

A National Research Agenda to Reduce Consumption of Sugar-Sweetened Beverages and Increase Safe Water Access and Consumption Among Zero- to Five-Year-Olds

Healthy Eating Research

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Introduction

Beverage choices, particularly those with added sugars, contribute significantly to dietary and caloric intake in the United States. Despite the 2015-2020 Dietary Guidelines for Americans' recommendation to limit added sugar intake to less than 10 percent of daily calories for children 2 years and older,¹ 60 percent of children ages 2 to 5 do not meet this recommendation, with the largest source of added sugars in their diet coming from sugar-sweetened beverages (SSBs).^{1,2} And, despite recommendations that children younger than 2 years avoid SSBs entirely, data shows that many infants and toddlers are also frequently drinking these beverages.³⁻⁵ Less is known about water access and consumption patterns in the early years, but water is recognized as a healthy substitute for SSBs in the diet.

In 2017, Healthy Eating Research (HER) received funding from the Robert Wood Johnson Foundation (RWJF) to develop a national research agenda to reduce SSB consumption and increase safe water access and consumption among 0- to 5-year-olds in the United States. The goal of this national research agenda is to provide a foundational framework outlining research gaps and opportunities for researchers, foundations, and practitioners to pursue in order to reduce SSB consumption and increase safe water access and consumption among 0- to 5-year-olds, particularly those at greatest risk for health inequities.



Rationale

Early childhood (ages 0 to 5) is a critical period for the development of enduring food preferences and dietary patterns.^{6,7} Research has demonstrated a link between consumption of SSBs in the early years of a child's life and increased preference for sweet foods and beverages, dental caries, excess weight gain, and obesity.⁸

Thus, to reduce SSB consumption among young children and to promote health and well-being, dual strategies to decrease SSB consumption and increase water access and promotion are needed. Given the dearth of evidence on effective strategies to reduce SSB consumption and provide and promote water in this age group, a rigorous and evidence-based research agenda is warranted to fill existing knowledge gaps and inform and advance strategies and policies to improve beverage patterns and reduce inequities in consumption.^{9,10}

The focus of this research agenda is on policy, systems, and environmental change strategies. Because racial/ethnic disparities in consumption patterns have been documented in the literature,^{11,12} this project also focused on identifying research gaps related to these equity issues.

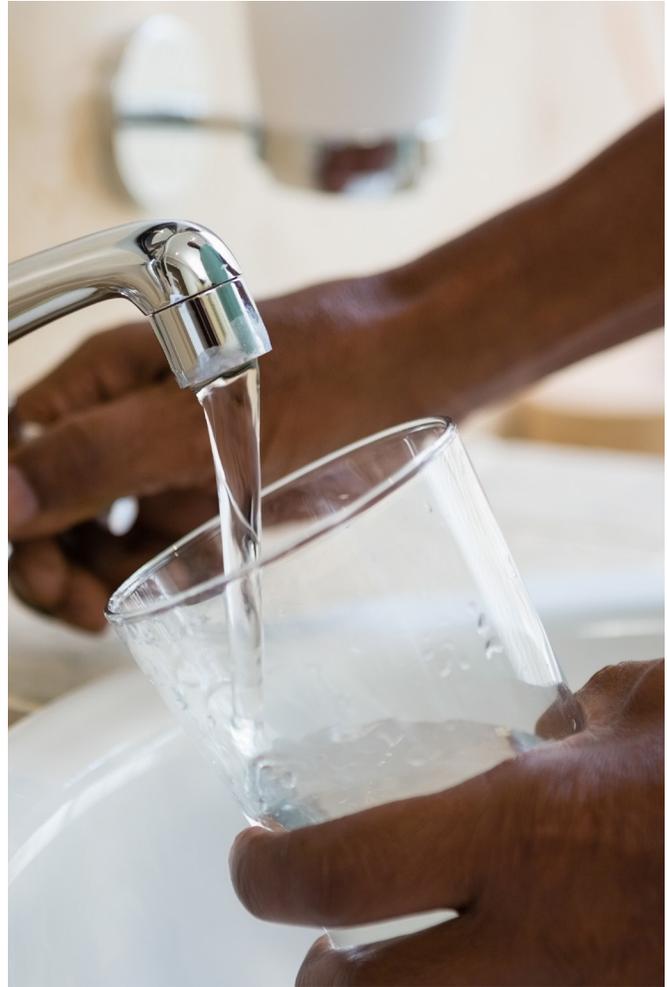
The Research Agenda Development Scope and Process

The following research agenda was the culmination of a rigorous, structured approach consisting of the following steps: (1) a scientific advisory committee; (2) systematic reviews of the literature on strategies to (a) reduce SSB consumption and (b) increase water access and consumption; (3) stakeholder surveys to (a) brainstorm novel strategies not published in the literature and (b) rank those strategies across a variety of dimensions, including overall importance, feasibility, effectiveness, reach, and health equity; (4) key informant interviews among priority populations to identify determinants of and strategies to improve beverage patterns unique to these populations (e.g., non-Hispanic black, Hispanic/Latino, Asian Americans, Native Hawaiians/Pacific Islanders, American Indians/Alaskan Natives, and rural); and (5) an in-person convening to develop and prioritize research questions based on the findings of the reviews, surveys, and interviews.

The scientific advisory committee consisted of researchers with a breadth of expertise related to SSBs, water, early childhood nutrition, and RWJF/HER's priority populations. The advisory committee provided input on the overall project plan, systematic reviews, stakeholder surveys, convening attendees and agenda, and the final research agenda. The goal of the systematic reviews was to identify strategies to reduce SSB consumption and increase water access and consumption that had been evaluated in the peer-reviewed literature and proven effective among 0- to 5-year-olds. The first stakeholder survey, to identify promising but not yet evaluated or published strategies, was completed by 276 people. The second stakeholder survey, to rank selected strategies, was completed by 182 people. For both surveys, most respondents worked in the United States, primarily as program staff, researchers, direct service providers, and advocates/policy experts, representing various sectors including academia, NGO, government, education, and health care. The results from the systematic reviews, stakeholder surveys, and key informant interviews were presented at the in-person convening, which brought together a mix of researchers, advocates, and government employees with expertise in early childhood health, SSBs, and water access and consumption.

All research questions generated at the convening were collated, duplicate questions were deleted, and some questions were excluded for reasons such as being out of scope, too specific, or not sufficiently refined. Questions were then grouped into 13 key issue areas, which are described below.

Given HER's exclusive focus on Policy, Systems, and Environmental (PSE) strategies and the lack of research on PSE strategies among 0- to 5-year-olds, the research questions put forward here predominantly focus on PSE approaches to reduce SSB consumption and increase water access and consumption. In addition, see the text box for definitions of SSBs, water, and priority populations used in this project.



Research Agenda Definitions:

- SSBs are defined as drinks with added sugars, including beverages such as soft drinks, fruit-flavored drinks, sweetened tea, sports drinks, and flavored milks.
- Water is defined as safe drinking water that could be obtained from a tap (faucet, sink, or fountain), bottled water, or other similar culturally appropriate sources.
- Priority populations are defined here as those groups at highest risk for poor health and well-being, especially nutrition and weight-related health disparities, and include: Non-Hispanic black, Hispanic/Latino, Asian American, Native Hawaiian/Pacific Islander, American Indian/Alaska Native, and rural. While we refer to these populations throughout this agenda as priority populations, we acknowledge that these groups are both distinct from one another and also may overlap.

National Research Agenda

Thirteen key issues emerged as priorities for future research efforts. For each key issue identified, a brief rationale and summary of related research is provided. All research questions are listed in Table 1.

I. Measures of Consumption and Baseline Understanding of Consumption Patterns:

Developing valid and objective measures of beverage consumption for this age group is critical for both baseline measurements and future evaluations. Both systematic reviews pointed to the drawbacks of proxy-reported beverage intake and the need for more reliable objective measures.^{9,10} Additionally, some recent research has examined beverage patterns of young children broadly^{5,13}; however, further research is needed and particularly research regarding the settings in which various beverages are consumed. Given these gaps, research questions one and two in Table 1 were identified.

II. Beverages in the Food Retail Environment:

Grocery stores are the top source of SSB purchases among parents and caregivers of 2- to 5-year-olds, making them a critical setting for future research efforts.¹⁴ In recent years there have been some declines in SSB purchases in stores; however, these declines have not been realized equally among all sociodemographic groups.¹⁵ Fast food outlets and full-service restaurants follow closely behind stores as top sources of SSB purchases, suggesting they are another important setting for research.^{16,17} Additionally, some research has suggested that Supplemental Nutrition Assistance Program (SNAP) participation may be associated with more purchases of SSBs. Nearly half of all SNAP participants are children, and of those, 31 percent are ages 0 to 4, so studies testing modifications to SNAP to improve beverage patterns among young children are warranted.^{16,18} Given these gaps and others related to the food retail environment, research questions three to 10 in Table 1 were identified.

III. Recommendations for Beverage Consumption in Early Childhood:

Various scientific entities have put forth recommendations related to beverage consumption among 0- to 5-year-olds.^{1,3,4} However, recommendations to date have either focused primarily on a specific beverage type, such as 100 percent juice, or on a specific age range within 0- to 5-year-olds, and some recommendations are contradictory or inconsistent.^{3,4,19} Specific, quantitative recommendations for plain drinking water are especially needed in this age group.^{3,18,20} Once these recommendations are established, efforts to consistently communicate the recommendations in ways that are culturally relevant to diverse communities will be needed. To address these gaps, research questions 11-13 in Table 1 were developed.

IV. Retail Price of SSBs and Water:

Recent evaluations of SSB taxes in the United States have examined the impact of these taxes among income groups, on a variety of types of beverage purchases, and on downstream effects such as pass-through (i.e., taxes passed through to the consumer often result in higher prices).²¹⁻²³ While some simulation studies have estimated the impact of SSB taxes on 2- to 5-year-olds, no research has been conducted to date on the impact of real world tax implementation on young children.^{24,25} Research is also needed to understand the differential impact of taxes among racial/ethnic groups. Additionally, some studies have shown that SSB taxes increase purchases of bottled water, but research examining the impact of alterations to the price of bottled water on beverage purchases is warranted.^{21,23} Given these gaps, research questions 14-21 in Table 1 were identified.

V. Beverage Marketing and Counter-Marketing Strategies:

Targeted marketing of SSBs in communities of color is well understood and documented.²⁶ Some approaches such as voluntary industry commitments and media literacy have been tested in previous work; however, future research should aim to understand the most effective strategies to reduce or eliminate targeted marketing and its impacts on dietary intake and health.^{27,28} Campaigns designed to market drinking water such as the Drink Up! campaign have been implemented, but research is needed to evaluate the impact of these marketing strategies. Given these gaps, research questions 22-25 in Table 1 were developed.

VI. SSB and Water Message Testing and Campaigns:

Message testing and the subsequent development of campaigns focused on behavior change are important strategies to explore in future research efforts. A recent evaluation of a three-year, community-wide campaign focused on healthy beverage consumption demonstrated strong evidence that campaigns are a promising strategy to improve beverage intake.²⁹ However, this evaluation did not examine the impact of the campaign on different subgroups or ages, so this will be an important area to explore in the future. Additionally, research is needed to understand the types of messages and settings for message delivery (e.g., healthcare settings, warning labels, or other point-of-purchase) that resonate with different groups of parents and caregivers and what health outcomes motivate parents and caregivers to make behavior changes. To address these gaps and others, research questions 26-28 in Table 1 were developed.

VII. Beverage Substitution:

The findings from the key informant interviews suggested that in many communities, consumption of SSBs is often directly linked to whether or not there is access to safe water or water that is perceived to be safe. Other research has confirmed this relationship among adults in the United States.³⁰ Future research should explore the impact of creating access to safe water and programs implemented in specific settings such as child care to increase water consumption on the intake of other beverages such as SSBs, milk and flavored milk, and 100 percent juice. Also, substituting SSBs with water has been shown to have a positive impact on weight-related outcomes, but research should examine the impact specifically on 0- to 5-year-olds and which substitutes are acceptable and culturally-relevant among a variety of racial/ethnic groups.³¹ Given these gaps, questions 29-32 in Table 1 were developed.

VIII. Fruit-Flavored Drinks and Artificially Sweetened Drinks:

The most commonly consumed variety of SSBs among 0- to 5-year-olds is fruit-flavored drinks, and there are significant racial/ethnic disparities in rates of consumption.^{5,12} Fruit-flavored drinks often include health and nutrition claims on their packaging, which can be confusing to parents and caregivers, and fruit drinks geared toward children are more likely to have these claims than other fruit drinks.³² Additionally, some research has shown that more than one-third of children's fruit drinks contain artificial sweeteners, yet the health effects and effects on taste preference of these sweeteners is largely unknown.³² Due to this lack of evidence, the American Heart Association recently published recommendations to limit consumption of artificially sweetened beverages among children.³³ Given these gaps, research questions 33-35 were developed.

IX. Long-Term Studies Related to SSBs and Water:

While some national surveys such as the Feeding Infants and Toddlers Survey include questions about drinking water intake in early childhood, longitudinal data about the impact of adequate or inadequate water consumption is needed. Additionally, longitudinal data about the health impacts of SSB consumption in early childhood is lacking.⁸ Finally, consumption of artificial sweeteners among all Americans, including children, is on the rise.³⁴ Recent reviews suggest the impact of artificial sweetener consumption on weight and metabolic outcomes as well as on taste preferences is unclear.^{34,35} To address these issues, questions 36-38 in Table 1 were identified.

X. Health Care Interventions to Improve Beverage Consumption Patterns:

Health care settings are critical targets for future research efforts. The systematic review on SSB reduction strategies found that successful strategies were more likely to be implemented in

health care settings than in other settings, highlighting the promise of these approaches.⁹ The systematic review focused on water consumption found that health care and dental care interventions related to water were lacking and noted this setting would be important for future research.¹⁰ Given these findings, research questions 39-42 in Table 1 were developed to address these gaps.

XI. Access to Safe Water and Tap Water Perception:

Disparities in access to safe water persist in the United States.¹¹ In water insecure communities, innovative strategies to improve access are needed. In communities with access to safe water, issues of negative perception of tap water are pervasive.³⁶ Research has demonstrated that perception of water quality is correlated with factors such as income, race/ethnicity, and foreign-born nativity and these perceptions impact health behaviors.³⁶ For example, negative tap water perception has been associated with increased bottle water purchases and SSB consumption.^{30,37} To address some of these issues related to access to safe water, research questions 43-48 in Table 1 were developed.

XII. Achieving Equity in Beverage Consumption Patterns and Addressing the Social Determinants of Health:

There are disparities in beverage consumption patterns in early childhood between racial/ethnic and income groups, with low-income children and children of color being more likely to consume SSBs.^{12,13} Research efforts are needed to understand the determinants of beverage patterns among high-risk groups and to develop tailored, culturally relevant strategies to improve beverage intake that address the social determinants of health. To address these gaps, research questions 49-53 in Table 1 were identified.

XIII. Beverage Consumption in Child Care Settings:

Both systematic reviews commissioned for this project found successful strategies to reduce SSB consumption and increase water access and consumption in child care settings.^{9,10} Policies and programs have been designed to improve the beverage environment in child care settings, such as updated meal standards through the Child and Adult Care Food Program or state child care licensing regulations, but little is known about the extent to which these policies are being implemented and ultimately impacting health and well-being of young children. Results from the key informant interviews and discussions at the convening highlighted the importance of focusing future research efforts on supporting family child care homes and family friend and neighbor (informal) care providers specifically, as many low-income or high-risk children are in care in these settings.³⁸ Given these findings, research questions 54-59 in Table 1 were developed.

Conclusions

Rigorous scientific research is needed to improve beverage intake and reduce inequities in SSB and water consumption among 0- to 5-year-olds in the United States. This research agenda covers a breadth of topic areas that can be addressed through efforts of a variety of stakeholders such as researchers, funders, and practitioners. By addressing these questions, stakeholders can guide the field toward understanding how to significantly impact beverage consumption patterns, and ultimately health and well-being among 0- to 5-year-olds.

Acknowledgments

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Table 1: National Research Agenda Questions

Key Issue Area		
Measures of Consumption and Baseline Understanding of Consumption Patterns	1. What are the beverage consumption patterns of 0- to 5-year-olds and how do these consumption patterns differ by setting and among priority populations?	
	2. How do we improve the estimation of beverage intake in 0- to-5-year-olds at the individual level (consumption methodology) and the population level (surveys like NHANES)?	
Beverages in the Food Retail Environment	3. What mix of price, promotion, placement, including check-out or other in-store marketing, would be effective in shifting the mix of beverages sold (and consumed) to decrease SSB and increase water consumption among 0- to 5-year-olds, especially for priority populations?	
	4. What is the comparative effectiveness of various modifications to the SNAP program (retailer standards, SSB restrictions, healthy beverage incentives) in improving beverage patterns of 0- to 5-year-olds?	
	5. What is the impact of healthy beverage policies for kids' meals on children's SSB and total intake at individual visits and on the frequency of visits? Do these policies increase purchases of adult meals for children?	
	6. What is the comparative effectiveness of different SSB front-of-package labeling systems (warning labels, stop light, guiding stars) on purchases and perceptions among parents/caregivers and young children from priority populations?	
	7. What is the impact of online shopping on beverage purchasing patterns for parents with young children? How are different beverages marketed (prompts, price) in online grocery shopping platforms and does the type of marketing differ among priority populations?	
	8. What is the current state of reformulation of beverages targeted to 0- to 5-year-olds and how is this reformulation impacting dietary intake among this population?	
	9. What strategies could be effective to reduce the prevalence of SSBs in the emergency food system?	
	10. Where do parents and caregivers of young children purchase SSBs and water? How do purchasing behaviors vary among priority populations? Can purchasing behaviors be used to effectively estimate consumption of SSBs among 0- to 5-year-olds?	
	Recommendations for Beverage Consumption in Early Childhood	11. What are the evidence-based, culturally appropriate recommendations for water, SSB, milk and flavored milk, and 100 percent juice intake for children from 0-5? How can these recommendations, once developed, be disseminated effectively?
		12. What are current health care provider practices regarding recommendations to parents and caregivers about water safety, access, and consumption? And what are effective methods to ensure health care providers are providing consistent messages?
13. What is the recommended maximum amount of added sugar for children from birth to age 5 and how does this impact Generally Regarded As Safe determinations?		

Table 1: National Research Agenda Questions

Key Issue Area	
Retail Price of SSBs and Water	14. What is the influence of SSB taxes on parent/caregiver purchases, beverage intake, and health outcomes among 0- to 5-year-olds from priority populations and their families?
	15. What are best practices for designing and implementing an SSB tax in a way that advances health equity among 0- to 5-year-olds and their parents/caregivers from priority populations?
	16. What are the downstream effects of SSB taxes (pass through, grocer marketing practices) and how do those effects differ by beverage type? How do they differ by geography (rural, urban)?
	17. Can we use nationwide policy change for SSBs (Mexico tax, e.g.) to examine rural versus urban settings as it relates to 1) pass through/implementation of tax; 2) impact of tax on behavioral change?
	18. What is the impact of decreasing the cost of bottled water on SSB and other beverage consumption among 0- to 5-year-olds? What is the price elasticity for bottled water for low-income populations?
	19. What are the comparative costs of packaged beverages, including water? How does this differ in different communities within the United States?
	20. What are the most effective ways to message SSB tax campaigns and how does this vary among priority populations?
	21. How have SSB tax revenues been used to impact health and equity?
Beverage Marketing and Counter-Marketing Strategies	22. What is the impact of marketing of healthier beverages on SSB and other beverage consumption among 0- to 5-year-olds, particularly in priority populations? What are the most effective marketing strategies in priority populations for promoting healthier beverages in this age group?
	23. What is the impact of targeted marketing of SSBs on SSB and water intake among 0- to 5-year-olds? What approaches to reduce targeted marketing are effective?
	24. What is the impact of counter-marketing on SSB and water intake of 0- to 5-year-olds and their families and what are effective counter-marketing approaches, channels, messengers and messages?
	25. What are the most effective strategies for engaging the food and beverage industry and reducing the marketing, availability, and consumption of SSBs among 0- to 5-year-olds?
SSB and Water Message Testing and Campaigns	26. What messages about reducing SSBs and increasing water intake resonate with parents and caregivers from priority populations? Do the messages differ based on cultural values, language, messenger, and setting (clinical, child care, community)?
	27. How is education related to SSB and water consumption currently being delivered through federally-funded programs such as SNAP-Ed and WIC? Are messages being delivered consistently across government programs? What are the best practices for messaging and education about these topics among 0- to 5-year-olds?
	28. What is the comparative effectiveness of using messages about the impact of SSB and water consumption on oral health versus messages about the impact on weight or other health outcomes in reducing SSB intake and increasing water intake among 0- to 5-year-olds?

Table 1: National Research Agenda Questions

Key Issue Area	
Beverage Substitution	29. What are culturally-appropriate, healthy substitutes for SSBs among priority populations? Does promoting water as the only healthy substitute alienate certain high-risk groups?
	30. What is the impact of increased access to safe water on purchases and consumption of other beverages (milk, 100 percent juice, SSBs) among 0- to 5-year-olds and their parents/caregivers?
	31. What is the impact of implementing programs intended to increase water consumption in settings such as Head Start on consumption of other beverages (milk, 100 percent juice, SSBs) among 0- to 5-year-olds?
	32. What is the impact on dietary intake and dietary quality of discouraging 100 percent juice and SSB intake among 0- to 5-year-olds and promoting whole fruit consumption and how does this differ among income groups or priority populations?
Fruit-Flavored Drinks and Artificially Sweetened Drinks	33. What aspects of product packaging of fruit-flavored drinks, including nutrition claims, images, or shape, mislead parents to believe these are healthy options for children? How do these elements of product packaging affect product purchases? What is the impact of using the same techniques that are used to promote fruit-flavored drinks to instead encourage purchase of water?
	34. How do perceptions of fruit-flavored drinks and packaging (nutrient claims, images, shapes) differ between priority populations? How does country of origin affect these perceptions?
	35. To what degree are beverage companies incorporating artificial sweeteners into beverages geared toward or consumed by 0- to 5-year-olds? What are parent/caregiver perceptions of artificially-sweetened beverages and claims on artificially-sweetened beverages (e.g., no added sugar)?
Long Term Studies Related to SSBs and Water	36. What is the impact of SSB consumption among 0- to 5-year-olds on insulin resistance and other physiological functions?
	37. What are the long-term health benefits of adequate water consumption in early childhood?
	38. What are the long-term impacts of artificial sweetener consumption among young children (ages 0-5) on children's health and/or taste preferences?
Health Care Interventions to Improve Beverage Consumption Patterns	39. What is the impact of education/counseling in pediatric oral health care settings about SSB and water consumption on beverage patterns of 0- to 5-year-olds and what are best practices for counseling in this setting?
	40. What guidance are health care providers currently providing pregnant women regarding beverage consumption? What is the impact of a pre-natal healthy beverage educational program provided in a clinical setting (i.e., by OB/GYNs, nurse practitioners, nurse midwives) on maternal and infant beverage intake patterns and health outcomes?
	41. What is the effectiveness of implementing programs within the Indian Health Service geared toward reducing SSB consumption and increasing water access and consumption among 0- to 5-year-olds?
	42. What is the comparative effectiveness of an evidence-based home visitation model that includes SSB and water content vs. an evidence-based model that does not include these topics on beverage intake and other health outcomes?

Table 1: National Research Agenda Questions

Key Issue Area	
Access to Safe Water and Tap Water Perception	43. What is the current state of access to safe drinking water, particularly among high-risk groups? How do perceptions of tap water safety differ from the true state of the tap water and how does that impact beverage patterns?
	44. What is the impact of water insecurity on SSB consumption, breastfeeding, infant formula feeding, and complimentary feeding practices?
	45. What is the feasibility of implementing technologies from the other parts of the world such as rainwater catchment or water extraction systems in water insecure communities? What is the impact of these technologies on beverage patterns among 0- to 5-year-olds?
	46. In communities with access to safe water, what is the impact of an intervention to increase trust in tap water or shift perceptions about tap water on SSB and water consumption among 0- to 5-year-olds?
	47. What is the impact of integrating a water security screening questionnaire into the Electronic Health Record and designing appropriate interventions for water insecure individuals on water intake, other beverage intake, and health outcomes among 0- to 5-year-olds?
	48. What is the impact of safe water distribution paired with tap water education and testing through the WIC program on maternal and child feeding practices and beverage intake?
Achieving Equity in Beverage Consumption Patterns and Addressing the Social Determinants of Health	49. Among priority populations, what are the determinants of and attitudes about SSB, 100 percent juice, water, and artificially-sweetened beverage consumption? What is the effectiveness of evidence-based strategies to reduce SSB consumption and increase water access and consumption in priority populations?
	50. Among priority populations, what is the impact of leveraging cultural beliefs such as water as wealth or water as life or emphasizing returning to indigenous practices in programs or policies on water and SSB intake among 0- to 5-year-olds?
	51. Can natural experiments such as policy changes that impact social determinants of health (housing, minimum wage, immigration etc.) be leveraged to understand the impact of these changes on beverage patterns among 0- to 5-year-olds?
	52. What is the comparative effectiveness of policies and programs that use a community-based participatory research approach versus those that do not in decreasing SSB consumption and increasing water access and consumption among 0- to 5-year-olds?
	53. What is the impact among priority populations of multi-generational interventions to improve beverage patterns that incorporate other influential care providers for 0- to 5-year-olds?

Table 1: National Research Agenda Questions

Key Issue Area	
Beverage Consumption in Child Care Settings	54. What family engagement strategies are effective in reducing SSB consumption and increasing water consumption in and outside of child care settings by specific region, cultural group or other community identity? What kind of capacity building with child care providers may be necessary to implement these family engagement strategies?
	55. Where and why do child care providers (center-based, family child care home, military, family, friend and neighbor care) purchase and serve the beverages that they do? How does this differ among priority populations?
	56. To what degree are beverage policies in early care and education environments (CACFP, Head Start, state and local licensing) being implemented? What is the current state of monitoring these policies and practices?
	57. What are existing health and safety policies in child care (licensing, QRIS, etc.) that interfere with successful implementation of water promotion strategies? How does this differ by child care setting and target population? What policies or practices support successful implementation of water promotion strategies?
	58. Among priority populations, what forms of child care are being utilized? What are the barriers and facilitators to decreasing SSB consumption and increasing water access and consumption in the forms of child care used by priority populations?
	59. What is the impact of training and technical assistance for family-based child care providers on addressing health inequities in SSB consumption?

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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For more than 40 years the Robert Wood Johnson Foundation has worked to improve health and health care. We are striving to build a national Culture of Health that will enable all to live longer, healthier lives now and for generations to come. For more information, visit www.rwjf.org. Follow the Foundation on Twitter at [www.rwjf.org/twitter](https://twitter.com/rwjf) or on Facebook at [www.rwjf.org/facebook](https://www.facebook.com/rwjf).



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