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# **Preventive Medicine Reports**

journal homepage: www.elsevier.com/locate/pmedr

# Supplemental Nutrition Assistance Program Education in Los Angeles County: Lessons and observations from the field, 2013–2016

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#### ARTICLE INFO

Keywords: Supplemental Nutrition Assistance Program Education Nutrition education Policies, systems, and environmental change interventions Obesity prevention

### ABSTRACT

Although the California Department of Public Health has been delivering nutrition education for nearly two decades, the use of Supplemental Nutrition Assistance Program Education (SNAP-Ed) resources to advance policy, systems, and environmental change interventions (PSEs) to prevent obesity has been relatively recent. To date, most efforts to couple PSEs to conventional nutrition education have not been well-studied and as such, their lessons have not been used extensively in local planning. This special issue seeks to close this gap by sharing lessons from the planning and implementation of these efforts in Los Angeles County during the 2013–2016 SNAP-Ed funding cycle. It comprises a collection of six articles that recount key experiences from this work in the field.

## 1. Introduction

According to the National Health and Nutrition Examination Survey, the prevalence of obesity among U.S. adults and youth in 2015–16 was 39.8% and 18.5%, respectively (Hales et al., 2017). In Los Angeles County (LAC), these prevalence estimates among adults and youth were lower than corresponding national estimates, but at 23.5% and 14.0%, respectively, they remained considerable (LACDPH, 2017; CHIS, 2016).

Although pervasive, obesity is preventable and can be mitigated through lifestyle modification and changes to the environment, especially those designed to increase access to healthy food and physical activity opportunities. To address this growing epidemic, many states have increasingly turned to safety net programs such as the United States Department of Agriculture's (USDA's) Supplemental Nutrition Assistance Program Education (SNAP-Ed) to help low-income families learn how to eat more healthfully, be more physically active, and manage their food resources more efficiently on a tight budget (Funding for SNAP-Ed, 2017; Wu et al., 2017).

Because obesity's etiology is multifactorial, federal and state agencies, as well as community organizations and learning institutions, are beginning to tackle this problem by intervening on the underlying socio-ecologic factors that often fuel the development and exacerbation of this condition (Story et al., 2008; Bunnell et al., 2012; Calancie et al., 2015; DeFosset et al., 2018). The addition of complementary policy, systems, and environmental change interventions (PSEs) to conventional nutrition education has been one approach to achieving this aim. The California Department of Public Health (CDPH) was among the first to embrace this model, as exemplified by its restructuring of SNAP-Ed programming in California to position local health departments as the programmatic lead for promoting this work (Wu et al., 2017).

Although CDPH has been delivering nutrition education for nearly two decades, this use of SNAP-Ed resources to advance PSEs to prevent obesity has been relatively recent. To date, most efforts to couple PSEs to conventional nutrition education have not been well-studied and as such, their lessons have not been used extensively in local planning. This special issue seeks to close this gap by sharing lessons from the planning and implementation of these efforts in LAC during the 2013–2016 SNAP-Ed funding cycle.

### 2. About the special issue

As SNAP-Ed's lead local agency in LAC, the Los Angeles County Department of Public Health (DPH) is tasked with decreasing the

Abbreviations: CDPH, California Department of Public Health; CSCs, Corner Store Conversions; DPH, Los Angeles County Department of Public Health; LAC, Los Angeles County; PSEs, policy, systems, and environmental change interventions; SNAP-Ed, Supplemental Nutrition Assistance Program Education; USDA, United States Department of Agriculture

https://doi.org/10.1016/j.pmedr.2019.100929

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harmful effects of poor nutrition and obesity through the development and implementation of program strategies that can provide underserved families with high-quality nutrition education and opportunities for physical activity (Funding for SNAP-Ed, 2017). This special issue describes DPH's data-driven approach and experience with planning, prioritization, and implementation of SNAP-Ed projects and interventions in target settings. This collection of six original articles recounts lessons learned and observations from the field, highlighting key nutrition education and obseivt prevention strategies that were instituted in the county.

In the first article of the collection, Sutton et al. (2019b) share findings from a context scan of nutrition and obesity prevention strategies implemented in LAC during 2010–2015. Using searches of peerreviewed and grey literature, as well as key informant interviews with 51 subject matter experts, the scan inventoried and described policy and programmatic interventions that were scaled in the region to address obesity and promote health among priority populations. It showed that during the 5-year period, PSEs increased from 33 to 98, with only a portion of the total being attributed to SNAP-Ed. The presence of other prevention initiatives in the county pointed to untapped opportunities for further collaboration with and leveraging of these non-SNAP-Ed efforts.

In the second article of the collection, Thompson et al. (2019) describe the development of a lexicon to aid communication among program implementers, evaluators, and community stakeholders of SNAP-Ed. Through a multi-stage process, which included the use of a modified Delphi method, the authors categorized terms/concepts/constructs that were relevant to SNAP-Ed intervention implementation. The purpose of the lexicon was to facilitate a common language that can be used to streamline the PSE process. The classification system was designed to avoid misunderstandings among staff and to reduce project delays or failure due to a lack of program standardization.

In the third article of the collection, Ponce Jewell et al. (2019) demonstrate the utility of CDPH's *Communities of Excellence in Nutrition, Physical Activity and Obesity Prevention* assessment tool, which is an instrument that has been used widely by local health agencies to identify and characterize neighborhood factors that can affect program implementation. In their analysis, Ponce Jewel and her colleagues showed that higher pricing of fresh produce was more likely in SNAP-Ed eligible neighborhoods than in those adjacent to non-program eligible neighborhoods with mixed or higher household incomes. These results underscore the dynamic between geography and pricing and its potential influence on SNAP-Ed planning and project execution.

In the remaining three articles, the special issue presents 'deeper dive' reviews of key SNAP-Ed projects, describing facilitators and barriers to intervention implementation in three different settings in LAC: small corner stores, large grocery stores, and faith-based environments.

In the first of the three (fourth article in the collection), Robles et al. (2019a) show that corner store conversions (CSCs), while popular as a strategy, faced several implementation barriers. The authors suggest that for CSCs to do well in a diverse marketplace, other complementary strategies, such as municipal policies that incentivize small businesses to undergo the conversion, are likely needed to ensure intervention sustainability beyond the start-up and early program activities supported by SNAP-Ed.

In the second of the three (fifth article in the collection), Sutton et al. (2019a) discover that healthy food marketing (e.g., program advertising and in-store cooking demonstrations) in large grocery stores was not significantly associated with percent dollars spent on fruits and vegetables each week. These results were likely the byproduct of limited and/or differential exposure to the intervention, which varied across the six participating stores in the study.

Finally, in the last of the three (sixth article in the collection), Robles et al. (2019b) describe the Episcopal Diocese of Los Angeles' experience with promoting health among its congregants by offering SNAP-Ed approved health education and PSEs at participating church sites. In their survey at thirteen Episcopal Diocese (intervention) and six Catholic Church (comparison) sites, Robles and colleagues found increased congregant interest in eating more fruits and vegetables, choosing water over soda, and becoming more physically active after being exposed to the intervention activities. These results suggest that implementing PSEs alongside health education in faith-based environments can be a resourceful approach for promoting health among priority populations. They build upon prior research that has shown similar benefits of promoting health in this setting (Baskin et al., 2001; Bopp and Webb, 2012).

#### 3. Takeaways and future directions

The existing evidence base suggests that nutrition education alone is insufficient to change poor eating behaviors; that physical activity by itself is inadequate to reduce obesity; and that PSEs, while promising, are often symbolic, especially when they cannot be enforced, or when they are not embraced by the communities they intend to help (Brownson et al., 2006; Story et al., 2008; Meinen et al., 2016). Ultimately, this evidence all points to a need for interdisciplinary efforts to test, implement, and demonstrate the effects of combining these interventions. A number of researchers have begun to address this gap; their simulated analyses suggest that the use of combination strategies is promising but may require further confirmation of their collective health impact (Babey et al., 2018; Nianogo and Arah, 2018; Kuo et al., 2016).

This special issue contributes to this dialogue in health promotion practice by sharing lessons and observations from the LAC experience. The results and information provided by the six articles are intended to inform ongoing efforts by state and local health agencies to address poor nutrition and obesity in their communities, especially as they plan their next generation of SNAP-Ed interventions. Program implementers and evaluators alike can rely on this backdrop of scientific discovery, program data, and proposed best practices to help guide them, as they work towards improving health outcomes by optimizing the synergies of these interventions.

#### **Declaration of Competing Interest**

The author reports no conflicts of interests.

#### Acknowledgments

The author thanks Noel Barragan and Dipa Shah from the Division of Chronic Disease and Injury Prevention at the Los Angeles County Department of Public Health for their reviews of the article prior to submission. The highlighted projects in this article were supported in part by the United States Department of Agriculture's Supplemental Nutrition Assistance Program Education through a contract from the California Department of Public Health (#12-10170). The content of the guest commentary is the responsibility of the author and does not necessarily represent the views of the United States Department of Agriculture, the Los Angeles County Department of Public Health, or any other organization mentioned in the text.

### References

- Babey, S.H., Lee, C., Meng, Y.-Y., Chen, X., Kominski, G., Pourat, N., 2018. Nutrition Education and Obesity Prevention in Los Angeles County. Final Report for the Evaluation of the Local Supplemental Nutrition Assistance Program Education (SNAP-Ed) Efforts. UCLA Center for Health Policy Research, Los Angeles, California January.
- Baskin, M.L., Resnicow, K., Campbell, M.K., 2001. Conducting health interventions in black churches: a model for building effective partnerships. Ethnicity & Disease 11 (4), 823–833. Retrieved from. http://www.ncbi.nlm.nih.gov/pubmed/11763307.
- Bopp, M., Webb, B., 2012. Health promotion in megachurches. Health Promot. Pract. 13 (5), 679–686. https://doi.org/10.1177/1524839911433466.
- Brownson, R.C., Haire-Joshu, D., Luke, D.A., 2006. Shaping the context of health: a review of environmental and policy approaches in the prevention of chronic diseases.

Т. Кио

Annu. Rev. Public Health 27 (1), 341–370. https://doi.org/10.1016/j.amepre.2017. 05.020.

- Bunnell, R., O'Neil, D., Soler, R., Payne, R., Giles, W.H., Collins, J., Bauer, U., Communities Putting Prevention to Work Program Group, 2012. Fifty communities putting prevention to work: accelerating chronic disease prevention through policy, systems and environmental change. J. Community Health 37 (5), 1081–1090. https://doi.org/10.1007/s10900-012-9542-3.
- Calancie, L., Leeman, J., Jilcott Pitts, S. B., Khan, L. K., Fleischhacker, S., Evenson, K. R., Schreiner, M., Byker, C., Owens, C., McGuirt, J., Barnidge, E., Dean, W, Johnson, D., Kolodinsky, J., Piltch, E., Pinard, C. Quinn, E., Whetstone, L., & Ammerman, A. (2015). Nutrition-related policy and environmental strategies to prevent obesity in rural communities: a systematic review of the literature, 2002–2013. Prev. Chronic Dis., 12, E57. doi:https://doi.org/10.5888/pcd12.140540.
- California Health Interview Survey (CHIS), 2016. Obesity Prevalence Among Youth Ages 2–19 Years, Via AskCHIS Portal. http://healthpolicy.ucla.edu/Pages/AskCHIS.aspx, Accessed date: 10 June 2018.
- DeFosset, A.R., Kwan, A., Rizik-Baer, D., Guttierrez, L., Gase, L.N., Kuo, T., 2018. Implementing a healthy food distribution program: a supply chain strategy to increase fruit and vegetable access in underserved areas. Prev. Chronic Dis. 15, 170291. (E61). https://doi.org/10.5888/pcd15.170291.
- Funding for SNAP-Ed Nutrition Education and Obesity Prevention Grant Program. (2017). USDA SNAP-Ed Connection website: https://snaped.fns.usda.gov/about/ snap-ed-funding-nutrition-education-and-obesity-prevention-grant-program. Accessed May 19, 2018.
- Hales, C.M., Carroll, M.D., Fryar, C.D., Ogden, C.L., 2017. Prevalence of Obesity Among Adults and Youth: United States, 2015–2016. NCHS Data Brief, No. 288. National Center for Health Statistics, Hyattsville, MD.
- Kuo, T., Robles, B., Trogdon, J., Ferencik, R., Simon, P., Fielding, J.E., 2016. Framing the local context and estimating the health impact of CPPW obesity prevention strategies in Los Angeles County, 2010–2012. J Public Health Manag Pract 22 (4), 360–369. Los Angeles County Department of Public Health (LACDPH), Office of Health Assessment
- and Epidemiology, January 2017. Key Indicators of Health by Service Planning Area.
- Meinen, A., Hilgendorf, A., Korth, A.L., Christens, B.D., Breuer, C., Joyner, H., Polzin, M., Adams, A., Wolfe, D., Braun, A., Hoiting, J., Paulson, J., Cullen, B., Stader, K., 2016.

The Wisconsin Early Childhood Obesity Prevention Initiative: an example of statewide collective impact. WMJ 115 (5), 269–274.

- Nianogo, R.A., Arah, O.A., 2018. Impact of public health interventions on obesity and type 2 diabetes prevention: a simulation study. Am J Prev Med 55 (6), 795–802.
- Ponce Jewell, M., Lai, E., Thompson, J., Fox, M., Kuo, T., 2019. Higher pricing of fresh produce is more likely in SNAP-Ed eligible neighborhoods when adjacent non-program eligible neighborhoods are mixed income. Prev Med Rep 14, 100817. https:// doi.org/10.1016/j.pmedr.2019.01.021.
- Robles, B., Barragan, N., Smith, B., Caldwell, J., Shah-Patel, D., Kuo, T., 2019a. Lessons learned from implementing the Supplemental Nutrition Assistance Program Education Small Corner Store Project in Los Angeles County. Prev Med Rep (in the special issue).
- Robles, B., Wright, T., Caldwell, J., Kuo, T., 2019b. Promoting congregants' health in faith-based organizations across Los Angeles County, 2013-2016. Prev Med Rep (in the special issue).
- Story, M., Kaphingst, K.M., Robinson-O'Brien, R., Glanz, K., 2008. Creating healthy food and eating environments: policy and environmental approaches. Ann Rev Public Health 29 (1), 253–272. https://doi.org/10.1146/annurev.publhealth.29.020907. 090926.
- Sutton, K., Caldwell, J., Yoshida, S., Thompson, J., Kuo, T., 2019a. Healthy food marketing and purchases of fruits and vegetables in large grocery stores. Prev Med Rep 14, 100861. https://doi.org/10.1016/j.pmedr.2019.100861.
- Sutton, K., Clark, S.E., Thompson, J., Craypo, L., Schwarte, L., Kuo, T., 2019b. Contextual assessment of the breadth and level of investments made by prevention initiatives to improve nutrition and prevent obesity in Los Angeles County, 2010-2015. Prev Med Rep 15, 100901. https://doi.org/10.1016/j pmedr.2019.100901.
- Thompson, J., Sutton, K., Kuo, T., 2019. The added value of establishing a lexicon to help inform, compare, and better understand the implementation of policy, systems, and environmental change strategies in Supplemental Nutrition Assistance Program Education. Prev Med Rep 14, 100873. https://doi.org/10.1016/j.pmedr.2019. 100873.
- Wu, H., Backman, D., Kizer, K., 2017. Restructuring a state nutrition education and obesity prevention program: Implications of a local health department model for SNAP-Ed. J Public Health Manag Pract 23 (1), e28–e36.