Screening for Beverage Consumption in Early Childhood Using Electronic Health Records: Implementation Toolkit for Health Care Systems

Healthy Eating Research

September 2023

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Advisory Committee Members

Jennifer Bass, MD
Permanente Medicine, Northwest Permanente, PC

Stephen R. Daniels, MD, PhD, MPH
University of Colorado School of Medicine, Children's Hospital Colorado

Ihuoma Eneli, MD, MS, FAAP
The Ohio State University, Nationwide Children's Hospital

Kimberly Gayle Montez, MD, MPH, FAAP
Wake Forest University School of Medicine

Kristina Henderson Lewis, MD, MPH, SM
Wake Forest University School of Medicine

Advisory Committee Support

Jennifer A. Weber, MPH, RD
Lead Consultant
Weber Moore Partners, LLC

Jessica Czelusniak, BSN, RN-BC, CPHIMS
Electronic Health Record Advisory Expert

Healthy Eating Research

The following HER staff provided guidance and counsel throughout the process, as well as editorial input and review of all final materials.

Mary Story, PhD, RD
Director, Healthy Eating Research
Professor, Global Health and Community and Family Medicine
Associate Director of Education and Training
Duke Global Health Institute

Megan Lott, MPH, RDN
Deputy Director, Healthy Eating Research
Duke Global Health Institute

Kirsten Arm Deuman, MPH, RDN
Research Analyst, Healthy Eating Research

Lauren Dawson, MPH
Communications Manager, Healthy Eating Research

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Introduction

The goal of this toolkit is to provide health care systems and providers with tools and resources to successfully incorporate and implement a beverage screener in the electronic health record (EHR).

Early childhood (ages 0 to 5 years) is a critical period for establishing healthy dietary patterns and taste preferences, which are important in supporting optimal growth and development and in preventing diet-related chronic diseases later in life. Dietary habits established early in life persist into childhood and adolescence, and influence diet quality during adulthood. Reported dietary patterns and habits appear to be stable after 3 to 4 years of age, highlighting a unique opportunity during the infant and toddler years to influence children's lifelong food preferences.

Beverages are of particular importance during this developmental period. They play a critical role in young children's health, as they comprise a substantial portion of the recommended overall diet during early life, serving as key contributors to both hydration and nutrition. However, many beverages also contain added sugars and saturated fats, which can be harmful when consumed in excess. Establishing healthy beverage patterns during this period is important for promoting healthy growth and development in childhood and reducing risk of chronic diseases as an adult. This also serves as an important public health intervention to ensure adequate nutrient intake and mitigate the risk of adverse health outcomes such as dental caries and obesity.

In 2018, Healthy Eating Research (HER) developed a national research agenda focused on identifying strategies to reduce the consumption of sugary drinks and increase access to and consumption of safe drinking water among 0- to 5-year-olds. Through this process, it became clear that a lack of consistent recommendations for beverage consumption in early childhood was one barrier to shifting consumption patterns. As a result, HER facilitated the development of a consensus statement on what young children (ages 0 to 5 years) should be drinking as part of a healthy diet. The consensus statement was developed by an expert panel of representatives from the Academy of Nutrition and Dietetics (AND), the American Academy of Pediatric Dentistry (AAPD), the American Academy of Pediatrics (AAP), and the American Heart Association (AHA). It provides authoritative guidance on optimal beverage consumption during early childhood and supports a life course approach to the development of healthy dietary patterns and prevention of chronic disease.

The resulting consensus statement was released in September 2019, along with a technical report outlining the scientific evidence and a suite of consumer-facing materials at HealthyDrinksHealthyKids.org. Since the release of the consensus statement, HER has conducted surveys and focus groups with Pediatricians, Family Medicine Physicians, Dietitians, and Pediatric Dentists from across the United States to inform the development of educational content for providers with the goal of facilitating implementation of the HER beverage recommendations in patient counseling practices. These free materials are available at healthydrinkshealthykids.org/professionals/.

Healthy Beverage Recommendations for Early Childhood

- Consensus Statement
- Full Technical Report
- Provider Toolkit & Resources
- Resources for Families

HEALTHY DRINKS.
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HEALTHYDRINKSHEALTHYKIDS.ORG

The goal of this toolkit is to provide health care systems and providers with tools and resources to successfully incorporate and implement a beverage screener in the electronic health record (EHR). Inclusion of validated beverage screener questions in the EHR supports nationwide efforts to reduce children's consumption of sugary beverages and provides an opportunity for widespread adoption and implementation of evidence-based recommendations. Nutrition and beverage screening is also recommended by AAP, especially for pediatric patients experiencing overweight and/or obesity.

What Health Care Providers Need to Know About Beverage Intake in Young Children

Sugary beverages add a significant amount of sugar and calories to the diets of children and adolescents. In fact, sugar-sweetened beverages (SSB) account for almost half of the added sugars consumed by U.S. children, and have been associated with weight gain, dental caries, and other health problems.

Health care providers play an essential role in identifying and addressing unhealthy beverage consumption patterns in young children and helping families develop healthy beverage habits. Choosing healthy beverages and low- or no-calorie options such as water, instead of high-calorie sugary drinks, has great potential to help children, youth, and families reduce caloric intake, improve diet quality, and reduce their risk for obesity and oral health problems.

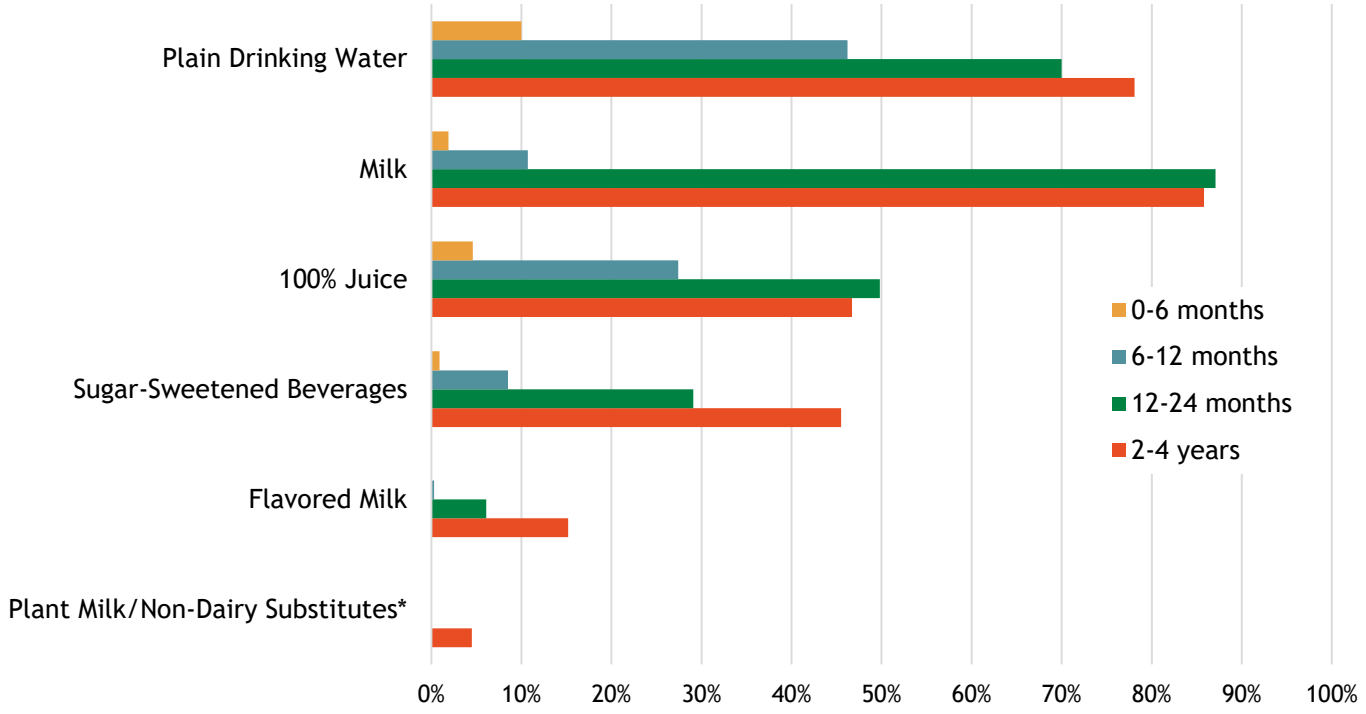
Definition of Sugar-Sweetened Beverages

Sugar-sweetened beverages (SSBs) are liquids to which any forms of sugar are added including, but not limited to, soft drinks/soda, fruit drinks, fruit-flavored drinks, fruitades, sports drinks, energy drinks, sweetened waters, and sweetened coffee and tea beverages. This category does not include beverages sweetened with low-calorie sweeteners, 100% juice, or flavored dairy and/or plant-based milks.

This definition is consistent with the U.S. Dietary Guidelines for Americans, 2020-2025.

Despite the importance of consuming healthy beverages in early childhood, U.S. survey data indicate that young children's beverage intake diverges from recommendations. For example, access to safe affordable drinking water is not equitable and many infants consume cow's milk and 100% juice before their first birthday (***Figure 1***).

Figure 1: **Prevalence of beverage consumption among children ages 0 to 4 years**

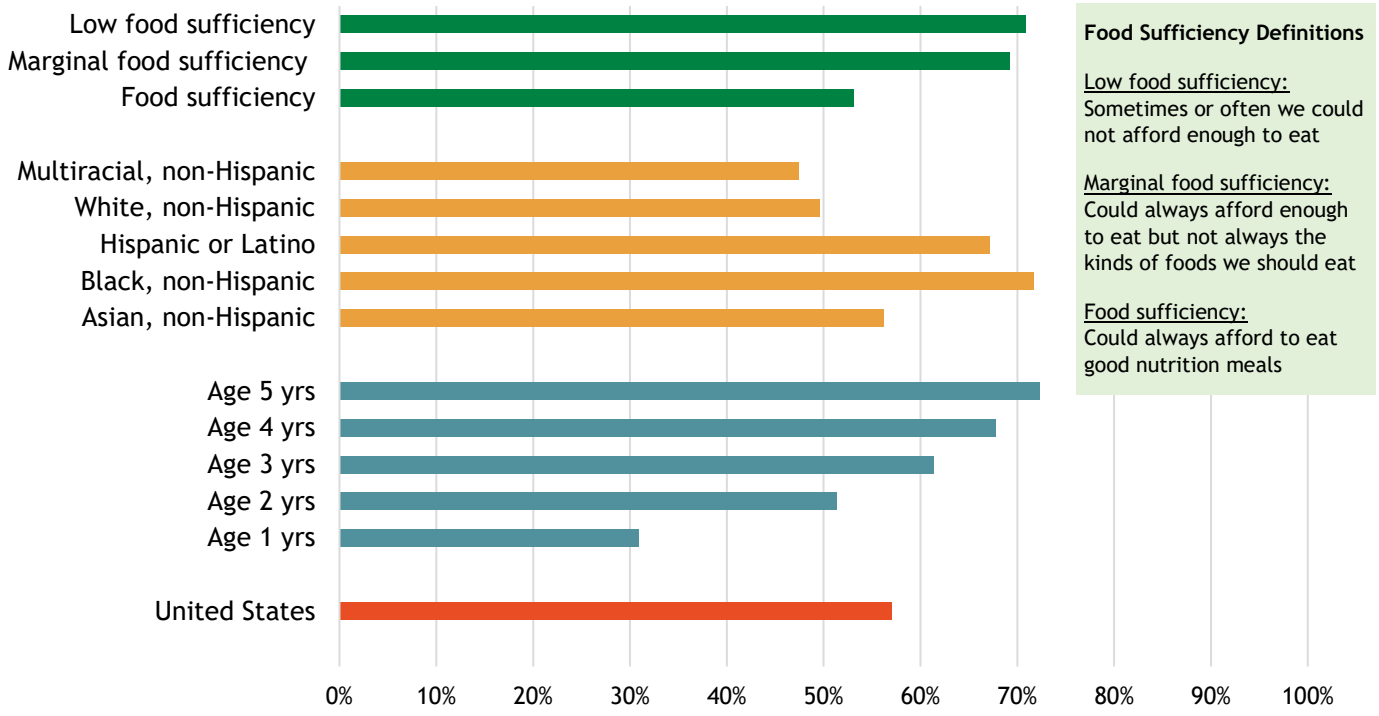


*Data only available for ages 2-4 years

Source: Kay MC, Welker EB, Jacquier EF, Story MT. Beverage consumption patterns among infants and young children (0–47.9 Months): data from the Feeding Infants and Toddlers Study, 2016. Nutrients. 2018;10(7):825. https://www.mdpi.com/2072-6643/10/7/825/htm

Significant disparities in beverage intake exist by racial, ethnic, and income groups; for example, Black children are more likely to consume SSBs than their White or Hispanic peers. More recent data reinforce these findings. The National Survey of Children's Health finds that in 2021, 57.1% of 1-5 year olds drank a sugar-sweetened beverage at least once during the preceding week (***Figure 2***). These rates increased with child age (i.e., 30.9% among 1 year olds and 72.3% among 5 year olds). Rates also differed by race and ethnicity with the highest consumption among Black or African American, non-Hispanic children (71.7%), Hispanic or Latino children (67.2%) and Asian, non-Hispanic children (56.2%) compared to White, non-Hispanic children (49.6%). Further, children living in households with low food sufficiency (70.9%) were more likely to consume SSB than children living in households with marginal sufficiency (69.2%) or food sufficiency (53.1%).

Figure 2: Percentage of children aged 1-5 years who consumed sugar-sweetened beverages during the preceding week, by sociodemographic characteristics



Source: Hamner HC, Dooyema CA, Blanck HM, Flores-Ayala R, Jones JR, Ghandour RM, Petersen R. Fruit, Vegetable, and Sugar-Sweetened Beverage Intake Among Young Children, by State - United States, 2021. MMWR Morb Mortal Wkly Rep. 2023 Feb 17;72(7):165-170. DOI: http://dx.doi.org/10.15585/mmwr.mm7207a1

Healthy Beverage Consumption in Early Childhood: Consensus Recommendations from Key National Health and Nutrition Organizations

Overview of the Healthy Beverage Consensus Recommendations

Healthy Eating Research (HER) facilitated the development of a consensus statement on what young children (ages 0 to 5 years) should be drinking as part of a healthy diet, with an expert panel of representatives from the Academy of Nutrition and Dietetics (AND), the American Academy of Pediatric Dentistry (AAPD), the American Academy of Pediatrics (AAP), and the American Heart Association (AHA). The Healthy Beverage Consumption in Early Childhood: Recommendations from Key National Health and Nutrition Organizations consensus statement is intended to aid health care providers and practitioners in communicating with parents and caregivers about healthy beverages.

The recommendations are presented in three categories:

1. **Beverages recommended as part of a healthy diet (plain drinking water and plain, pasteurized milk);**
2. **Beverages to limit (100% juice); and**
3. **Beverages not recommended as part of a healthy diet in early childhood (plant milks/non-dairy beverages, flavored milk, toddler milk, SSB, beverages with low-calorie sweeteners, and caffeinated beverages).**

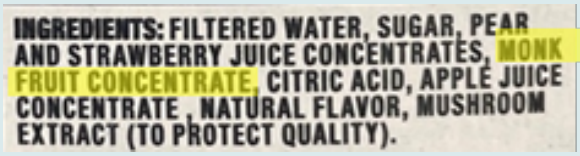
The recommendations outlined by age in ***Figure 3*** are intended for healthy children in the U.S. and do not address medical situations in which specific nutrition guidance or special dietary accommodations are needed to manage a health condition.

What are Low-Calorie Sweeteners?

The term "low-calorie sweeteners" (LCS) includes the six high-intensity sweeteners currently approved by the U.S. Food and Drug Administration as food additives (saccharin, aspartame, acesulfame-K, sucralose, neotame, and advantame) and two additional high-intensity sweeteners permitted for use in the food supply (steviol glycosides, known more commonly as stevia, and monk fruit). Other terms for LCS include non-nutritive sweeteners, artificial sweeteners, and sugar substitutes.

While LCS are approved for use by the FDA, experts have concluded that beverages containing LCS should be avoided between the ages of 0 to 5 years. This is due to the dearth of evidence on the potential adverse effects of LCS beverages relative to health benefits, and given that early childhood is a critical developmental period with rapid physical, brain, cognitive, and social growth and development.

More information on how to help families identify beverages with LCS can be found in this handout.



Why are Plant Milks Not Recommended for Young Children?

The nutrition profiles of plant milks vary widely and are not the same as dairy milk, which contains vitamins and minerals essential for the young developing child. While there is a dearth of research on diet quality and health outcomes associated with young children's plant milk consumption, existing research demonstrates that exclusive consumption of plant milks in place of infant formula or cow's milk has been associated with negative health outcomes. Therefore, plant milks are not recommended for exclusive consumption in place of dairy milk except when medically indicated (i.e., allergies or intolerances to cow's milk) or to meet specific dietary preferences (e.g., vegan). In these cases, parents are advised to consult with a Registered Dietitian Nutritionist (RDN) or pediatrician before choosing a plant milk for their child.

When medically indicated, the best plant milk options for young children will have nutritional profiles similar to cow's milk, such as: fortified soy milk, pea milk, and soy-pea milk blends. These options have protein, fat, calcium, and vitamin D levels most like whole dairy milk. When plant milks are consumed, only unsweetened varieties are recommended. More information on how to help families decide what is the most nutritionally appropriate alternative for toddlers and young kids who cannot consume dairy milk can be found in this decision guide.

Figure 3: **Summary of Key Panel Findings and Recommendations**

	0 - 6 months	6 - 12 months	12 - 24 months	2 - 3 years	4 - 5 years
Water *Plain drinking water*	**Not needed** *Babes only need breast milk or infant formula to meet all of their nutrition and hydration needs.*	**½-1 cup (4-8 fl oz)** *Offer in a cup at meal times once solid food is introduced.*	**1-4 cups (8-32 fl oz)** *Where an individual child falls within these ranges will depend on the amounts of other beverages consumed during the day.*		**1½-5 cups (12-40 fl oz)**
Milk *Plain, pasteurized milk*	**Not recommended**		**2-3 cups (16-24 fl oz)** whole milk	**Up to 2 cups (16 fl oz)** skim (fat-free) or low-fat (1%)	**Up to 2½ cups (20 fl oz)** skim (fat-free) or low-fat (1%)
100% juice *Made from 100% fruit or vegetable juice*	**Not recommended**		**Limit to ½ cup (4 fl oz)*** *Only a small amount of 100% juice is recommended - you can add water to fill a bigger cup and make the juice less sweet. *It's best for children to get their fruit servings from fresh, canned, or frozen forms of fruit. If this isn't possible, 100% juice can be used to help children consume enough fruit.*		**Limit to ½-¾ cup (4-6 fl oz)***
Plant-based/non-dairy milk *Made from plant-based ingredients*	**Not recommended** *Examples: almond, rice, cashew, coconut*		**Medical indication/dietary reasons only** *Plant milks are nutritionally different from dairy milk. If your child is lactose intolerant, allergic to dairy milk, or if your family has chosen not to eat animal products, talk with your child's pediatrician or a registered dietitian to determine the best plant milk option.*		
Flavored milk *Sweetened cow's milk*	**Not recommended** *Examples: chocolate, strawberry, vanilla*				
Toddler formula *Milk drink marketed for 9 to 36 month olds, also known as "toddler milk"*	**Not recommended** *Examples: Enfagrow Toddler Transitions, Similac Go and Grow, Nido 1+*				
Sugary drinks *Sweetened with added sugar*	**Not recommended** *Examples: regular soda, fruit-flavored drinks, sports drinks*				
Drinks with low-calorie sweeteners *Beverages with artificial sweeteners (or "fake sugars") added, often called diet or light drinks*	**Not recommended** *Examples: flavored water, soda, juice, or tea sweetened with Splenda®, Equal®, Sweet'N Low®, Stevia, etc.*				
Drinks with caffeine	**Not recommended** *Examples: coffees, teas, energy drinks, some sodas*				

The Role of Health Care Systems and Providers in Implementing Healthy Beverage Recommendations

Health care systems can play a critical role in addressing sugary beverage consumption in the pediatric populations they serve. Assessment of dietary patterns and counseling during pediatric well-child visits, including SSB and fruit juice intake, is recommended and is required by some states for Medicaid reimbursement. Health care systems can support their providers and improve the health of the children in their care by educating and engaging staff on the importance of healthy beverage screenings and recommendations, implementing standardized beverage screening, and providing resources for families regarding healthy beverages.

Educating and Engaging Staff

Health care providers are a trusted, go-to resource for parents and caregivers when it comes to the health of young children. Educating and training staff on the important role beverages play in children's growth and development, the healthy beverage recommendations, and the importance of screening will increase adult awareness of the recommendations and support more children in consuming healthy beverages.

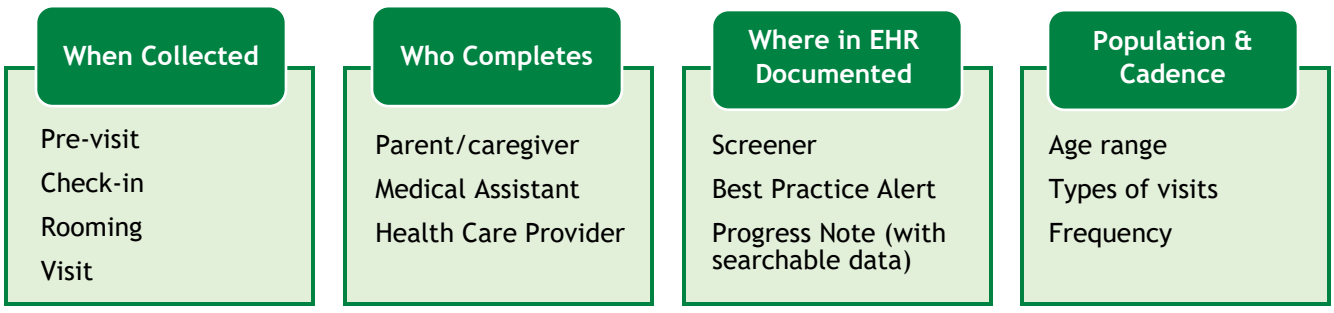
The Healthy Drinks, Healthy Kids Toolkit for Providers has numerous resources to educate and engage staff on these topics. Resources include talking points, frequently asked questions, and educational resources that can be provided to parents and caregivers.

Screening for Beverage Intake

Electronic health record (EHR)-based screeners can facilitate health systems' efforts to reduce child consumption of sugary beverages. Utilizing EHRs for beverage screeners will support data collection that is consistent, accurate, and actionable. Investing in systems to support screenings that are already being collected, often through parent surveys or in physician notes, will be more useful at the individual, physician, and population-level.

There are numerous options for incorporating a beverage screener into the EHR that aligns with various system or practice workflows and staffing (***Figure 4***). The primary goal is to utilize a validated screener, for consistency in data collection, and ensure the questions are asked and the data are collected; however, there is flexibility in the method of collection, including how the screening questions are asked, who asks them, how often they are asked, and at what visits.

Figure 4: **Options for Implementing an EHR-based Beverage Screener**



Validated Screening Questions

Beverage screeners have been validated and successfully implemented in the EHRs in pediatric populations. Below are two examples that primarily focus on SSB and juice consumption; they gather comparable data with slightly different wording. None of the validated screeners examined for this project asked questions about water or milk consumption; rather all focused on drinks to limit, such as SSBs and juice.

Example One – *These two screener questions are included in EPIC's platform, have been validated, and are available for use.*

On a usual day in the past month, how often did (child's name) drink 100% pure fruit juice like orange, apple or grape juice? Don't include fruit-flavored drinks like Kool-Aid or lemonade.

Responses:

- Never
- Sometimes but not every day
- 1 x per day
- 2 x per day
- 3 or more x per day
- Refused

On a usual day in the past month, how often did (child's name) drink regular sodas, fruit-flavored drinks like Kool-Aid or lemonade, sports drinks like Gatorade, sweet tea or any other sugary drinks?

Responses:

- Never
- Sometimes but not every day
- 1 x per day
- 2 x per day
- 3 or more x per day
- Refused

If your health system uses EPIC, you can contact your IT department or EHR oversight panel to request these SSB screener questions be "turned on" for use. However, before doing so, it is important to consider where in the workflow the questions will be asked and by whom (e.g., pre-visit, at check-in, during rooming by nurse or medical assistant, during the visit with the provider). It is also important to consider where clinicians will see this information, and who should have access to these features and data.

Example Two – *These questions have been used in a pilot project at Kaiser Permanente.*

On a usual day in the last month, how often did (child's name) drink 100% juice?

Responses:

- 3 or more times per day
- 2 times per day
- 1 time per day
- Sometimes but not every day
- Never
- Decline

And, how often did (s)he drink regular sodas, fruit flavored drinks like Kool-Aid or lemonade, sports drinks like Gatorade?

Responses:

- 3 or more times per day
- 2 times per day
- 1 time per day
- Sometimes but not every day
- Never
- Decline

There are additional screening questions that gather "yes/no" data on beverage consumption. These questions do not allow identification of high-risk consumption, however they can be helpful in gathering additional data for counseling purposes. *These questions are not recommended in place of the above validated screener questions that distinguish between consumption levels.*

Examples

Does your child consume more than one small cup (4-6 oz) of juice per day?

Responses:

- Yes
- No
- Skip

Does your child drink soda, juice drinks, sports drinks, energy drinks, or other sweetened drinks more than once per week?

Responses:

- Yes
- No
- Skip

Workflow

To ensure consistency in the data collected, a validated beverage screener should be utilized (see **Example One** above); however, implementation of the screener can be adapted for a variety of practice processes and workflows. Key points to consider include (see ***Figure 4***): 1) when to collect this type of information, 2) who completes the screener, 3) where this information should be documented in the EHR, and 4) how often this type of information should be collected from families. All of these factors should be considered and discussed with the organization's Information Technology (IT) department, providers and office staff prior to implementation.

For example, data can be collected at various points during the visit either in writing or verbally:

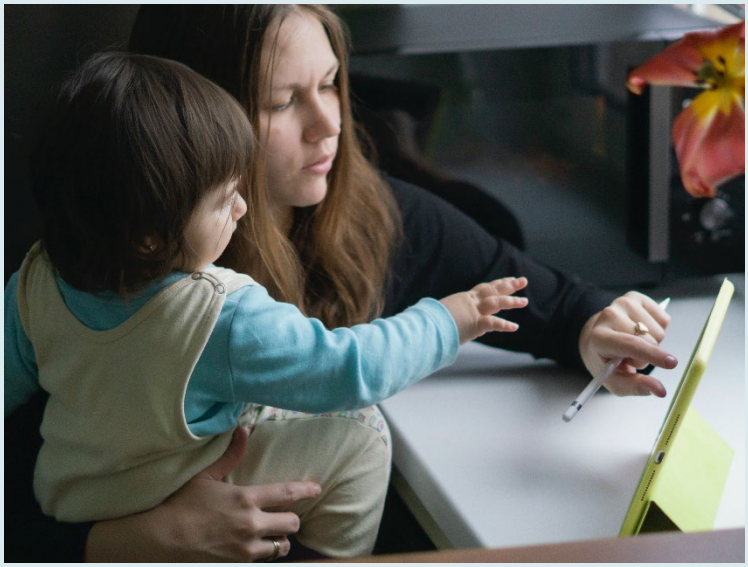
- **Before visit** – screening completed by parent/guardian
  - Send out questions any timeframe before visit for completion
  - Complete on tablet at check-in or while in waiting room
- **Rooming at start of visit** – screening completed by medical assistant
  - Answer any questions that the parent/caregiver skipped or did not have time to complete pre-visit
  - Utilize screening templates available in many EHRs
  - Utilize Best Practice Alerts (BPA) in EHR
- **During Visit** – screening completed by physician/practitioner
  - Utilize navigators in EHR
  - Document in the EHR physician notes. Utilizing this method does not automatically allow for analysis beyond the individual patient level. It is important to have smart data elements or smart phrases as part of the notes process to allow for panel or population level review and assessment if utilizing notes.

Additional considerations that need to be determined and incorporated into the workflow include:

- **Ages of children screened** – The healthy beverage guidelines apply to children ages 0-5 years, however there are benefits to screening children above the age of five.
- **Types of visits for screening** – Well child visits are the baseline for including the beverage screener, but including screening in additional types of visits may capture high SSB consumers who have not attended well child visits.
- **Frequency of screener** – The frequency of screener completion is an important component of the workflow if the screener is included in all types of visits. Options include having the screener every 6 or 12 months or putting a parameter on the BPA or screening popping up if the screening has not been answered within a certain number of months outside of the well child visit.

Case Study

Children's Primary Care Medical Group, a large single-specialty pediatrics group in San Diego and Riverside Counties, screens patients ages 12 months and older at each well child visit for sugar sweetened beverage intake, providing valuable information to the providers while also meeting state Medicaid requirements. Parents and guardians can answer a question regarding sugary drink intake prior to the visit via MyChart. If questionnaires are not answered prior to the visit, iPads are provided at the clinic for the screening to be completed. Responses are included in the patients' electronic health record and are searchable within the system. Patients that screen as having sugar sweetened beverage intake above the recommendations receive education from the provider and supportive materials.



Tools and Resources for Implementation Support

Tools for implementation support will depend on the process and workflow selected by the health care system. Several sample communications are included below in hopes that they may be helpful resources to support implementation of beverage screeners in the EHR:

- Communications to practice managers notifying them about the screener and workflow (example text in ***Example 1***).
- Centralized training module for clinic staff tasked with screening.
- Job aids covering the steps required to document responses to the screeners (example text in ***Example 2***)

Additional examples of these tools are included in **Appendix A**.

Example 1: Sample Language for Communications to Practice Managers Courtesy of Wake Forest School of Medicine

To All Clinic Managers:

Sugar-sweetened beverages account for almost half of the added sugars consumed by American children, and have been associated with weight gain, dental caries, and other health problems. **We are asking for your help to address sugary beverage consumption in our pediatric population.**

Beginning in **[date]**, a **new "best practice alert" (BPA)** will fire at pediatric primary care visits for children [ages]. The BPA will prompt clinical staff to ask 2 brief questions about how often a child consumes **fruit juice and sugar-sweetened beverages**.

Here is how you can help to ensure success of the new sugary drink BPA and video rollout:

- Please make your clinical staff (nursing and providers) aware that this BPA is coming
- Encourage staff to complete the training on sugary drinks
- Encourage staff to notify screened families that they may receive a link to a video (or other resources) about sugary drinks.
- Create an office environment that sets the right tone for healthy alternatives by promoting water consumption.
- Finally, please reach out to (contact information) with any questions or concerns, either before or after the screening process goes live.

*Note: Original letter from Wake Forest School of Medicine is included in **Appendix A**.*

Example 2: Sample Sugar Sweetened Beverage Screening Job Aid for Providers Courtesy of Northwest Permanente

What is it?
Point of care screening for juice and SSB over-consumption in children [ages] paired with an educational video and provider counseling.

How does it work?

1. MA Best practice alert will pop up every [x months] after vital signs are entered.
2. MA will ask the juice and SSB questions and enter them into the flowsheet.
3. MA will offer to show SSB video in exam room. There are Spanish and English versions.
4. Yellow SSB Provider Best Practice Alert will fire if the child is over-consuming (any SSB intake, and drinking juice more than once a day)-see screen shot below.
5. Inside the Yellow SSB Provider Best Practice alert is a link to click and add the "pediatric nutrition, exercise, and screen time counseling" diagnostic code.
6. The Provider Best Practice alert will stay yellow in the section on Best Practice Alerts as well as in the Storyboard until you accept the counseling code. Then, it will disappear.

What do providers need to do?

1. If appropriate, counsel on juice and SSB intake
2. Code for your counseling (either 1 click inside BPA with or by adding to diagnosis list)

*Note: Full job aid from Northwest Permanente available in **Appendix A**.*

Building Champions

Questions on sugary drink consumption are already included in AAP well-child recommendations and some state Medicaid required parent surveys. These responses are not currently trackable at the patient level to measure progress or compare across panels and populations. Incorporating this important factor into the EHR allows currently measured metrics to be analyzed and leveraged in a powerful way.

Successful implementation of a beverage screener will require support from health system leadership and the IT department. Identifying and communicating the benefits of sugar-sweetened beverage screeners can help build investment and champions.

Benefits to Health Systems

- Assessing progress on community initiatives and goals.
- Streamlining data sharing needs with community organizations.

Benefits to Providers

- Tracking progress with patients and panels. Readily trackable and measurable data to identify at-risk patients and ability to measure progress over time.
- Supporting resources that can be automatically sent to families to provide supportive and reinforcing resources.

Benefits to Families

- Consistent and supportive assessment, messaging and resources around children's beverage recommendations.

Benefits to Communities

- Providing aggregate data on priority health issues.

Acting on the Data

Implementing a beverage screener will help identify individuals that are consuming beverages inconsistent with the recommendations. There are several options for supporting those families during the office visit (see **Talking Points** below and **Appendix C: Additional Resources**) and via post-visit materials (see **Appendix B: Incorporating Patient Education into the After Visit Summary**). The time spent working with families during the visit can be coded and billed using related codes for dietary surveillance and counseling or BMI codes such as overweight/obesity in children ages 2 and older.

Examples from the Field

- **Kaiser Permanente** has a short video (available in English and Spanish) that can be shown immediately after screening or included in the post-visit summary. They also have in-room resources to support counseling, including posters and fliers. Billing codes for counseling are included in the EHR, along with the option for referrals to health coaching or a dietitian.
- **Wake Forest Baptist Medical Center** has developed several scalable tools to support their beverage screening results including a brief video (also available in Spanish). A mobile phone app, Ready, Set, Gulp!, and a series of automated interactive voice response phone calls (14 over 6 months) to parents.
- **Healthy Eating Research** has videos and parent resources available at HealthyDrinksHealthyKids.org.

Talking Points

As a health care professional, you are a trusted resource for parents and caregivers when it comes to the health and well-being of their kids. The following talking points can support your conversations about these recommendations.

The quick basics:

- SSBs are the largest source of extra sugar and empty calories in young children's diets.
- SSBs are directly associated with health complications – both now (e.g., cavities) and in the long-term (e.g., overweight, obesity, diabetes).
- Research shows that juice can be a gateway drink. Young children who drink juice early in life are more likely to drink SSBs as they get older.

Additional information:

- We know that what kids drink in the early years of life is just as important as what they eat for healthy growth and development.
- Making healthy drink choices is important both for being healthy now, as well as developing healthy habits down the road.
- Many children are not drinking the beverages that are best for their health and growth.
- Guidelines for how much and what kinds of drinks help kids get adequate nutrition and hydration at different ages are (Refer to ***Figure 3*** for exact serving sizes):
    - 0-6 months: Babies need only breast milk or infant formula to get enough fluids and proper nutrition.
    - 6-12 months: In addition to breast milk or infant formula, offer a small amount of drinking water once solid foods are introduced to help babies get familiar with the taste – just a few sips at meal times is all it takes. It's best for children under 1 not to drink juice. Even 100% fruit juice offers no nutritional benefits over whole fruit.
    - 12-24 months: It's time to add whole milk, which has many essential nutrients, along with plain drinking water for hydration. A small amount of juice is ok, but make sure it's 100% fruit juice to avoid added sugar. Better yet, serve small pieces of real fruit instead, which are more nutritious and satisfying.
    - 2-5 years: Milk and water are the go-to beverages. Look for milks with less fat than whole milk, like skim (non-fat) or low-fat (1%). If you choose to serve 100% fruit juice, stick to a small amount, and remember adding water can make a little go a long way!

You can find downloadable educational materials to support conversations about healthy beverage consumption with parents and caregivers in the Healthy Drinks, Healthy Kids Toolkit for Providers. Materials available in this toolkit include educational resources and tools for providers, free CEU webinar recordings, and client and parent educational materials. A full list of these resources is included in **Appendix C: Additional Resources**.

Become a Champion for Healthy Beverage Consumption

Now that you've learned about the importance of healthy beverage consumption in early childhood and the Healthy Beverage Consensus Recommendations, have seen examples of how health care systems can play a critical role in addressing sugary beverage consumption in the pediatric populations, and have access to the tools and resources to successfully incorporate and implement a beverage screener in the EHR, consider becoming the champion in your health care system. Inclusion of validated beverage screener questions in the EHR supports nationwide efforts to reduce children's consumption of sugary beverages and provides an opportunity for widespread adoption and implementation of evidence-based recommendations.

Appendices

Appendix A. Job aids

Sample Clinic Manager Communication

Re: New Sugary Drink Best Practice Alert in WakeOne

To All Clinic Managers in the Wake Forest Baptist Pediatric and Primary Care Network:
Sugar-sweetened beverages account for almost half of the added sugars consumed by American children, and have been associated with weight gain, dental caries, and other health problems. **We are asking for your help to address sugary beverage consumption in our pediatric population.**

Beginning in **March 2020**, a **new "best practice alert" (BPA)** will fire at pediatric primary care visits for children 6 months through 17 years of age. The BPA will prompt clinical staff to ask 2 brief questions about how often a child consumes **fruit juice and sugar-sweetened beverages**.

Based on responses to the screening questions, families may receive an email or myWakehealth message prompting them to view a **short educational video** about sugary drinks and water. Staff do not have to place an order for the video - it will be automatically ordered by WakeOne, in English or Spanish, based on documented language preference for the patient.

Here is how you can help to ensure success of the new sugary drink BPA and video rollout:

- Please make your clinical staff (nursing and providers) aware that this BPA is coming
- Encourage staff to complete the **Healthstream training** on sugary drinks in February 2020
- Encourage staff to notify screened families that they may receive a link to a video about sugary drinks. The message will come from Wake Forest Baptist Health and Emmi.
- Create an office environment that sets the right tone for healthy alternatives by promoting water consumption. We're getting you started by providing your staff with water bottle stickers from the National Drinking Water Alliance (enclosed)
- Finally, please reach out to (contact name redacted) with any questions or concerns, either before or after the screening process goes live.

Thank you so much for your support,
(names redacted)

Sugar Sweetened Beverage Screening Job Aid

Sugar Sweetened Beverage Screening Job Aid for Providers

What is it?

Point of care screening for juice and SSB over-consumption in children ages **6 months to 4 years old** paired with an educational video and provider counseling.

How does it work?

1. MA Best practice alert will pop up every 6 months (like exercise as a vital sign) after vital signs are entered.
2. MA will ask the juice and SSB questions and enter them into the flowsheet.
3. MA will offer to show SSB video in exam room. It takes 2 mins 44 sec. There are Spanish and English versions.
4. Yellow SSB Provider Best Practice Alert will fire if the child is over-consuming (any SSB intake, and drinking juice more than once a day)-see screen shot below.
5. Inside the Yellow SSB Provider Best Practice alert is a link to click and add the "pediatric nutrition, exercise, and screen time counseling" diagnostic code.
6. The Provider Best Practice alert will stay yellow in the section on Best Practice Alerts as well as in the Storyboard until you accept the counseling code. Then, it will disappear.

What do providers need to do?

1. If appropriate, counsel on juice and SSB intake
2. Code for your counseling (either 1 click inside BPA with or by adding to diagnosis list)

Frequently Asked Questions

1. What if I'm seeing a sick child?
   Use your judgment with asking juice and SSB questions, counseling and coding. If inappropriate, please skip it.
2. What if my MA doesn't ask the questions?
   You will see the MA alert for SSB screening and you can also enter the juice/SSB questions by clicking on the yellow link to flowsheets.
3. What if family doesn't want to watch the video?
   Video is optional not mandatory.
4. What if the patient wants to watch video but doesn't have time to watch the video?
   Video is short, but if no time, can give them link on AVS to watch at home. If the child is consuming more than recommendations, it will auto-populate in the AVS.
   English: Kp.org/healthengagement/drinkwater
   Spanish: Kp.org/healthengagement/tomeagua
5. Are there other resources? Yes.
   A. "The choice is clear" poster 18892T
   B. "Fewer sugary drinks leads to a healthier tomorrow" (cookie comparison) flier 17166
   C. "Water infusion recipes" flier
   D. Can refer to health coach (online appointing) or dietitian

Appendix B. Incorporating Patient Education into the After Visit Summary

After screening a patient for sugar-sweetened beverage and 100% juice intake using the Example One Validated Screening Questions provided on page 8, this algorithm can help determine the appropriate After Visit Summary messaging to provide to the patient.

Example Algorithm for After-Visit Summary (AVS)		
Age of Child at Time of Visit	**Response to Screening Item**	**AVS Message**
0 months - 6 months	Never	Nothing in AVS
0 months - 6 months	Sometimes but not every day	Infant important message
0 months - 6 months	1 per day	Infant important message
0 months - 6 months	2 per day	Infant important message
0 months - 6 months	3 or more per day	Infant important message
0 months - 6 months	Refused	Infant important message
6 months - 11 months (<12m)	Never	Nothing in AVS
6 months - 11 months (<12m)	Sometimes but not every day	Infant important message
6 months - 11 months (<12m)	1 per day	Infant important message
6 months - 11 months (<12m)	2 per day	Infant important message
6 months - 11 months (<12m)	3 or more per day	Infant important message
6 months - 11 months (<12m)	Refused	Infant important message
12 months - 24 months	Never	Nothing in AVS
12 months - 24 months	Sometimes but not every day	Nothing in AVS
12 months - 24 months	1 per day	Toddler important message
12 months - 24 months	2 per day	Toddler important message
12 months - 24 months	3 or more per day	Toddler important message
12 months - 24 months	Refused	Toddler important message
2 - 3 years	Never	Nothing in AVS
2 - 3 years	Sometimes but not every day	Child important message
2 - 3 years	1 per day	Child important message
2 - 3 years	2 per day	Child important message
2 - 3 years	3 or more per day	Child important message
2 - 3 years	Refused	Child important message
4 - 5 years	Never	Nothing in AVS
4 - 5 years	Sometimes but not every day	Child important message
4 - 5 years	1 per day	Child important message
4 - 5 years	2 per day	Child important message
4 - 5 years	3 or more per day	Child important message
4 - 5 years	Refused	Child important message

Example AVS Messages

Infant (0-6 months) Important Message:

During today's visit, you mentioned that your baby currently drinks some form of sugar-sweetened beverage or 100% juice. For babies under 6 months of age, we recommend drinking only breast milk or infant formula.

Drinking the right drinks, in the right amounts, at the right ages helps kids grow up healthy.

Learn more about healthy beverages for your infant at https://healthydrinkshealthykids.org/parents/

Prefer videos? Check out https://youtu.be/V4YxL2Mt_Rk

Please ask your pediatrician if you have questions or need help switching your baby to only breast milk or formula until his/her first birthday.

Infant (7-12 months) Important Message:

During today's visit, you mentioned that your baby currently drinks some form of sugar-sweetened beverage or 100% juice. For babies 7 to 12 months, we recommend drinking only breast milk or infant formula. Once solid foods are introduced, you can start offering sips of water from an open cup during meals (no more than 0.5-1.0 cups per day). While your baby might spill more than they drink, this will help them learn to like the taste of plain water.

Drinking the right drinks, in the right amounts, at the right ages helps kids grow up healthy.

Learn more about healthy beverages for your infant at https://healthydrinkshealthykids.org/parents/

Prefer videos? Check out https://youtu.be/V4YxL2Mt_Rk

Please ask your pediatrician if you have questions or need help switching your baby to only breast milk or formula until his/her first birthday.

Toddler (12-24 months) Important Message:

During today's visit, you mentioned that your child regularly drinks some form of sugar-sweetened beverage, or 100% juice. For children ages 12-24 months, we DO NOT recommend drinking sugar-sweetened beverages (things like fruit drinks, lemonade, sweet tea, punch, juice from concentrate, flavored milks, soda, sports drinks), and only small amounts of 100% fruit juice (limited to 4 ounces per day).

Instead, we recommend drinking water or unflavored milk. Drinking the right drinks, in the right amounts, at the right ages helps kids grow up healthy.

What about drinks with low-calorie sweeteners? For children, the long-term effects of consuming artificially-sweetened beverages are not known, so it's best for kids to avoid them.

Learn more about healthy beverages for your toddler at https://healthydrinkshealthykids.org/parents/

Prefer videos? Check out https://youtu.be/-WXwAJqyDeI

Please ask your pediatrician if you have questions or need help getting your child to drink fewer sugary beverages.

Child/Preschool (2-3 years) Important Message:

During today's visit, you mentioned that your child regularly drinks some form of sugar-sweetened beverage, or 100% juice. For children ages 2-3 years, we DO NOT recommend drinking sugar-sweetened beverages (things like fruit drinks, lemonade, sweet tea, punch, juice from concentrate, flavored milks, soda, sports drinks), and only small amounts of 100% fruit juice.

Instead, we recommend drinking water or unflavored milk. Drinking the right drinks, in the right amounts, at the right ages helps kids grow up healthy.

What about drinks with low-calorie sweeteners? For children, the long-term effects of consuming artificially-sweetened beverages are not known, so it's best for kids to avoid them.

Learn more about healthy beverages for your child at https://healthydrinkshealthykids.org/parents/

Prefer videos? Check out https://youtu.be/-WXwAJqyDeI

Please ask your pediatrician if you have questions or need help getting your child to drink fewer sugary beverages.

Child/Pre-K (4-5 years) Important Message:

During today's visit, you mentioned that your child regularly drinks some form of sugar-sweetened beverage, or 100% juice. For children ages 4-5 years, we DO NOT recommend drinking sugar-sweetened beverages (things like fruit drinks, lemonade, sweet tea, punch, juice from concentrate, flavored milks, soda, sports drinks), and only small amounts of 100% fruit juice (no more than 4-6 ounces per day).

Instead, we recommend drinking water or unflavored milk. Drinking the right drinks, in the right amounts, at the right ages helps kids grow up healthy.

What about drinks with low-calorie sweeteners? For children, the long-term effects of consuming artificially-sweetened beverages are not known, so it's best for kids to avoid them.

Learn more about healthy beverages for your child at https://healthydrinkshealthykids.org/parents/

Prefer videos? Check out https://youtu.be/JCF8Acr8HJk

Please ask your pediatrician if you have questions or need help getting your child to drink fewer sugary beverages.

Appendix C. Additional Resources

References for the Consensus Recommendations

Lott M, Callahan E, Welker Duffy E, Story M, Daniels S. Healthy Beverage Consumption in Early Childhood: Recommendations from Key National Health and Nutrition Organizations. Consensus Statement. Durham, NC: Healthy Eating Research, 2019. Available at http://healthyeatingresearch.org.

Lott M, Callahan E, Welker Duffy E, Story M, Daniels S. Healthy Beverage Consumption in Early Childhood: Recommendations from Key National Health and Nutrition Organizations. Technical Scientific Report. Durham, NC: Healthy Eating Research, 2019. Available at http://healthyeatingresearch.org.

Articles on Sugar Sweetened Beverage Screeners

Lewis, K. H., Skelton, J., Hsu, F. C., Ezouah, P., Taveras, E. M., & Block, J. P. (2020). Use of Electronic Health Record Data to Study the Association of Sugary Drink Consumption With Child Weight Status. Academic pediatrics, 20(6), 767–775. https://doi.org/10.1016/j.acap.2019.11.002

Lewis, K. H., Skelton, J. A., Hsu, F. C., Ezouah, P., Taveras, E. M., & Block, J. P. (2018). Implementing a novel electronic health record approach to track child sugar-sweetened beverage consumption. Preventive medicine reports, 11, 169–175. https://doi.org/10.1016/j.pmedr.2018.06.007

Palakshappa, D., Lenoir, K., Brown, C. L., Skelton, J. A., Block, J. P., Taveras, E. M., & Lewis, K. H. (2020). Identifying geographic differences in children's sugar-sweetened beverage and 100% fruit juice intake using health system data. Pediatric obesity, 15(11), e12663. https://doi.org/10.1111/ijpo.12663

Materials Available in the HER Health Professional Toolkit

You can find downloadable educational materials to support conversations about healthy beverage consumption with parents and caregivers in the Healthy Drinks, Healthy Kids Toolkit for Providers. A list of materials available in this toolkit follows:

Educational Resources and Tools for Providers

- **Healthy Beverage Consumption in Early Childhood: Recommendations from Key National Health and Nutrition Organizations**
  - **Official Consensus Statement** (Available in English and Spanish) – Expert recommendations developed by Healthy Eating Research along with some of the nation's leading health organizations.
  - **Full Technical Report** (Available in English and Spanish) – Scientific rationale and basis for the Consensus Statement.
  - **Executive Summary** (Available in English, Spanish, Tagalog, and Vietnamese) – 3-page synopsis of the recommendations.
  - **Summary Recommendations Table** – 1-page overview of the recommendations
- **Free Educational Webinar Recordings**
  - **Bottoms Up - Helping Parents Make Informed Child Hydration Decisions** – Learn how to implement the latest recommendations for children's beverage intake.
  - **Milk, Plant-Based Alternatives, Flavored Milk, Toddler Milk - A Deeper Dive into the Science and Resulting Recommendations** – Discover the latest in milk recommendations for children.
  - **SSBs, Juice, and Non-Nutritive Sweeteners - A Deeper Dive into the Science and Resulting Recommendations** – Learn the latest guidelines on children's consumption of sugar-sweetened beverages, juice and non-nutritive sweeteners.

- **Provider Tools**
  - **Dairy Milks vs. Plant Milks Decision Tool** (Available in English, Spanish, Tagalog, and Vietnamese) – This resource can assist in making milk recommendations to clients based on their individual situations.
  - **Example Scenarios of Daily Fluid Breakdown by Age** (Available in English, Spanish, Tagalog, and Vietnamese) – This resource provides both recommended amounts and example scenarios of daily fluid breakdowns for children ages 1 to 5 years.
  - **Comparison of Beverage Consumption Recommendations for Young Children: Opportunities for Improvement** – These resources compare the HER Consensus Recommendations to other beverage guidelines for kids ages 0-5, including the Dietary Guidelines for Americans, the Supplemental Nutrition Programs for Women, Infants and Children (WIC), and the Child and Adult Care Food Program (CACFP).

Client and Patient Educational Resources

- **Summary Recommendations Table** – 1-page overview of the recommendations
- **"All About" Beverage Fact Sheets** (Available in English, Spanish, Tagalog, and Vietnamese)
- **"Healthy Drinks" One Pagers by Age**
- **Dairy Milk vs. Plant Milks for Toddlers & Young Kids** (Available in English, Spanish, Tagalog, and Vietnamese)
- **Short Videos: Tips For Healthy Kids Drinks** (Spanish videos) (Videos for the visually impaired)
  - Healthy Beverages In The Earliest Years Set Kids Up To Thrive
  - Avoid Serving Sugary Drinks To Kids To Build Healthy Habits
  - Water And Plain Milk Help Toddlers Grow Up Healthy & Strong
  - What Should My Baby Drink In The First Year?
  - What Should My Toddler Drink?
  - What Should My Preschooler Drink?
  - 5 Tips For Healthy Kids Drinks
  - Is Juice Good For My Kids?
  - What Milk Is Good For My Kid?
  - How To Swap Out Sugary Drinks
  - Healthy Drinks As Kids Grow
  - Toddler Formula: What Do I Need To Know?
  - How Much Water Do Kids Need?
  - All About Toddler Milks
  - What's The Deal With Fruit Drinks?