

Leveraging Juvenile Justice Food Environments to Advance Health Equity

Healthy Eating Research

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The Issue

This research brief examines the evidence linking the food environment in juvenile justice facilities to diet-related health disparities in the United States and identifies potential policy levers for improving the nutrition related health outcomes of youth who reside in this institutional setting. The United States incarcerates a larger proportion of youth and adults than any other developed democracy.^{1,2} Researchers and advocates have drawn attention to the public health consequences of mass incarceration and its contribution to racial health disparities in the United States.^{3,4,5} The conditions within juvenile justice facilities may influence long-term health outcomes for African-American, Latino, and Native American populations, who are more likely than white youth to be placed in these institutional settings. Between 2003 and 2013, the disparity in incarceration rates between white and African American youth rose by 15%, although the overall rate of incarceration of all racial and ethnic groups declined by 47%.⁶ African-American, Latino, and Native American populations are also disproportionately burdened with diet-related health conditions such as obesity, diabetes, and cardiovascular disease.^{7,8,9} Although there are potential health equity implications for improving the food available in juvenile justice settings, limited research is available on the factors shaping these food environments and their potential public health outcomes. This exploratory study aims to identify potential policy levers for leveraging juvenile justice facility food systems to promote health equity, as well as practical issues to be considered by researchers and advocates recommending changes to these settings and systems.



Introduction

Chronic disease rates, such as diabetes and hypertension, in the United States are high, due in part to poor diets.¹⁰ Only 1 in 10 U.S. adults eat the daily recommended amount of fruits and vegetables.¹¹ Rates of obesity-related health issues are also higher among communities of color. For example, rates of diabetes are higher among Native Americans (15%), African-Americans (13%), and Latinos (12%) as compared to whites (7%).^{12,13} For many, these nutrition habits begin in childhood. Nearly one-third of children and youth in the United States are overweight or obese.⁸ In 2015, obesity prevalence among adolescents aged 12–19 was 21%; however, African Americans and Latinos had higher rates of obesity than their white peers.¹⁴ This study is rooted in a life-course perspective on health equity which considers how health outcomes are shaped by earlier life experiences, as well as material and social conditions.¹⁵ Using this approach, this study regards the experience of youth incarceration and exposure to juvenile justice food environments as potential determinants of risk for diet-related diseases such as obesity, hypertension, and diabetes later in life.

At the national level, juvenile offenders are defined as persons under the age of 21 who are held in a residential setting because of their contact with the justice system.¹⁶ At the state-level individuals age out of the juvenile justice system between 17 and 25 years of age depending on the laws in their jurisdiction. For all youth involved with the criminal justice system, increased length of incarceration is associated with worse mental and physical health in adulthood, including higher rates of obesity and hypertension.^{17,18} Youth incarceration is also associated with significant weight gain that increases with the length of stay.¹⁹

Research indicates that these negative health outcomes are also associated with pre-incarceration exposures such as adverse childhood experiences (i.e., trauma), unmet physical and mental health care needs, community violence, school disciplinary practices, and poverty.^{20,21} For example, students expelled or suspended for a discretionary violation at school are nearly three times as likely to come into contact with the juvenile justice system the following year.²² Racial disparities in exclusionary school discipline policies like these mean that African American youth, who are disciplined at disproportionate rates compared with their white peers, are more likely to have lower levels of educational attainment, compounded with other adverse childhood experiences.²³ Collectively, such factors are considered the social determinants of health and are recognized to have life-long influences on subsequent health outcomes.²⁴

Early childhood adversity can be further exacerbated by conditions in juvenile justice facilities (such as overcrowding, violence, length of stay, and the use of solitary confinement).^{14,25,26,27} However, some evidence suggests that improved diet and nutrition may positively influence mental health and behavior among juvenile offenders.^{28,29,30} Taking this body of evidence into consideration, the food environment within juvenile justice facilities is of particular importance for the health of incarcerated youth, during incarceration and over the course of their lifetime. However, there has been little research to date on the food environment in juvenile justice facilities and the policy levers to improve it.

This research brief examines the evidence linking the food environment in juvenile justice facilities to diet-related health disparities in the United States. It describes the population impact, number and types of juvenile justice facilities, the institutional food system and the juvenile justice food environment, and related policies and regulations. It is based on a study that included a review of existing data, literature, and interviews with key experts such as correctional food service directors, state procurement policy officers, justice system reform and public health advocates.

Brief Methodology

This issue brief reports on a rapid exploratory study of the policies shaping food environments in juvenile justice facilities and their potential to address diet related health disparities, including:

- a review of peer-reviewed literature on the health of incarcerated individuals and food/food service in correctional facilities;
- a review of federal, state, and local policies and laws on food service and procurement;
- an analysis of publicly-available demographic data on young people in juvenile justice facilities;
- a convenience sample of key informant interviews; and
- participation in expert convenings.

Key informant interviews and convenings with stakeholders and subject-matter experts (N=13) were used to identify policy levers and understand the practices and processes that shape food environments in juvenile justice facilities. Individual interviews and convenings included a representative from a state-level procurement task force, a former juvenile justice facility food service director, representatives from private food service providers that contract with institutions such as schools and adult and youth correctional facilities, attorneys, a former state-level school nutrition services manager, a family member of an incarcerated individual, as well as food and nutrition policy advocates. These individuals were selected in a convenience sample, based on their knowledge of various components of the correctional food system, expertise in food procurement, and experiences related to the juvenile justice system. This qualitative data was used to identify components of the juvenile justice food system and the policies and informal practices that shape it.

National data on young people in juvenile justice facilities and the types of facilities where they are housed was sourced from the *2015 Census of Juveniles in Residential Placement*, the most recent available data from this source.³¹ The data set includes demographic characteristics (race/ethnicity, age, and gender), facility type (public/private), and length of stay. State-level juvenile population data is from the *Easy Access Juvenile Populations* database, which presents data from the National Center for Health Statistics.³² 2017 data is now available, but 2015 are used in this issue brief to maintain consistency with the national data used. These data sets were analyzed with descriptive statistics to inform our findings on the potential population impact of improving juvenile justice food environments.

Key Findings

In this issue brief’s findings, juvenile justice facilities refer to public and private juvenile residential facilities for court-involved offenders. Public facilities are owned and operated by state or local government agencies, whereas private facilities are owned and operated by private non-profit or for-profit corporations or organizations.³³ Facilities included in the *2015 Census of Juveniles in Residential Placement* include detention centers, shelters, reception/diagnostic centers, group homes, camps, residential treatment center, long-term secure facilities, and alternative residential schools. The data does not include adult facilities that hold juveniles, or drug treatment or mental health facilities.

Population Impact of Juvenile Justice Facilities

The potential population impact of improving juvenile justice facility food environments is a function of the total number of youth incarcerated and the duration of their stay. Combining these factors provides an estimate of overall exposure to this food environment.

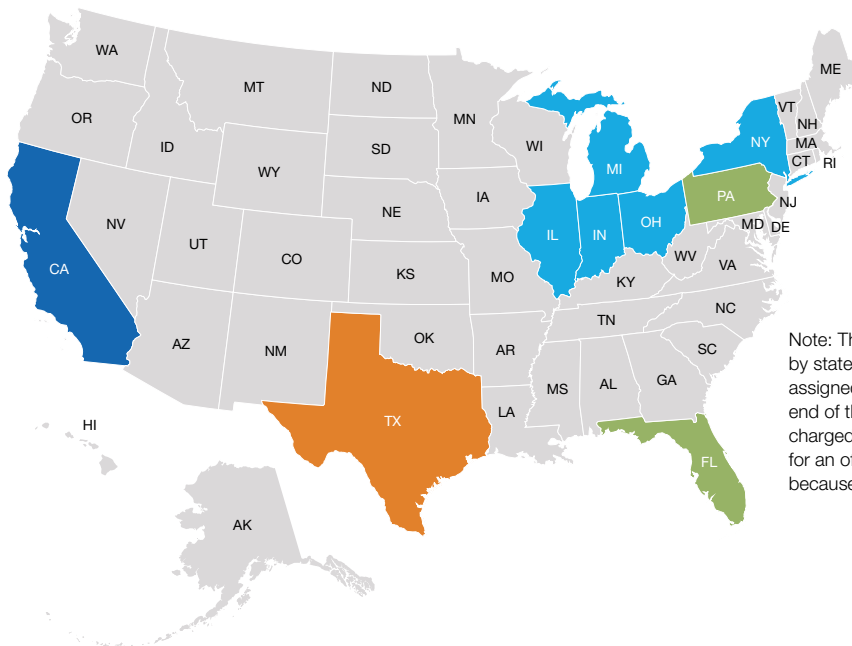
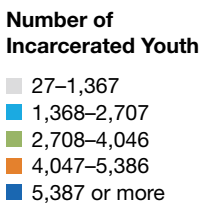
- On the date of the *2015 Census of Juveniles in Residential Placement*, October 28, 2015, there were 48,043 youth ages 21 and under, incarcerated in residential facilities in the United States. If incarcerated youth were served all three meals (breakfast, lunch, dinner) on this date, a total of 144,129 meals would have been served in one day.
- The length of stay in a juvenile justice facility compounds the impact of the food environment on incarcerated youth.

In October 2015, of the total number of incarcerated youth ages 21 and under, eight percent had been held for over a year, 23 percent had been held over 6 months, and 67 percent had been held for longer than a month.³⁴

Racial and ethnic disparities in youth incarceration rates add another layer to understanding how the population impact of improving juvenile justice food environments could have implications for health equity: According to the *2015 Census of Juveniles in Residential Placement*:

- African American youth are incarcerated at the highest rate, compared to their White, Latino and Native American peers, at a rate of 433 per 100,000.
- Native American youth are incarcerated at a rate of 261 per 100,000.
- Latino youth are incarcerated at a rate of 142 per 100,000.
- White and Asian youth have the lowest incarceration rates, 86 and 23 per 100,000 respectively.^{24,25}
- Montana has one of the highest rates of incarceration of African American and Latino youth, while Wyoming, Nebraska, Iowa, Minnesota, and West Virginia all have the highest rates of incarceration of Native American youth.
- African American youth are also held for more total days than any other racial or ethnic group, without adjusting for relative population size.

Figure 1
Number of Incarcerated Youth by State



Note: The total number of incarcerated youth by state includes youth under the age of 21, assigned a bed in a residential facility at the end of the day on the census reference date, charged with an offense or court-adjudicated for an offense, and in residential placement because of that offense.

Institutional Food Systems and the Juvenile Justice Food Environment

Generally, institutional food systems are complex networks that include many actors interacting at multiple levels of the system (in the cafeteria, institution, locality, state, nation).³⁵ These actors and their interactions play a key role in determining the accessibility of healthy or unhealthy food and beverages for people living in correctional facilities.³⁶ This issue brief identifies programmatic and environmental elements of juvenile justice food systems, which together provide a framework for understanding the policy opportunities for promoting health equity through these institutional food environments.

Limitations on food spending and safety considerations are factors that strongly influence the practices and policies related to these food system components. Safety considerations throughout juvenile justice food systems, including in commissary and food service settings, are mostly focused on food and packaging being used as weapons. Literature on food systems in adult correctional facilities includes rich discussion of informal food preparation and sharing practices. These are discussed less in literature on juvenile justice food systems.

At the facility-level, food environments may include four components: food service and catering, commissary shops and canteens, food in visiting areas, and food gardens.³⁷ These four components and the factors that shape their implementation are described below. Findings in this section are based on the qualitative data analysis and review of related literature.

- **Food service and catering** are how the meals and snacks that ensure adequate nutrition are provided for residents of juvenile justice facilities.
 - Some facilities operate kitchens on site, preparing meals from scratch, and others have food prepared off-site and delivered. Some jurisdictions and facilities contract with food service management companies to provide complete food service. The privatization, or contracting out, of food service allows prison systems to lower per meal food costs by leveraging economies of scale offered by industrial food systems and private vendors.^{38,39} Privately owned juvenile justice facilities have a stronger profit motive than public facilities and may be more likely to contract out their food service.
 - Procurement contracts, federal child nutrition standards, as well as state and local laws can influence the menus and nutrition standards for these meals.

- The economic interests of states, beyond food cost alone, can be reflected in the food served in correctional facilities. For example, states with economies supported by the dairy industry serve butter (rather than less expensive margarine) and states with economies supported by the pork industry serve this meat, even though they must also then accommodate many religious exceptions to its consumption (which complicates and increases food service costs).
- **Commissary shops and canteens** that sell food and other personal items are available in some, but not all juvenile justice facilities.
 - Commissaries, canteens, and vending machines may not always be covered by nutritional standards set for meals served.
 - Procurement contracts and state and local laws can influence what commissaries and canteens offer residents.
 - Commissaries and canteens in facilities participating in federal school meal programs must also comply with nutrition requirements for competitive food, known as Smart Snacks standards, but only during the school day (defined as the midnight before to thirty minutes after the school day ends).⁴⁰ Although they vary by facility, the products available outside the Smart Snacks standards tend to be low-quality processed items, high in fat, salt, and sugar.⁴¹
 - As one of the few places youth living in juvenile justice facilities exercise autonomy, changes to available products could be a sensitive topic for youth and facility staff. Also, food sales from these sources may fund programming and activities in correctional facilities, making it politically challenging to apply new requirements that could negatively impact the availability of rehabilitative and educational programs. In the school environment outside of correctional systems, school revenues decreased after establishing nutrition standards for competitive foods.⁴² Thus, implementing nutrition standards which reduce revenue may have adverse impacts on the availability of other health promoting resources for residents.
 - The context of juvenile justice facilities is unique and requires a sensitive approach. For example, unlike schools, juvenile justice facilities are residential so that commissaries present one of the few opportunities for residents to obtain foods that are not part of the institution's meal and snack plan.

- **Food in visiting areas** may be available to visitors and residents from vending machines.
 - Items stocked in these machines may be influenced by state, local, or facility-level healthy vending policies.
 - Most states have laws that give legally blind vendors priority in operating vending machines and other concession services on government property.⁴³ In states with such laws, adopting healthy vending standards may require approval and uptake from state-level blind vendor associations and individual vendors.
 - In some cases, friends, family, and legal representation are allowed to bring food items as gifts to be consumed during visit.
- **Food gardens** may exist as part of nutrition education, rehabilitation, or vocational training programs. In some facilities, gardens or on-site farms produce food that is used in a facility's food service or donated to local community groups.^{44,45,46} There is some evidence that gardening programs reduce recidivism rates for incarcerated youth.⁴⁷
 - The presence of gardening programs is determined by the degree to which a facility's leadership prioritizes rehabilitation as well as the availability of funding to support the activity.

Juvenile Justice Food Policies and Regulations

There is broad variation in the governance of juvenile justice facilities, depending on the facility type, jurisdiction, and state and local policy landscape. Juvenile justice facilities fall within two overarching categories with implications for the policies and regulations that shape their operations and food environments: public facilities (operated by state or local government agencies) and private facilities (operated by private non-profit or for-profit corporations or organizations). At the national-level, 69 percent of incarcerated youth are held in publicly-run facilities. At the state level, the proportion of youth in public facilities ranges from 24 percent to 100 percent.⁴⁸

City, county, and state facilities are all subject to different jurisdictional requirements. For example, the state of California has procurement requirements for all state agencies, including the mandate that state agencies utilize the California Prison Industry Authority (CALPIA), a prisoner work assignment agency that produces and sells agricultural and food products, to purchase individual food items; and specific nutritional guidelines for all food served by the California Department of Corrections and Rehabilitation.⁴¹ But, most juveniles arrested in the state are held in county facilities, which are not subject to the same requirements. In some states, policy follows the person – if a Virginia resident is arrested and sent to an out-of-state

facility, Virginia law follows that youth and is applied in the out-of-state facility.^{49,50} This adds complexity and administrative burden to the task of managing facility-level food service delivery to meet multiple sets of nutrition and procurement guidelines. Overall, the overlap and gaps between standards at different levels of government can complicate meal planning and food service delivery, potentially deterring facilities and jurisdictions from tackling this policy issue.

Federal Policies and Regulations

At the national level, federal school meal program policies are the main lever for influencing the food served in juvenile justice facilities.

- Public and private non-profit detention facilities are considered residential child care institutions (RCCIs). As such, they are eligible to participate in the federal National School Lunch Program (NSLP) and School Breakfast Program (SBP), which are administered by the United States Department of Agriculture (USDA).
- Private for-profit facilities are not eligible for the NSLP, and depending on state licensing requirements, may not be subject to the same laws and policies as public facilities.
- In 2015, 3,800 RCCIs participated in the NSLP and SBP.⁵¹ Participating facilities are required to comply with USDA's procurement requirements, nutrition standards, and recommendations for meal service timing and duration.
- Facilities may also receive reimbursement from the USDA for serving after-school snacks, which have less complicated nutrition standards and require little additional administrative burden to implement.
- Dinner and weekend/holiday meals are not part of the federal school meal programs in RCCI settings.⁵² This means that any meals served at dinner or on weekends or holidays are not reimbursable by the USDA and are not subject to the federal meal pattern requirements.
- Although states often require that correctional facilities serve three meals a day, the nutritional quality of dinner, weekend, and holiday meals may be left unregulated and unfunded, even in facilities participating in the NSLP and SBP.
- The administrative requirements for participating in NSLP and SBP (record keeping and reporting requirements), especially for smaller institutions, can be burdensome and a barrier to participation in the program. Smaller sites may struggle to keep up with reporting and record keeping, drawing fiscal action by administering agencies and leading to withdrawal from the program. This administrative burden can also mean that meal planning and preparation is a lower priority, compromising the quality of meal service.

State Policies and Regulations

State laws and policies, specifically those regulating facility licensing, procurement, and nutrition and meal standard policies, provide an opportunity to influence the nutritional content and meal service standards in juvenile justice facilities. For example:

- Massachusetts requires state agencies (including the Department of Corrections) responsible for large-scale food purchasing to purchase food that meets nutrition standards defined by Executive Order 509.⁵³
- Oregon law requires that all local correctional facilities, including juvenile facilities, feed detainees three meals a day that are “nutritionally adequate” as defined by a registered dietitian or the Oregon Health Authority.⁵⁴
- California state law includes a bill of rights for youth in juvenile justice facilities, which includes a provision stating that youth confined in a facility have a right to “receive adequate and healthy food and water, sufficient personal hygiene items, and clothing that is adequate and clean.”⁵⁵

County & Local Policies and Regulations

County, city, and institutional food service and contracting standards also impact food availability in juvenile justice food systems. While not specific only to juvenile justice facilities, contracting standards often dictate the nutritional standards for all food procurement that occurs in a local jurisdiction or institution. For example:

- A Mayoral executive order in New York City mandated health standards for the 260 million meals and snacks served annually at schools, senior centers, homeless shelters, childcare centers, after-school programs, correctional facilities, public hospitals, and other city agency facilities and programs.⁵⁶
- The Multnomah County Sheriff’s Office in Oregon includes nutritional specifications in its requests for proposals for food services, requiring that proposed menus be consistent with the Dietary Guidelines for Americans.⁵⁷ Woodbury County in Iowa instituted a policy requiring county departments that purchase and serve food to prioritize local and organic food.⁵⁸ Wayne County, Michigan, instituted a law in 2007 that prohibited trans-fat from being served in juvenile justice facilities, before federal law around trans-fats went into effect.⁵⁹

Conclusions and Policy Implications

The findings outlined above suggest potential policy levers and challenges for improving the food environment in juvenile justice settings through action by state and local governments. Due to the compounding socio-economic and health impacts of pre-incarceration exposures, and disproportionate burden on certain racial and ethnic groups, changes at all of these

levels could have significant implications for youth who are held in juvenile justice facilities and are experiencing or at risk of diet-related diseases.

Policy Implications, Levers and Challenges

The impact of youth incarceration, and potential impact of changes to the food environment, is a function of the number of youth incarcerated, racial and ethnic disparities in rates of incarceration, and length of stay. Policy efforts to affect change to the food environment in these facilities may be targeted in geographic areas or towards population groups with the highest numbers or rates of incarceration for greater impact. Figures 1 and 2 illustrate which states have the largest populations of youth in juvenile justice facilities and highest rates of youth incarceration. These may be useful to advocates interested in targeting their efforts at areas with significant potential population impact.

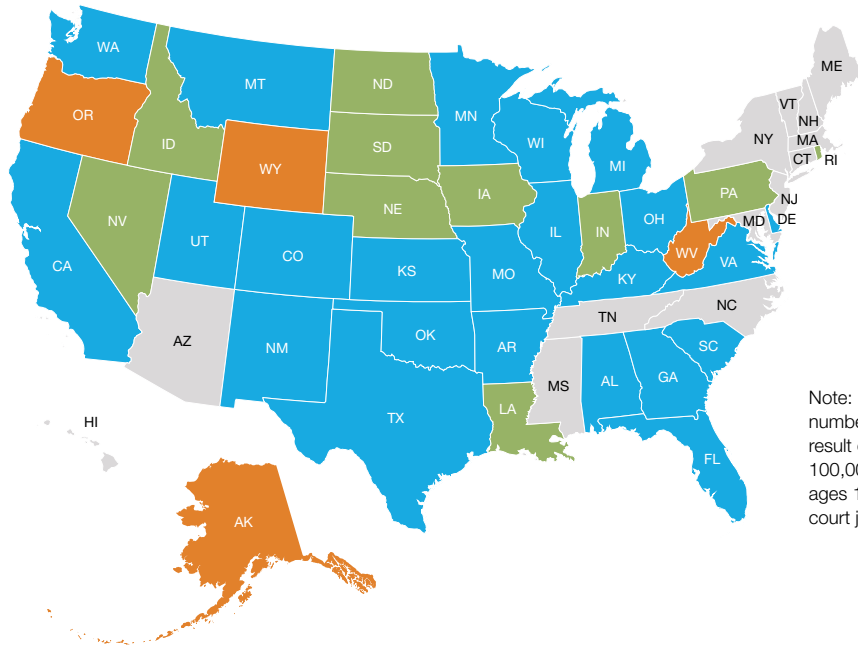
Specific attention to the components of juvenile justice food systems provides insight to potential policy opportunities and gaps. In the food service and catering context, policy interventions could focus on nutrition and meal service requirements directly, attach such requirements to licensing qualifications for public and private facilities, and/or establish procurement standards that incorporate nutrition guidelines for all state-funded food procurement. Local jurisdictions could act in a similar manner, establishing nutrition standards for public facilities within the county or city government structure that exceed state standards depending on their capacity to leverage local and regional food systems. An important component of any policy or regulation for nutrition standards at the state or local level is a standardized definition of the nutrition standards, which may help to promote equitable implementation.

Of interest are the current gaps in meal service regulations that impact youth held in juvenile justice facilities. Dinner, which is required to be served by most states, but isn’t often regulated in terms of the nutritional quality, presents a great opportunity for impact and influence on the food landscape in juvenile justice settings. There are also missed opportunities in federal meal programs. It appears that juvenile justice facilities that participate in the NSLP may not be taking full advantage of the after-school snack program, which has few administrative requirements and simple nutrition guidelines. Targeted support and technical assistance from the administering agencies, both state departments and the USDA Food and Nutrition Service, could increase the number of facilities utilizing this program. Encouraging, or requiring facilities to take part in this program could be an effective way to provide more food that meets federal nutritional standards. Additional administrative burden on facility staff should be evaluated when considering expanded nutritional requirements, and when possible, administrative support and financial incentives should be considered.

Figure 2
Rates of Incarceration by State

Rates of Youth Incarceration per 100,000 Youth

- 36–109
- 110–183
- 184–256
- 257–329



Note: Rates for “All ages” represent the number of juveniles assigned a bed as a result of an offense on October 28, 2015, per 100,000 juveniles in the general population ages 10 through the upper age of juvenile court jurisdiction in each State.

Additionally, commissaries and other food sale points within juvenile justice facilities are a potential target for policy change. Food available in commissaries are less likely to be regulated, and often have little nutritional value. Changes to these spaces where youth have autonomy in decision making is a sensitive topic and should be approached delicately and with significant stakeholder engagement. For example, through taste tests and with input from incarcerated youth.

Finally, state governments are in a particularly important position to implement policy for minimum nutrition and food service standards for public and private facilities. Changes to state-level policy have a wide-reach across local jurisdictions and are more attainable than changes to federal-level policy. Policy levers at the state level include attaching nutrition and meal service standards to licensing requirements for juvenile justice facilities and/or residential child care facilities (public and private) and including nutrition standards to procurement and contracting requirements for state agencies or agencies that receive state funding.

Future Research Needs

More research is needed to inform policy development and advocacy efforts to leverage food environments in juvenile justice facilities to promote health equity. Nationally, there is a need to collect and assess all state and local policies to identify the leaders, and gaps, in this area. Very little research has explored juvenile justice in tribal communities, and the intersection of native youth incarceration with tribal government jurisdiction. Considering the high rates of

incarceration for Native American youth, learning more about juvenile justice in tribal communities could shed light on important policy levers for a population at high risk for diet related disease. Across population groups more research is needed on the pre- and post- incarceration health status of youth with attention to how these outcomes are connected to broader determinants of health such as educational attainment and experiences of trauma. Additional research on the connections between nutrition, behavior, and mental health could provide additional evidence for changes to the juvenile justice food environment.

A more comprehensive examination of policies and budgets related to the food environment in juvenile justice facilities is needed to better understand how these factors shape differences in diet quality, both within public and private facilities. Data on food spending by juvenile justice facilities is not published in public reports. Information of food budgets for juvenile justice facilities would help determine if there is a need to advocate for increasing funding to support implementation of food and nutrition standards. As potential policy levers may be attached to funding streams, and existing knowledge of food purchasing and spending by juvenile justice facilities is limited, a review of requests for proposals (RFPS), contracts, and food spending at state and local levels is necessary. This would likely require submitting requests for data to states under the Freedom of Information Act. Finally, there is a need for a systematic analysis of the inclusion of food and nutrition among state policies for juvenile justice facilities available through the National Institute of Corrections.⁶⁰

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About Healthy Eating Research

Healthy Eating Research (HER) is a national program of the Robert Wood Johnson Foundation. Technical assistance and direction are provided by Duke University under the direction of Mary Story PhD, RD, program director, and Megan Lott, MPH, RDN, deputy director. HER supports research to identify, analyze, and evaluate environmental and policy strategies that can promote healthy eating among children and prevent childhood obesity. Special emphasis is given to research projects that benefit children and adolescents and their families, especially in lower-income and racial and ethnic populations at highest risk for obesity. For more information, visit www.healthyeatingresearch.org or follow HER on Twitter at [@HERResearch](https://twitter.com/HERResearch).

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