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# Is it a complex system? Identifying connections and interventions in the system of unhealthy commodity influence on public health

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Unhealthy commodities, such as tobacco, alcohol, sugar-sweetened beverages, and high-fat, salt, and sugar foods, are significant contributors to noncommunicable diseases, resulting in at least 14.5 million annual global deaths. It is imperative to implement interventions that prevent and mitigate the influence of the unhealthy commodity industry (UCI) on public health policies. While the field of public health has seen emerging literature on interventions, current conceptualisations fail to adequately account for the broader systemic complexities surrounding UCI influence, potentially undermining the effectiveness of interventions.

Recognising the potential of systems thinking to understand intervention complexity, this research sought to create a systems map illustrating the intricate web of UCI influence. Subsequently, we identified and explored various interventions to address UCI influence, their interconnections within the broader systems, and the challenges associated with their implementation. To collect data, we conducted online participatory workshops involving stakeholders with expertise in UCIs. The Action Scales Model was employed to assist participants in identifying interventions and facilitating discussions. Thematic analysis was utilised to analyse the data.

Fifty-two individuals participated in twenty-three workshops. They identified twenty-seven diverse, interconnected, and interdependent interventions corresponding to five pathways of influence. These interven-

tions aim to curtail UCI's ability to: 1) Directly access public sector decision-makers (regulate public official interactions with UCIs; reform political financing; regulate lobbying; regulate revolving doors; regulate public-private partnerships); 2) Create confusion and doubt about policy decisions (reform science governance and funding; frame and reframe the narrative; expose, raise awareness, and denormalise; monitor UCIs and the public sector actor; provide formal and informal education or training; regulate the media industry and marketing); 3) Prioritise industry growth and profits (challenge neoliberalism and GDP growth; reform investment practices; reform corporate ownership and management; promote fair competition and encourage the production and consumption of healthy alternatives; minimise externalities; reform taxes; and invest in the public sector); 4) Leverage legal and dispute settlement processes (reform Investor-State Dispute Settlements processes and judicial proceedings; undertake strategic litigation; fund legal practices to oppose UCIs; leverage human rights; develop and leverage international treaties; develop anti-corruption legislation); and 5) Leverage policymaking norms, rules, and laws in their favour (reform government regulatory frameworks; reform policy consultation and deliberation processes; represent public health interests in governance institutions and policies; develop conflict of interest policies at all levels of governance; change practices in multistakeholder governance). Participants also identified

four potential key challenges to these interventions (i.e., difficulty in implementation or achievement; incomplete formulation; susceptibility to exploitation or misuse; need for contextual tailoring) and four key actions to facilitate their realisation (i.e., coordination and cooperation with stakeholders; investment in civil society; creation of a social movement; nurturing leadership).

A systems thinking perspective unveiled a diverse array of interventions, each characterised by its unique

features. The interdependence between these interventions suggests the need for a collective approach, applied to different aspects of the system, and supported by intermediary actions for effectiveness. Urgent action is needed to implement these interventions, with support and advancement from policy actors.

#### **DISCLOSURE**

The authors report no conflict of interest.