

Nutricia code: Nutrition and conflict of interest in academia

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Abstract

To combat malnutrition in all its forms, actions must be integrated from society as a whole. The main interest of the actors involved in these actions should be health. However, there are actors with conflict of interest that interfere in the design, planning, implementation and monitoring of public health nutrition policies. In order to mitigate the adverse effect that result from these conflicts, from evidence generation to the design and implementation of policies, this Code is proposed. It invites the nutrition and health community to adopt it, promote it and subscribe it, and to favor the advancement of actions and policies without industry interference to address the problem of malnutrition.

Keywords: conflict of interest; nutrition; obesity; malnutrition; policies; food industry

Background

In Mexico, malnutrition in all its forms is one of the most significant public health challenges. On one hand, the country has one of the highest obesity prevalences in the world among all age groups and officials have not been able to control it for the past two decades. On the other hand, undernutrition persists, especially among vulnerable groups that require immediate attention.¹⁻⁶ These conditions and their accompanying complications are strongly associated with excessive consumption of critical ingredients, such as sugar, saturated fats, and added sodium, which come from ultra-processed products.⁷⁻¹¹

It has been acknowledged that the causes of malnutrition in all its forms are complex and therefore, require intersectoral actions. However, the limited economic and human resources available in our country pose a barrier for the implementation of comprehensive policies to address this problem.¹² As a result, actions to modify the food environment have made slow progress as they

require a sustained effort from various sectors in society. A fundamental change that is needed includes developing food environments that facilitate healthy choices.^{13,14}

One thing that has obstructed the advancement of comprehensive health and nutrition policies is the interference of actors with conflicts of interest; this includes interfering in the design, planning, implementation, and monitoring of these policies. In particular, multinational companies that produce ultra-processed foods and beverages, and whose priority is to protect their sales, oppose these policies through four widely described strategies: 1) *Deny* scientific evidence; 2) *Deflect* attention from real issues towards other factors; 3) *Delay* the implementation of policies contrary to their economic interests; and 4) *Divide* opinion by funding evidence and data in favor of their interests.¹⁵⁻¹⁹ To achieve effective actions against malnutrition, the primary guiding interest should be health and population wellbeing. With this understanding, a conflict of interest arises when the independence, objectivity, judgement, or actions of health professionals and other actors involved in policy design become unduly

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influenced by a secondary interest.²⁰ In this situation, economic interests are the main influence.²¹

Conflicts of interest can involve individuals and institutions. It is important to note that the existence of a potential conflict of interest is not synonymous with inappropriate action, but rather with the risk of an improper action occurring. For this reason, it should be identified and declared, and actions must be taken to prevent it from influencing health-related decisions.

Oftentimes, the ultra-processed food and beverage industry expresses an interest in health and participating as an ally to combat malnutrition. In the public sphere, they usually exert their influence through front groups meant to protect their commercial interests, such as chambers of commerce, civil society organizations, and lobbyists. Furthermore, they tend to invest resources in developing studies, positions, agreements, or supporting conferences, events, professional associations, opinion leaders, and students so they endorse their products and increase their sales.²²⁻²⁸ The latter is often done without proper transparency regarding the type of funding and the role of the professional who receives it.²⁹

In our country, there are diverse examples of industry interference in the development of obesity prevention policies.³⁰ Noteworthy among these is the case of the Mexican Observatory on Noncommunicable Diseases (OMENT, Spanish acronym) that emerged as part of the National Obesity and Diabetes Prevention and Control Strategy, which had a strong involvement of actors with commercial interests.²⁵ Another example includes the Guideline Daily Amount (GDA) front-of-pack labelling system, which was proposed by the industry and implemented without appropriate international or national scientific evidence concerning its effectiveness, and despite its low understanding among the Mexican population.³¹⁻³⁴ A third example is in reference to school food guidelines, where the ultra-processed food industry made significant efforts to avoid eliminating products from schools that failed to meet the established criteria.^{22,23,35}

Given that health policies should be based on the best scientific evidence available, using biased studies that are funded by the industry has proven confusing for public health recommendations. Various meta-analyses have documented how excluding studies and positions produced with this funding changes recommendations in a meaningful way.³⁶⁻⁴¹ One of the main risks of generating this type of controversy in a critical health topic is delaying the implementation of policies at the expense of health. This has been the main obstacle to achieving obesity prevention policies in Mexico in the last two decades.^{22,24}

A health professional, particularly in the field of nutrition, experiences a potential conflict of interest in their work (policies, programs, positions, consultations, conferences, etc.) if

a private interest (a financial, personal, or non-governmental interest or commitment) seems to influence their capacity to behave impartially in favor of health.²⁰

Considerations

The goal of the present Code is to incentivize health professionals and sectors associated with the problem of malnutrition to conduct themselves in an ethical, transparent, and professional manner in the presence of a potential conflict of interest. On this basis, the following measures are proposed.

1. To guarantee the highest standards of professionalism, as well as a culture of transparency among academic institutions, we recommend the adoption and promotion of an ethical code to identify and disincentivize interference from actors with conflicts of interest in the development of positions, agreements, evidence, programs, and policies that seek to prevent malnutrition in all its forms. There are various codes that can be utilized as a model to pursue this objective.^{20,42-46} It is suggested that professionals operate under the ethical code of the institution or society to which they belong. Independent professionals should abide by the code of a recognized professional association. This is meant to create consciousness about professional conduct and ensure that activities are carried out truthfully, legitimately, and ethically, for the benefit of society.^{42,44-47}
2. Avoid relations with industry or actors involved in inappropriate actions with regards to human rights, including: the right to health, food, wellbeing, and the rights of children, etc.^{48,49}
3. To carry out academic events, we suggest adopting the position of the Latin American Society of Nutrition (SLAN, Spanish acronym), which establishes principles of transparency and recommendations so that relationships between industry and health professionals are publicly declared.⁵⁰
4. Promote transparency in publications, studies, symposia, conferences, medical literature, and classes in which persons who have a relationship with the industry related to the topic participate; furthermore, adherence to ethical guidelines developed for editors and authors of medical journals is recommended.⁵¹⁻⁵⁴

The following declaration is referred to as the Code on Nutrition, Conflict of Interest, and Academia (NUTRICIA code). We subscribe to this code and invite those whose work forms part of the nutrition community to adopt it.

Declaration

As a health and nutrition professional, I recognize the challenges faced by Mexico to combat malnutrition in all its forms and implement intersectoral actions to effectively counteract it. For these reasons, I commit to avoiding relationships that could generate conflicts of interest in my professional behavior. Although strategic alliances are needed to solve problems associated with malnutrition, I recognize the obstacles that can arise from engaging in relationships with actors who have potentially different primary interests; that is, interests that might infringe on health or common wellbeing (children's rights, right to food, wellbeing, right to information, and right to water).^{55,56} Conflicts of interest, whether real or perceived, can undermine the credibility of scientific research and investigators; this results in an erosion of the general public's trust and actors involved in the policy-making process, as well as skepticism regarding published findings.²⁹ In the case of a relationship that could generate a conflict of interest, I pledge to conduct myself in an ethical and transparent manner in working groups, positions, or agreements related to health and nutrition policies, as well as symposia, conferences, classes, consultations, and other professional activities. To make progress in the global fight against malnutrition, I consider it a priority to safeguard policy-making processes and scientific research from commercial interests,⁵⁷ and in this way, contribute to actions that advance obesity prevention and control.

The health professionals that have signed this code invite the nutrition and health community to promote it and join by registering at the following link: https://docs.google.com/forms/d/e/1FAIpQLSdcqjyTFpp1xcZE19KdXo-bSrfpnbSaaQg1KYIaZ80ZzT9aVw/viewform?usp=sf_link

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References

1. Rivera JA, Pedraza LS, Martorell R, Gil A. Introduction to the double burden of undernutrition and excess weight in Latin America. *Am J Clin Nutr*. 2014 Dec;100(6):1613S-1616S.
2. Kroker-Lobos MF, Pedroza-Tobías A, Pedraza LS, Rivera JA. The double burden of undernutrition and excess body weight in Mexico. *Am J Clin Nutr*. 2014;100(6):1636S-1643S.
3. Rivera-Dommarco JÁ, Cuevas-Nasu L, González de Cosío T. Desnutrición crónica en México en el último cuarto de siglo: análisis de cuatro encuestas nacionales. *Salud Publica Mex*. 2013;55:161-9.
4. OECD Health statistic. Obesity Update 2017. Vol. 13, Diabetologie. OECD; 2017. p. 331-41.
5. Secretaría de Salud. Declaratoria de Emergencia Epidemiologica EE-3-2016. Ciudad de México: CENAPRECE; 2016.
6. Shamah Levy T, Cuevas Nasu L, Rivera Dommarco J, Hernández Ávila M. Encuesta Nacional de Salud y Nutrición de Medio Camino 2016 (EN-SANUT 2016). Informe final de resultados. Cuernavaca, Morelos: Instituto Nacional de Salud Pública; 2016.
7. Marrón-Ponce JA, Flores M, Cediell G, Monteiro CA, Batis C. Associations between Consumption of Ultra-Processed Foods and Intake of Nutrients Related to Chronic Non-Communicable Diseases in Mexico. *J Acad Nutr Diet*. 2019;
8. Monteiro CA, Cannon G, Lawrence M, Louzada ML da C, Machado PP. Ultra-processed foods, diet quality, and health using the NOVA classification system. Rome: Food and Agriculture Organization of the United Nations; 2019. p. 48.
9. Monteiro CA. Nutrition and health. The issue is not food, nor nutrients, so much as processing. *Public Health Nutr*. 2009;12(5):729-31.
10. Mozaffarian D, Hao T, Rimm EB, Willett WC, Hu FB. Changes in Diet and Lifestyle and Long-Term Weight Gain in Women and Men. *N Engl J Med*. 2011;364:2392-404.
11. Weaver CM, Dwyer J, III VLF, King JC, Leveille GA, MacDonald RS, et al. Processed foods: contributions to nutrition. *Int J Pharm Sciences Res*. 2014;99(6):525-1542.
12. Barquera S, White M. Treating Obesity Seriously in Mexico: Realizing, Much Too Late, Action Must Be Immediate. *Obesity*. 2018;26(10):1530-1.
13. Rivera Dommarco, JA; Colchero, MA; Fuentes, ML; González de Cosío Martínez, T; Aguilar Salinas, CA; Hernández Licona, G; Barquera S. La obesidad en México. Estado de la política pública y recomendaciones para su prevención y control. 2018. 270 p.
14. Kleinert S, Horton R. Rethinking and reframing obesity. *Lancet*. 2015;385(9985).
15. Mozaffarian D. Conflict of interest and the role of the food industry in nutrition research. *JAMA*. 2017;317(9):1755-6.
16. Barquera S, Sánchez-Bazán K, Carriedo A, Swinburn B. The development of a national obesity and diabetes prevention and control strategy in Mexico: actors, actions and conflicts of interest. In: *Public health and the food and drinks industry: The governance and ethics of interaction Lessons from research, policy and practice*. UK Health Forum; 2018. p. 18-30.
17. World Cancer Research Fund International. Building-Momentum: Lessons on implementing a robust front-of-pack food label. 2019.
18. Stuckler D, McKee M, Ebrahim S, Basu S. Manufacturing Epidemics: The Role of Global Producers in Increased Consumption of Unhealthy Commodities Including Processed Foods, Alcohol, and Tobacco. *PLoS Med* [Internet]. 2012 Jun 26;9(6):e1001235. Available from: <https://dx.plos.org/10.1371/journal.pmed.1001235>
19. Freudenberg N. Lethal but Legal Corporations, Consumption and Protecting Public Health. With a New Afterward by Author. [Internet]. Oxford University Press; 2016. Available from: https://www.researchgate.net/publication/299425257_Lethal_but_Legal_Corporations_Consumption_and_Protecting_Public_Health_With_a_New_Afterward_by_Author
20. World Health Organization. Safeguarding against possible conflicts of interest in nutrition programmes : Draft approach for the Prevention and Management of Conflicts of Interest. Geneva, Switzerland: World Health Organization; 2017. p. 1-21.
21. La Rosa-Rodríguez E. Los conflictos de intereses. *Acta Bioeth* [Internet]. 2011 Jun;17(1):47-54. Available from: http://www.scielo.cl/scielo.php?script=sci_arttext&pid=S1726-569X2011000100006&lng=en&nlng=en
22. Charvel S, Cobo F, Hernández-Ávila M. A process to establish nutritional guidelines to address obesity: Lessons from Mexico. *J Public Health Policy*. 2015;36(4):426-39.
23. Monterrosa EC, Campirano F, Mayo LT, Frongillo EA, Cordero SH, Kaufer-Horwitz M, et al. Stakeholder perspectives on national policy for regulating the school food environment in Mexico. *Health Policy Plan*. 2015;30(1):28-38.
24. Barquera S, Campos I, Rivera JA. Mexico attempts to tackle obesity: The process, results, push backs and future challenges. *Obes Rev*. 2013;14(5):69-78.
25. Sánchez K, Rodríguez E, del Castillo B, Munguía A, Balderas N, Barquera S. Conflicto de intereses en las políticas públicas de prevención y control del sobrepeso y la obesidad. In: Rivera Dommarco JA, Colchero MA, Fuentes ML, González de Cosío Martínez T, Aguilar Salinas CA, Hernández Licona G, et al., editors. *La obesidad en México Estado de la política pública y recomendaciones para su prevención y control*. Ciudad de México: Instituto Nacional de Salud Pública; 2018. p. 143-56.
26. Weisbrod BA. *To Profit or Not to Profit: The Commercial Transformation of the Nonprofit Sector*. Weisbrod BA, editor. Cambridge: Cambridge University Press; 1998.
27. Nestle M. Food company sponsorship of nutrition research and professional activities: a conflict of interest? *Public Health Nutr*. 2001;4(5):1015-22.
28. Nestle M. *Food politics how the food industry influences nutrition and health*. U. University of California Press. Berkeley; 2007.
29. Cullerton K, Adams J, Forouhi N, Francis O, White M. What principles should guide interactions between population health researchers and the food industry? Systematic scoping review of peer-reviewed and grey literature. *Obes Rev*. 2019;20(8):1073-84.
30. Branca F. Preventing and managing conflict of interest in nutrition policies and programmes. 2016. p. 19-21.
31. Tolentino-Mayo L, Rincón-Gallardo Patiño S, Bahena-Espina L, Ríos V, Barquera S. Conocimiento y uso del etiquetado nutrimental de alimentos y bebidas industrializados en México. *Salud Publica Mex*. 2018;60(3, may-jun):328.
32. Stern D, Tolentino L, Barquera S. Students' understanding of the Mexican industry-sponsored Guideline to Daily Amounts (GDA) front-of-pack labeling system. *National Institute of Public Health*; 2011.
33. Kaufer-Horwitz M, Tolentino-Mayo L, Jáuregui A, Bourges H, Kersh-novich D, Rivera J, et al. Postura sobre un Sistema de Etiquetado Frontal de Alimentos y Bebidas para México: una Estrategia para la Toma de Decisiones Saludables. *Salud Publica Mex*. 2018;
34. Freudenberg N. *Corporations, Conflicts of Interest and Protecting Public Health*. Corporations and Health Watch; 2017.
35. La Redacción. "Discriminatoria", la norma que prohíbe venta de refrescos en escuelas: Coca Cola. Proceso. 2010.
36. Fabbri A, Holland TJ, Bero LA. Food industry sponsorship of academic research: investigating commercial bias in the research agenda. *Public Health Nutr*. 2018;21(18):3422-30.

37. Moodie A. Before you read another health study, check who's funding the research. *The Guardian*. 2016.
38. Odierna DH, Forsyth SR, White J, Bero LA. The Cycle of Bias in Health Research: A Framework and Toolbox for Critical Appraisal Training. *Account Res*. 2013;20(2):127-41.
39. Krinsky S. Do Financial Conflicts of Interest Bias Research? An Inquiry into the "Funding Effect" Hypothesis. *Sci Technol Hum Values*. 2013;38(4):566-87.
40. Naci H, Dias S, Ades AE. Industry sponsorship bias in research findings: A network meta-analysis of LDL cholesterol reduction in randomised trials of statins. *BMJ*. 2014;349(October):1-12.
41. Mandrioli D, Kearns CE, Bero LA. Relationship between research outcomes and risk of bias, study sponsorship, and author financial conflicts of interest in reviews of the effects of artificially sweetened beverages on weight outcomes: A systematic review of reviews. *PLoS One*. 2016;11(9):1-20.
42. Academic of Nutrition and Dietetics. Code of Ethics for the Nutrition and Dietetics Profession. Vol. 118, *Journal of the Academy of Nutrition and Dietetics*. 2018. p. 1764-7.
43. The Obesity Society. TOS Code of Ethics for Members [Internet]. 2019. Available from: <https://www.obesity.org/about-us/tos-code-of-ethics-for-members/>
44. WPHNA. Conflict of Interest in Public Health Nutrition and Food, Nutrition and Health Policy Making.
45. Sociedad Mexicana de Salud Pública. Código de Ética. Código de Ética 2015. 205AD. p. 1-4.
46. Public Health Leadership Society. Principles of the Ethical Practice of Public Health Version 2.2. 2002.
47. Colegio Mexicano de Nutriólogos. Código de Ética del Colegio Mexicano de Nutriólogos [Internet]. Available from: https://www.cmnutriologos.org/recursos/Codigo_de_etica.pdf
48. Van Der Plancke V, Van Goethem V, Paul G, Wrzoncki E. Corporate Accountability for Human Rights Abuses: A Guide for Victims and NGOs on Recourse Mechanisms. *International Federation for Human Rights*; 2016. p. 1-2.
49. Romain PL. Conflicts of interest in research: looking out for number one means keeping the primary interest front and center. *Curr Rev Musculoskelet Med*. 2015;8(2):122-7.
50. Barquera S, García-Chávez G, Navarro-Rosenblatt, Debora Uauy R, Pérez-Escamilla Rafael, Martorell R, Ramírez-Zea M, Sánchez-Bazán K. Postura de la Sociedad Latinoamericana de Nutrición (SLAN) sobre el manejo de conflicto de intereses. *Salud Publica Mex* [Internet]. 2018; Available from: <http://www.saludpublica.mx/index.php/spm/article/view/9657>
51. Committee on Publication Ethics (COPE). Principles of Transparency and Best Practice in Scholarly Publishing. *Sci Ed*. 2013;6(1):1-2.
52. Smith R. Beyond conflict of interest. *Br Med J*. 1998;317.
53. National Institutes of Health. Being Transparent About Conflicts of Interest. NIH. 2016.
54. Annane D, Lerolle N, Meuris S, Sibilla J, Olsen KM. Academic conflict of interest. *Intensive Care Med*. 2019;45(13-20).
55. Branca F, Demaio A, Udomkesmalee E, Baker P, Aguayo VM, Barquera S, et al. A new nutrition manifesto for a new nutrition reality. *Lancet*. 2019;6736(19):19-21.
56. Kraak VI, Swinburn B, Lawrence M, Harrison P. The accountability of public-private partnerships with food, beverage and quick-serve restaurant companies to address global hunger and the double burden of malnutrition. *United Nations Syst Standing Comm Nutr News*. 2011;39:11-24.
57. Nestle M. *Unsavory Truth: How Food Companies Skew the Science of What We Eat*. Basic Books; 2018.