate disease vectors', and Dr Margaret Chan, in her opening speech at the 2013 Health Promotion Conference in Helsinki, to declare 'Big Food, Big Soda, and Big Alcohol' as among the biggest challenges facing health promotion⁽³¹⁾.

In May 2013 a global political commitment was made towards a comprehensive plan for the prevention and control of non-communicable diseases (NCDs) and for a monitoring framework to measure progress on twenty-five indicators towards nine targets⁽³²⁾. However, this newly adopted framework is deficient in monitoring key aspects of food environments and policies impacting on those.

Development of a monitoring framework for food environments and policies

The International Network for Food and Obesity/NCDs Research, Monitoring and Action Support (INFORMAS) was recently founded to fill this important gap⁽³³⁾. INFORMAS offers standardized stepwise approaches to monitor several key aspects of food environments transformable by government and private-sector policies and actions. These include food composition⁽³⁴⁾, food labelling⁽³⁵⁾, exposure of children to unhealthy food promotion⁽³⁶⁾, food provision in different settings⁽³⁷⁾, food availability in communities⁽¹¹⁾, prices and affordability of healthy *v.* less healthy diets⁽³⁸⁾, and the impacts of trade and investment agreements on food environments⁽³⁹⁾.

In addition to monitoring key aspects of food environments, INFORMAS has proposed a Government Healthy Food Environment Policy Index (Food-EPI) to assess government policies and actions towards good practice⁽⁴⁰⁾. A separate assessment of private-sector actions and practices⁽⁴¹⁾ draws on experience from the recently

launched Access to Nutrition Index (ATNI)⁽⁴²⁾, supplemented with the measurement of less visible practices, such as lobbying, political donations and corporate philanthropy. INFORMAS also aims to monitor the diet quality of populations⁽⁴³⁾, with the dietary share of ultra-processed foods as one of the indicators, similar to the approach used by Moubarac *et al.*⁽⁴⁴⁾ in this issue.

This new monitoring initiative aims to increase effectiveness in influencing policy makers and private-sector organizations to shift their efforts towards creating healthy food environments. Monitoring should also provide a clear focus on where policy actions are most needed.

Implementation of the monitoring framework

Pilot tests for the INFORMAS monitoring modules are currently underway in countries of varying size and income. For some modules, or parts of them, monitoring is already being performed, as shown in this issue by King *et al.*⁽⁴⁵⁾, who present the approach for independent monitoring of food advertising on television in Australia. All countries globally are invited to implement the INFORMAS monitoring framework⁽³³⁾, fully or in part, and to collect representative data on the healthiness of their food environments and the policies, actions and practices of government and private-sector organizations as they relate to food environments.

The global INFORMAS database⁽³³⁾ will provide international best practice exemplars or benchmarks against which to compare progress of countries, and possibly companies, on improving food environments. It will also allow for evaluation of the impact of new national policies and changes in food environments on diets and NCDs, which is rarely possible through randomized controlled trials. In the long run, INFORMAS aims to be a cost-effective and policy responsive contribution towards decreasing the global diet-related NCD burden. Efforts such as INFORMAS are a critical next step if we accept our role in informing and catalysing policy responses, and in holding governments and private-sector organizations accountable for their policies and actions.

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