

# Improving the Food Environment in Washington State-Run Correctional Facilities: The Healthy Commissary Project

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Improvements to correctional facilities' food environment can provide healthier food and beverage options for incarcerated individuals, a population disproportionately affected by chronic disease. This article describes efforts to increase healthy options in the commissary program at Washington State correctional facilities from 2017 to 2019, and the role of a multidisciplinary collaboration between the state's Department of Corrections, Department of Health, and Statewide Family Council. Through the development, implementation, and promotion of nutrition standards, the nutritional quality of foods and beverages in the commissary program improved. (*Am J Public Health*. 2021;111(8):1439-1442. <https://doi.org/10.2105/AJPH.2021.306292>)

**F**ood environments in correctional settings can affect incarcerated individuals' diet and potentially mitigate or exacerbate chronic disease.

## INTERVENTION

The commissary at correctional facilities functions as a store for incarcerated individuals to purchase products, including foods and beverages. The Washington State Department of Health (DOH) facilitated a work group to plan, implement, and evaluate the Healthy Commissary Project (HCP), with the goal of improving the nutritional quality of foods and beverages for sale in 12 Washington State correctional facilities' commissaries. The work group included representatives from the Washington State Department of Corrections (DOC), Correctional Industries (CI), the business arm of the DOC that operates

commissaries; and the Statewide Family Council (SFC), consisting of incarcerated individuals' family members. The SFC advises with the DOC to improve the quality of life of those incarcerated.<sup>1</sup> The HCP improved the nutritional quality of commissary foods and beverages by (1) creating nutrition standards for products available for sale in commissaries; (2) identifying, procuring, and offering products that met nutrition standards; (3) disseminating educational material for incarcerated individuals about healthier commissary offerings; and (4) monitoring product sales to ensure their sustainability in the commissary.

## PLACE AND TIME

The work group convened monthly from February to May 2017 for project planning, and CI identified products that met

## PERSON

On average, 16 950 incarcerated individuals in Washington State correctional facilities had access to healthier commissary products on any given day during the HCP (June 2017–May 2019). State data show that incarcerated individuals were on average 39 years old during this time. The majority of incarcerated individuals

nutrition standards and could be sourced through distributors. CI formally adopted commissary nutrition standards in June 2017; products meeting nutrition standards were added to the commissary program in all 12 Washington State-run correctional facilities the same month. No products were removed as a result of the HCP. Meetings held in August 2017 and February 2018 helped monitor and evaluate the HCP's progress.

were male (92%); 70% identified as White, 18% as Black, 14% as being of Hispanic origin, 5% as American Indian/Alaska Native, and 4% as Asian/Pacific Islander.

## PURPOSE

Because food service in correctional facilities is primarily a closed system, incorporating healthier options has the potential to positively affect the health of incarcerated individuals,<sup>2</sup> a population shown to have a higher burden of chronic medical conditions than the general population.<sup>3,4</sup> Foods and beverages available in commissaries are generally of poor nutritional quality.<sup>5</sup> The purpose of the HCP was to increase the availability of healthier products in Washington State's correctional facilities' commissaries and assess the uptake of healthier products through sales analyses.

## IMPLEMENTATION

During the first work group convening, the DOC, CI, DOH, and SFC identified shared goals for improving the nutritional quality of commissary products;

reviewed products offered in the commissary and CI's operating procedure used to evaluate product healthfulness; and agreed to a timeline for implementing changes. At subsequent meetings, members discussed security and logistic considerations (e.g., foods packaged in tin cans present a security hazard) and opportunities to increase communication to incarcerated individuals about healthier products (e.g., flyers detailing healthier products available).

Outside of work group meetings, the DOH, DOC, and CI updated CI's operating procedure for determining which products were healthy. The work group decided that because of limitations in commissary offerings (e.g., products must be nonperishable, which excludes many healthy foods like fresh produce), a more accurate descriptor than "healthy" would be "best choice" for products that meet specific food component and nutrient guidelines. The DOH and CI agreed to align the "best choice" products with the US Department of Agriculture's Smart Snacks in School ("Smart Snacks").<sup>6</sup> An online tool was available for determining if products met Smart Snacks guidelines, which

made identifying and categorizing products easier for CI.

The updated operating procedure categorized commissary foods, beverages, and condiments into one of three categories: "best choice," "better choice," and "limited" (Table 1). Limited products contained high amounts of fats, sugars, or salt (e.g., candy, chips, and soda). Better choice products were lower in sodium, sugar, and fat than limited products, but they did not meet best choice guidelines. Better choice was included as a category because CI's old operating procedure had three categories, and CI wanted to keep an intermediate category to demonstrate that it was offering products that met at least some nutrient guidelines.

## EVALUATION

The main analysis compared sales of best choice foods and beverages versus all other foods and beverages (i.e., better choice and limited), to allow for better comparability to other studies, and because these products met established nutrition standards. Condiments were not included in the analysis

**TABLE 1— Nutrition Standards Developed Through the Healthy Commissary Project Used to Categorize Foods and Beverages in Washington State's Correctional Facilities' Commissary Program: June 2017–May 2019**

Category	Foods	Beverages
Best choice	Meet Smart Snack <sup>6</sup> food component guidelines (i.e., contain whole grains, fruits, vegetables, dairy products, or protein foods) and nutrient guidelines for calories, sodium, total fat, saturated fat, trans fat, and sugar (with the exception that these nutrient guidelines are per serving vs per package, unlike the Smart Snacks guidelines, which calculate nutrient guidelines by package). See Smart Snack guidelines for specific food component and nutrient requirements and exemptions.	Meet Smart Snack guidelines, and include plain or carbonated water; flavored or unflavored nonfat and 1% milk and milk alternatives; and 100% fruit juice with no added sugars. Although condiments are not a stand-alone product listed in Smart Snack guidelines, they are products offered in the commissary.
Better choice	Meet Smart Snacks food component guidelines and all but one of the nutrient guidelines (e.g., the product can be high in sodium and still meet this categorization).	Low- and no-calorie (under 60 calories), which includes diet soda.
Limited	Meet none of the guidelines outlined in the best choice and better choice categories.	Meet none of the guidelines outlined in the best choice and better choice categories.

because of their small contribution to sales and calories. Sales data were plotted over time from approximately two years prior to the HCP (the pre-HCP period, beginning July 2015) to two years following initial implementation of the HCP (the post-HCP period, ending May 2019), and an interrupted time series analysis<sup>7</sup> was conducted to account for seasonal variations and other factors that might affect purchases. Total calories sold, by product type (i.e., food, beverage) and category, was calculated by multiplying the calories per serving times the total servings sold before and after the HCP. Best choice beverages made up a greater proportion of beverage sales after the HCP compared with before the HCP (63% vs 58%,

respectively; Figure 1). Overall, data showed a 7.5% increase (95% confidence interval = 7.2%, 7.9%;  $P < .001$ ) in sales of best choice beverages in the first month of HCP implementation (June 2017), indicating that individuals were replacing better and limited choice beverages with best choice beverages. Sales of best choice beverages showed an overall 2.6% increase in the post-HCP period, corresponding to 7.2 million fewer calories from beverages sold after the HCP compared with before the HCP. There was no significant or meaningful change in best choice food sales after the HCP compared with before the HCP. Among all foods and beverages (combined), there was a slight (though not significant)

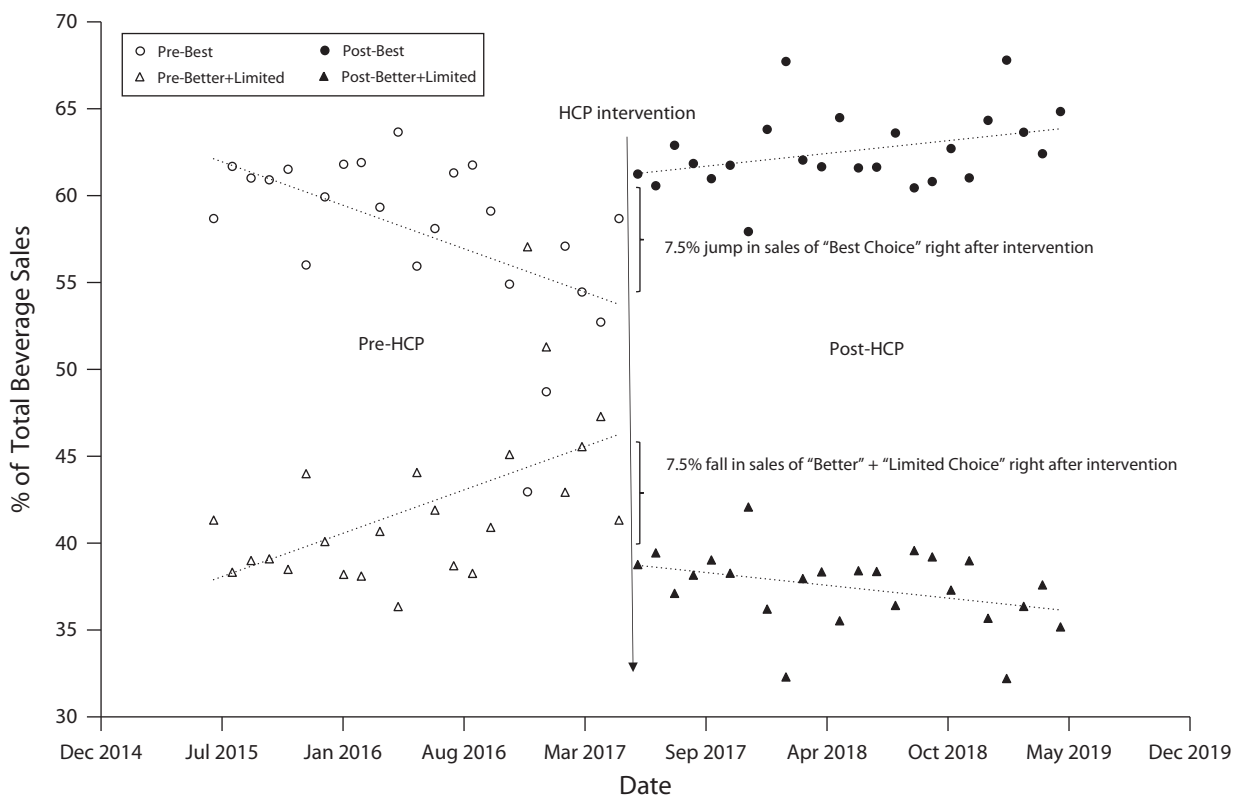
increasing trend in sales of best choice products, from 12% sold in July 2015 to 14% sold in May 2019.

### ADVERSE EFFECTS

The HCP targeted commissary products, not meals or other foods and beverages available in correctional facilities. Not all incarcerated individuals can access the commissary, because of lack of money or security concerns; therefore, the HCP only affected those who used the commissary.

### SUSTAINABILITY

Overall, the proportion of foods and beverages for sale that met best choice



**FIGURE 1—** Sales of Best Choice vs Better Choice and Limited Beverages, as Percentage of Total Quantity of Beverages Sold During (July 2015–May 2017) and After (June 2017–May 2019) the Healthy Commissary Project: Washington State

Note. HCP = Healthy Commissary Project. Dashed line represents linear trend as assessed through an interrupted time series regression analysis<sup>7</sup> (model fit  $R^2 = 0.82$ ).

criteria increased from 13% before the HCP to 19% after the HCP. Best choice products continue to be offered more than three years after the HCP was first implemented, and CI and the DOC continue to promote healthier commissary products through posters and newsletters.

The HCP showed how government agencies can collaborate to improve the food environment in correctional facilities. This approach can be replicated in other correctional facilities across the country that have commissary programs. CI's operating procedure can be translated to other commissary programs regardless of size. As a result of the HCP's success, the DOH, DOC, and CI continued collaboration in 2018 to address meals, which affect most incarcerated individuals.

## PUBLIC HEALTH SIGNIFICANCE

Correctional facilities provide an exceptional opportunity for implementing public health nutrition interventions because of the controlled nature of the food environment. Research suggests that many incarcerated individuals gain excess weight while incarcerated and experience higher rates of chronic medical conditions compared with the general population.<sup>3,4</sup> Nutrition interventions are therefore especially important to implement in the correctional setting.

The HCP demonstrates the feasibility of partnerships between health departments, corrections, and advocacy organizations to implement effective nutrition interventions in correctional facility commissaries. This project also serves as a model for implementing nutrition interventions in additional food service venues, such as mealtimes, to

further increase access to healthy food and beverage options. *AJPH*

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## CONTRIBUTORS

A. Auvinen and J. Marcinkevage conceptualized the study, and A. Auvinen wrote the first draft of the article with input and edits from C. Mornick, J. Marcinkevage, M. Daniel, J. Dolan, B. Carney, and C. Prather. S. Nambuthiri performed data analysis, and S. Nambuthiri and J. Marcinkevage interpreted the data for the article. A. Auvinen, J. Marcinkevage, B. Carney, and C. Prather participated in the intervention research on which this article is based. All authors approved the final version of the article.

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## CONFLICTS OF INTEREST

The authors have no conflicts of interest to report.

## HUMAN PARTICIPANT PROTECTION

The Washington State institutional review board deemed evaluation activities exempt from review.

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