From Seed to Harvest:

Advancing Public Health Nutrition Strategies That Work

Anu Pejavara, MPH
Chief, Nutrition Branch
Division of Nutrition, Physical Activity, and Obesity

June 9, 2024

Centers for Disease Control and Prevention
National Center for Chronic Disease Prevention and Promotion

From Seed to Harvest

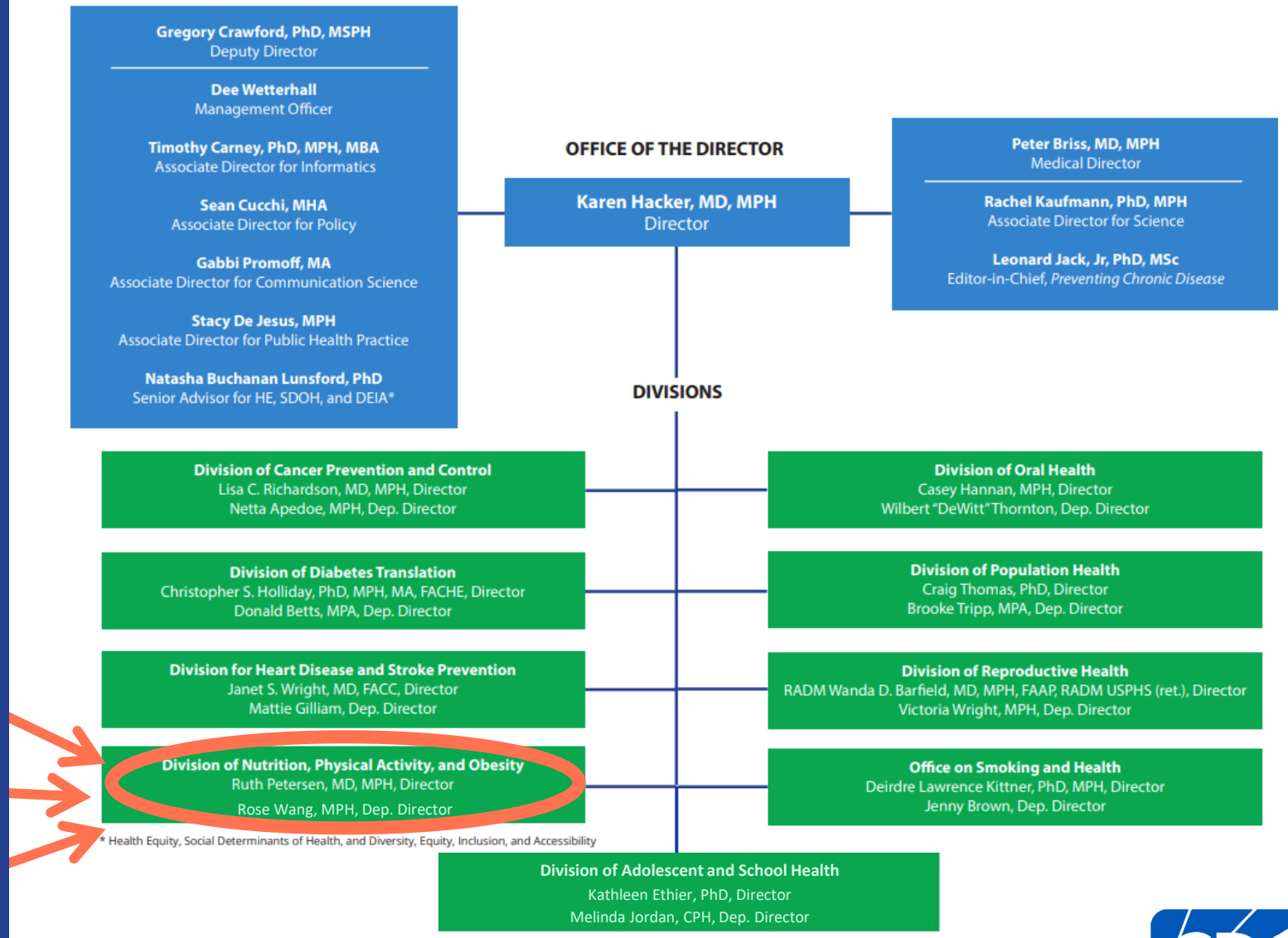
Planting the Seeds
Strategies that Work

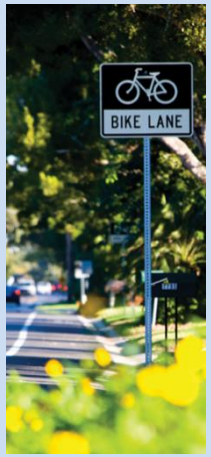
Tending the Garden
DNPAO Funded Programs

Harvesting the Crop
Gaps, Resources, and Opportunities


Introducing the Gardeners:
CDC's Division of Nutrition, Physical Activity, and Obesity (DNPAO) and Partners

National Center for Chronic Disease Prevention and Health Promotion (NCCDPHP)





Vision:

A nation where everyone can easily access nutritious food, lead active lives, and live free of diet- and inactivity-related disease.

Mission:

Lead efforts to support healthy eating and active living for all people by advancing public health strategies.

DNPAO: What we strive for every day

The Division of Nutrition, Physical Activity, and Obesity (DNPAO)

Ruth Petersen,
Director

Rose Wang,
Deputy Director

Office of the Associate Director for Science

Deborah Galuska,
Associate Director for Science

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Physical Activity & Health Branch

Ken Rose,
Branch Chief

Program Development & Evaluation Branch

Terry O'Toole,
Branch Chief

Leading the Charge for a Healthier Nation

2024 DNPAO National Training

May 6-9, 2024

Thank you, ASPHN!

ASPHN co-hosted the DNPAO National Training on May 6-9, 2024.

The training was for DNPAO's State Physical Activity and Nutrition (**SPAN**) Program, Racial and Ethnic Approaches to Community Health (**REACH**) Program, and High Obesity Program (**HOP**) recipients and representatives of the DNPAO Ambassador program.

Thank you, ASPHN!

Partners in the DNPAO Nutrition & Physical Activity Traineeship!

Traineeship Purpose:

Prepare underrepresented upper-level university students with competencies needed for entry-level public health professional occupations related to nutrition and physical activity

8-week, 32-hours a week program

Located in a designated facility receiving funds from DNPAO, including but not limited to state health departments

Students are selected through an application process and will be evaluated at the end of a program

The traineeship is designed to be an engaging learning experience

Paid student internships

Core Competencies for Public Health Professions will serve as learning activities

Summer Placement Sites in: Arizona, Georgia, Illinois, Indiana, Massachusetts, Michigan, Ohio, Oklahoma, Texas, Wisconsin


It takes all of us planting seeds and
cultivating growth for a healthy, abundant garden.

Planting the Seeds:
DNPAO's Public Health Strategies that Work

Fun Fact #1

Which one of these does CDC/DNPAO emphasize as a **key strategy** to reduce chronic disease through physical activity and nutrition?

A. Make breastfeeding easier to start and sustain
B. Spread and scale family healthy weight programs
C. Make healthy food choices more accessible
D. All of the above

Five Strategies to Reduce Chronic Disease through Improved Physical Activity and Nutrition

Make physical activity safe and accessible for all

Support active transportation and land use policies to make more activity-friendly routes to everyday destinations.

Make healthy food choices easier everywhere

Promote food service and nutrition guidelines and healthy food procurement. Coordinate uptake and expansion of voucher incentive and produce Rx programs.

Make breastfeeding easier to start and sustain

Help hospitals use evidence-based maternity care practices to support new mothers to start breastfeeding.

Strengthen obesity prevention standards in early care and education (ECE) settings

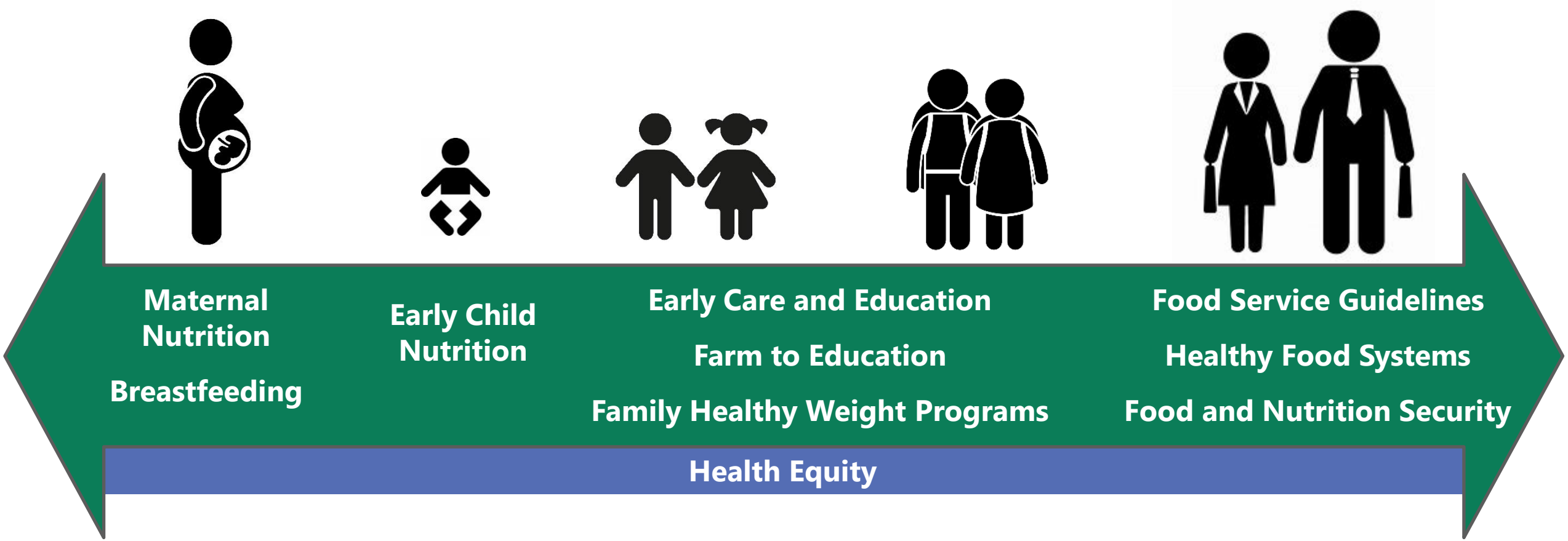
Improve standards that help prevent childhood obesity (healthy eating, physical activity, and limiting screen time) within existing ECE systems.

Spread and scale family healthy weight programs

Work with state Medicaid programs to help ensure that families with low incomes can easily access family healthy weight interventions.

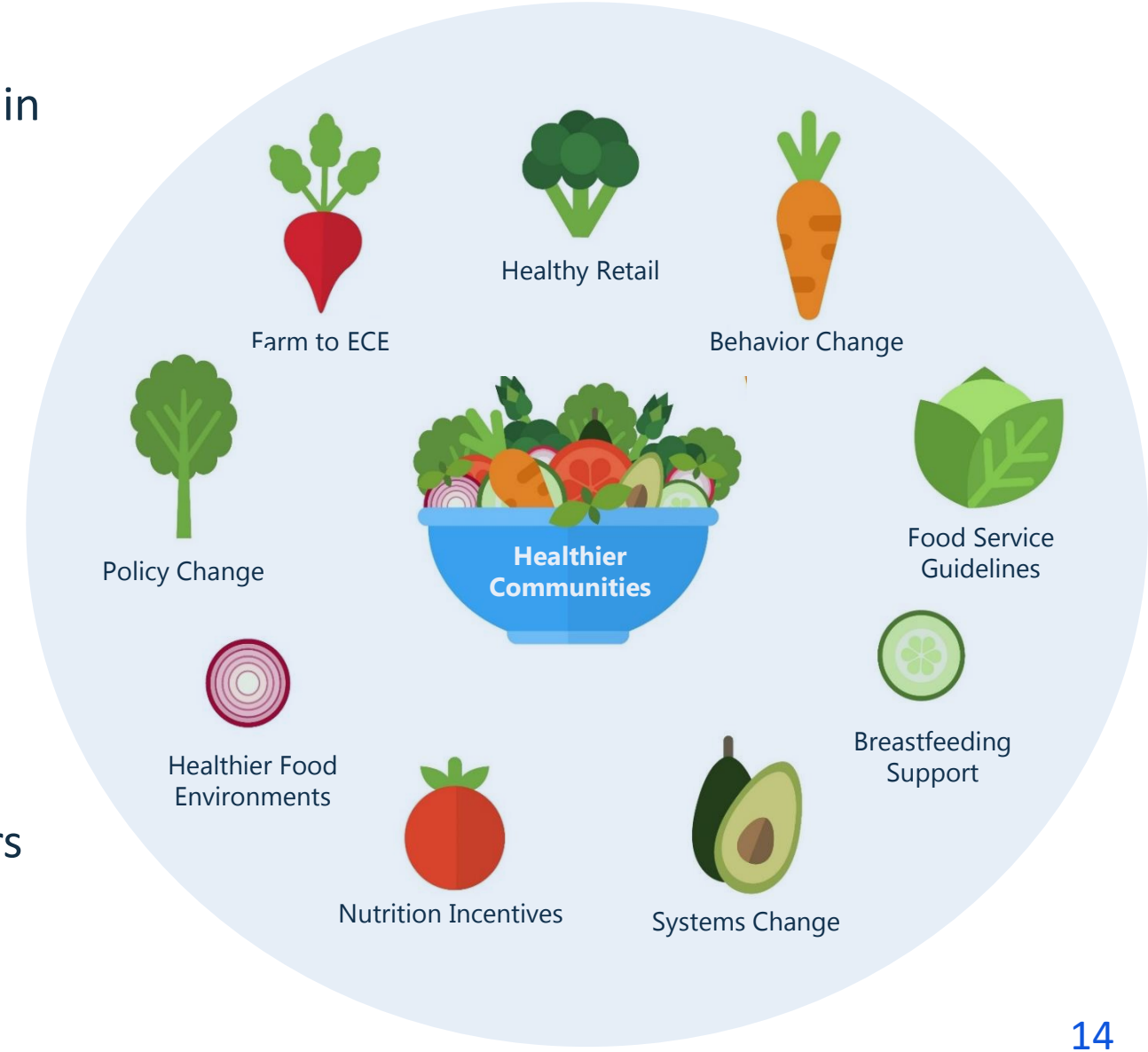
Our Vision: Optimal Nutrition Across the Lifespan

DNPAO works at multiple levels to establish healthier food environments for all



DNPAO's Nutrition Strategies

- Implement interventions to support breastfeeding in hospitals & community
- Implement nutrition standards in key institutions, such as Early Care and Education (ECE)
- Accelerate, adopt, or expand Farm-to-ECE
- Implement Food Service Guidelines (FSG) in worksites and community settings to increase availability of healthy foods
- Expand existing fruit and vegetable voucher incentive and produce prescription programs
- Work with food vendors, distributors and producers to enhance healthier food procurement and sales



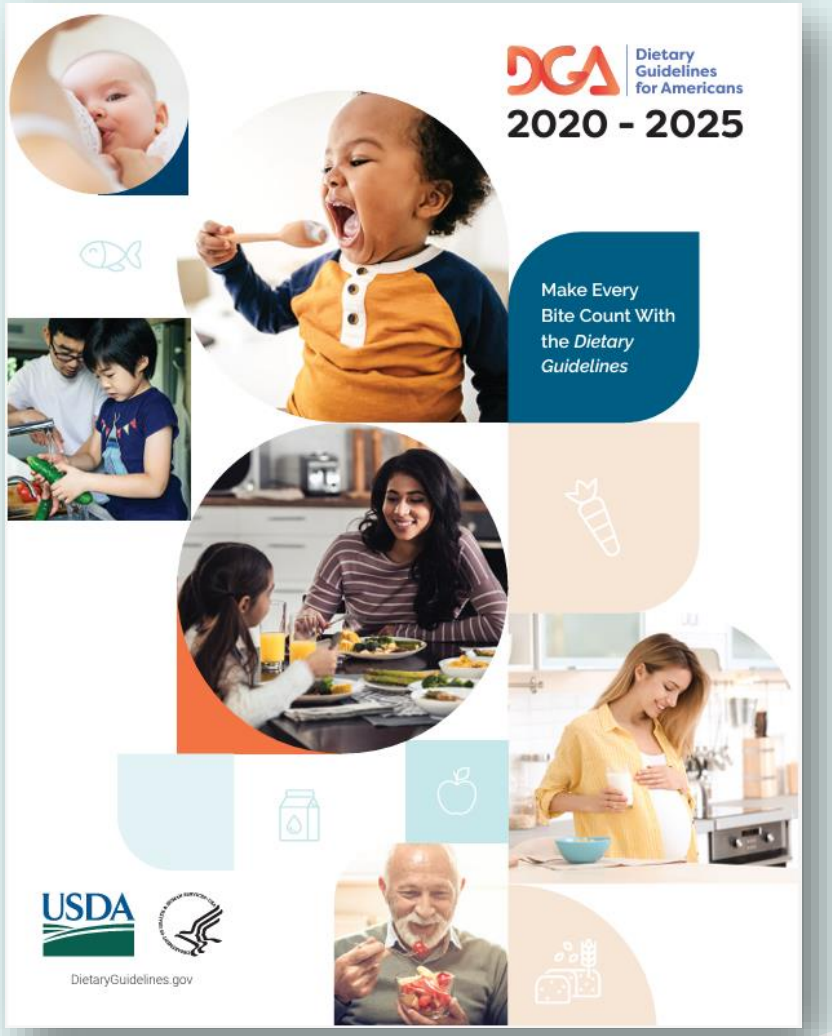
Health equity is when **everyone** has the opportunity to be as healthy as possible.

Achieving health equity is foundational to our work.

We work with partners, state, local, tribal and territorial health agencies, and organizations to **remove environmental and systemic barriers to health and advance health equity**.

For more information, visit: https://www.cdc.gov/nccdphp/dnpao/health-equity/index.html

Dietary Guidelines for Americans (DGAs)

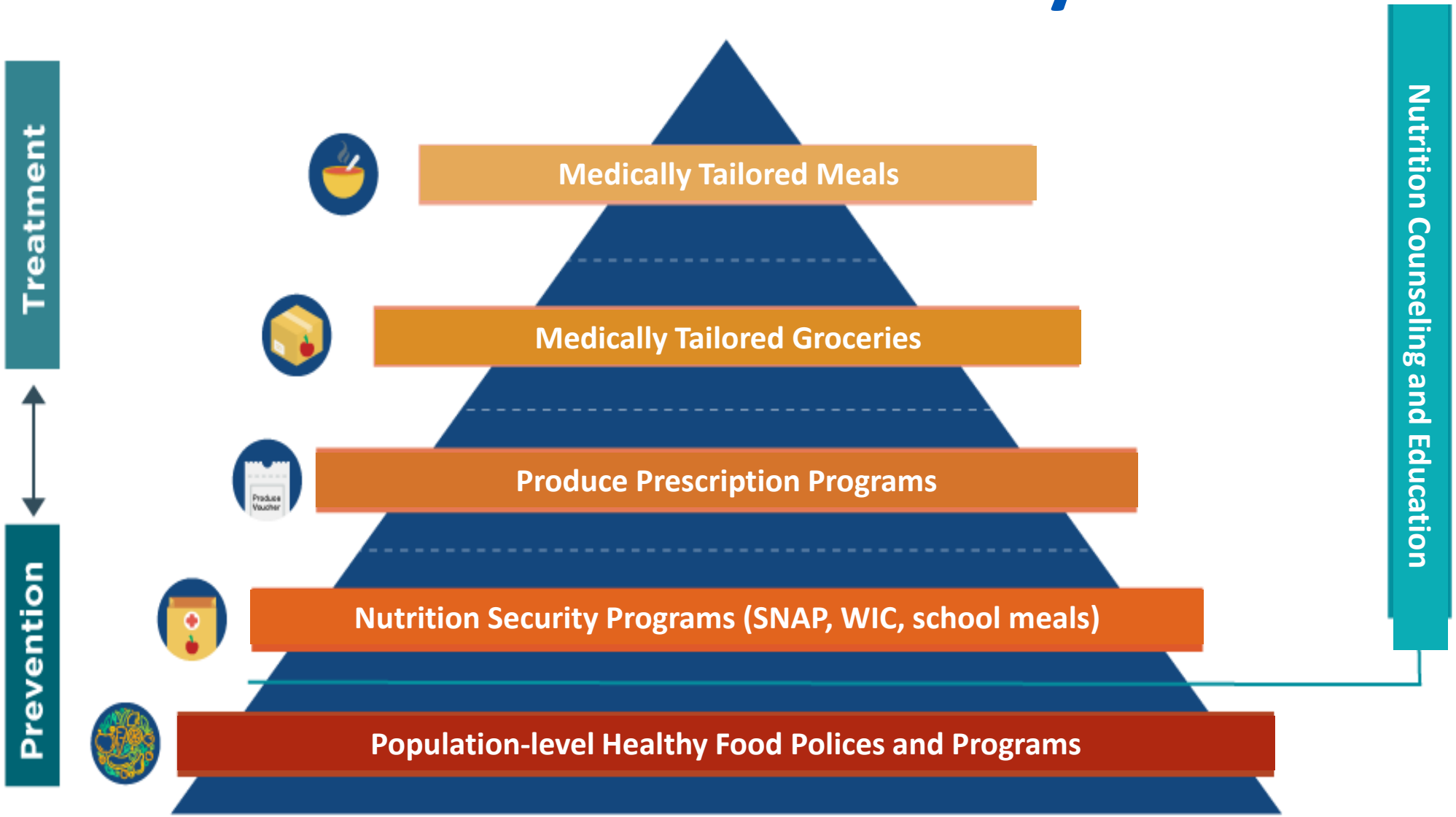


GOAL:	Provide advice on what to eat and drink to meet nutrient needs, promote health, and prevent disease across the lifespan.
HOW:	Experts in the U.S. Departments of Health and Human Services (HHS) and Agriculture (USDA) update and release the Dietary Guidelines every five years to reflect the current body of nutrition science.
WHO:	The DGAs are developed and written for a professional audience: policymakers, healthcare providers, nutrition educators, and federal nutrition program operators.

Helping translate nutrition science to public health practice

Visit: https://health.gov/our-work/nutrition-physical-activity/dietary-guidelines

The Food Is Medicine Pyramid

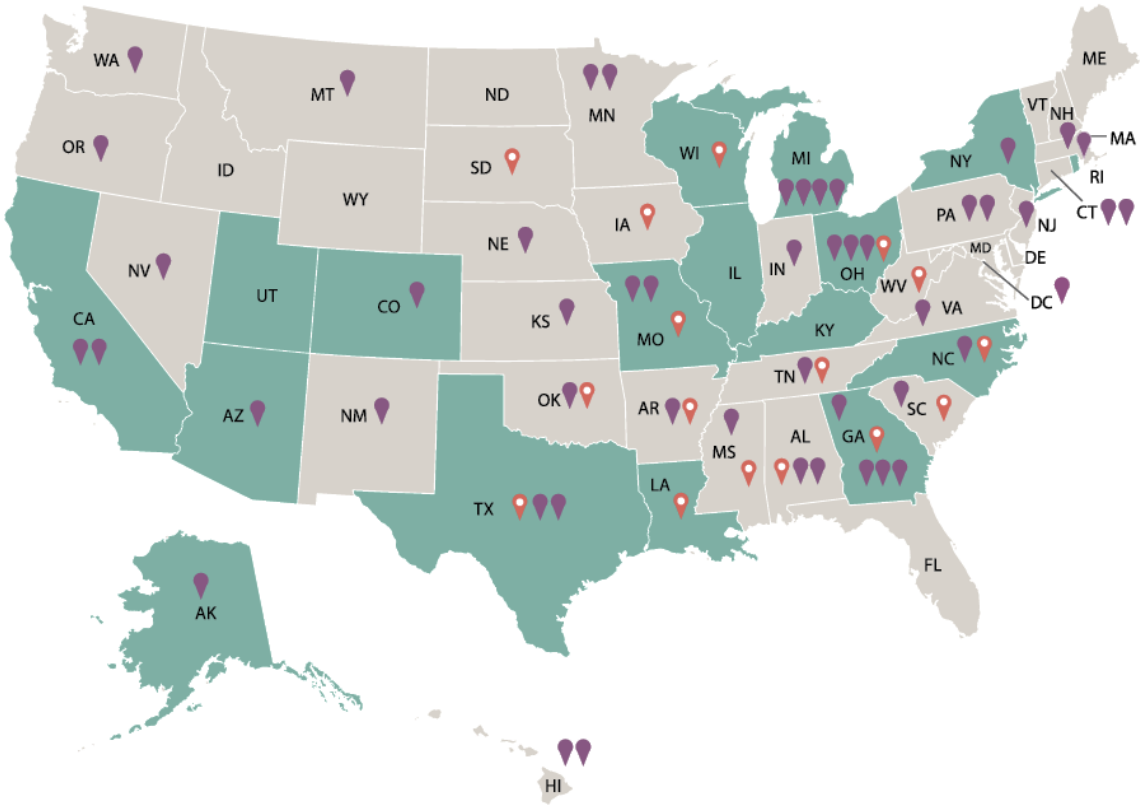


Adapted from Mozaffarian D, Blanck HM, Garfield KM, Wassung A, Petersen R. A Food is Medicine approach to achieve nutrition security and improve health. Nat Med. 2022 Nov;28(11):2238-2240.

Tending the Garden:
DNPAO's Funded Programs

DNPAO's Funded Program Recipients: 2023-2028 Program Cycle

Fiscal Year 2023



State Physical Activity and Nutrition Program (SPAN)

- 17 state and local recipients strengthening efforts to implement interventions that support healthy nutrition, safe and accessible physical activity, and breastfeeding

High Obesity Program (HOP)

- 16 land grant universities leveraging community extension services to increase access to healthier foods and opportunities for physical activity in counties that have more than 40% of adults with obesity

Racial and Ethnic Approaches to Community Health (REACH) Program

- 50 organizations aiming to improve health, prevent chronic diseases, and reduce health disparities among racial and ethnic populations with the highest risk, or burden, of chronic disease

SPAN 2023-2028 Program Strategies

Design communities to increase access to physical activity

Promote healthy food service and nutrition standards

Expand fruit & vegetable voucher and prescription programs

Integrate obesity prevention into ECE & advance Farm to ECE

Implement continuity of care for breastfeeding families

HOP 2023-2028 Program Strategies

Design communities to increase access to physical activity

Promote healthy food service and nutrition standards

Expand fruit & vegetable voucher and prescription programs

Integrate obesity prevention into ECE & advance Farm to ECE

Optional Strategy

Implement Family Healthy Weight Programs

Optional Strategy

REACH 2023-2028 Program Strategies*

Design communities to increase access to physical activity

Promote healthy food service and nutrition standards

Expand fruit & vegetable voucher and prescription programs

Establish continuity of care in breastfeeding support





Implement tobacco prevention and control policies

Integrate obesity prevention in ECE & advance Farm to ECE

Support family healthy weight programs

Increase equitable access to vaccination for adults

*Recipients must propose work in physical activity and nutrition plus another strategy. The adult vaccination strategy is optional.

Five-Year Impact of SPAN, REACH, & HOP: 2018-2023

>28M people
Physical Activity

>9M people
Healthy Nutrition Standards

>3M people
Breastfeeding
Continuity of Care

>2.6M people
Food Systems

>3.8M children
Early Care and Education

>1M people
Tobacco
Local Policies

>41k patients
Community-Clinical Linkages

Fun Fact #2

How many total **additional dollars** did SPAN, REACH, and HOP recipients leverage during the 2018-2023 cooperative agreements?

A. $50M
B. $120M
C. $270M
D. $400M

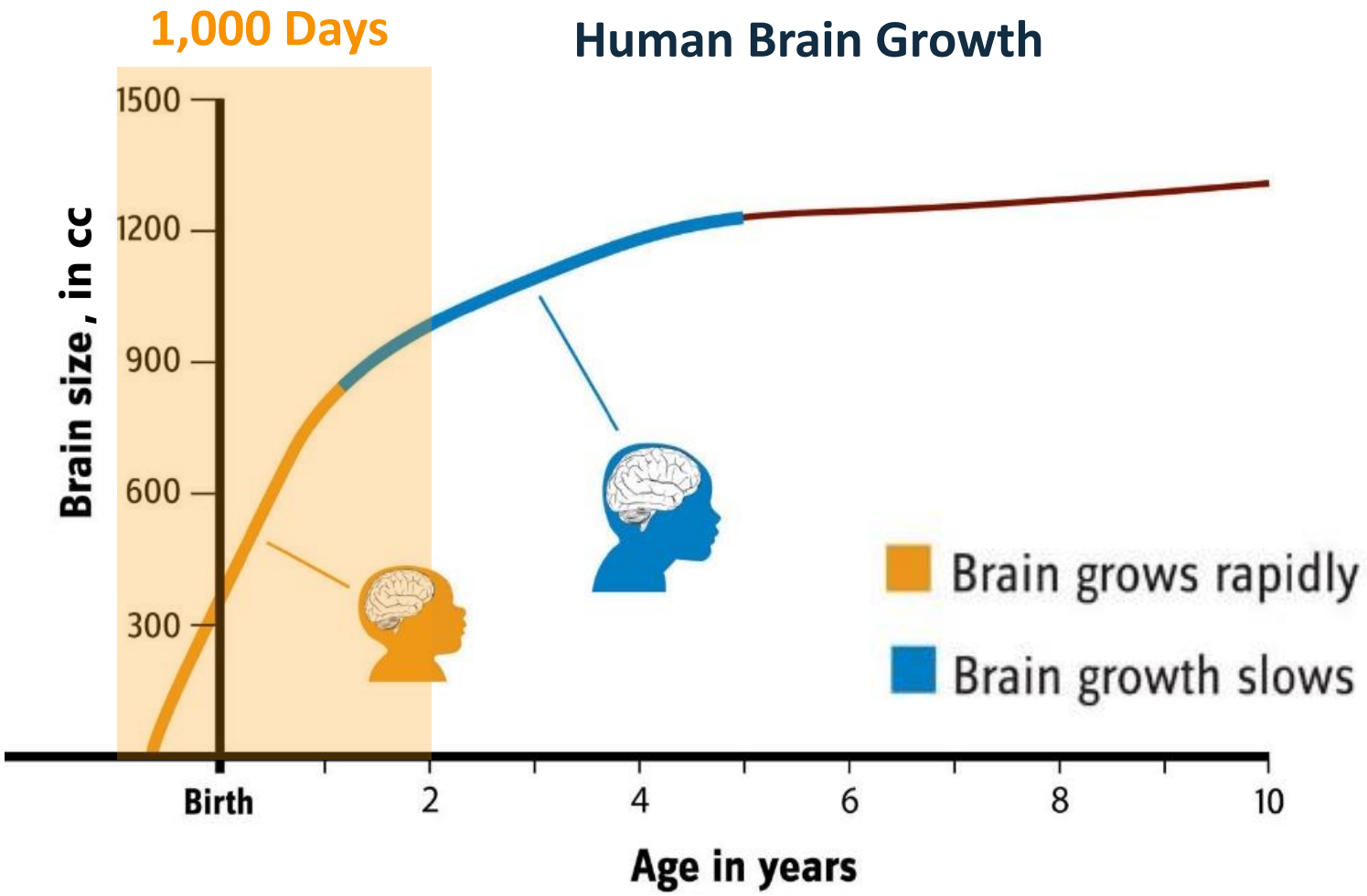
SPAN REACH HOP leveraged $400M (2018-2023)

SPAN (16 Recipients)	$175.2M
REACH (40 Recipients)	$200.7M
HOP (15 Recipients)	$23.9M

Harvesting the Crop:
Gaps, Resources, and Opportunities by Life Stage

Life Stage: The First 1,000 Days

Improving Dietary Quality During the First 1,000 Days



Gap: Micronutrient Deficiencies During Pregnancy

1 in 6 women is iron deficient during pregnancy – deficiency is higher among black and Hispanic women

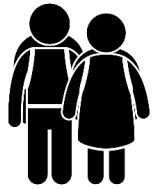
Fewer than **1 in 5** women take a prenatal vitamin containing iodine during pregnancy

Iron and iodine deficiency are associated with:

- Poor birth outcomes and physical growth
- Impaired cognitive and motor development
- Poorer quantitative and language abilities

Gap: National and State-Level Micronutrient Surveillance Data



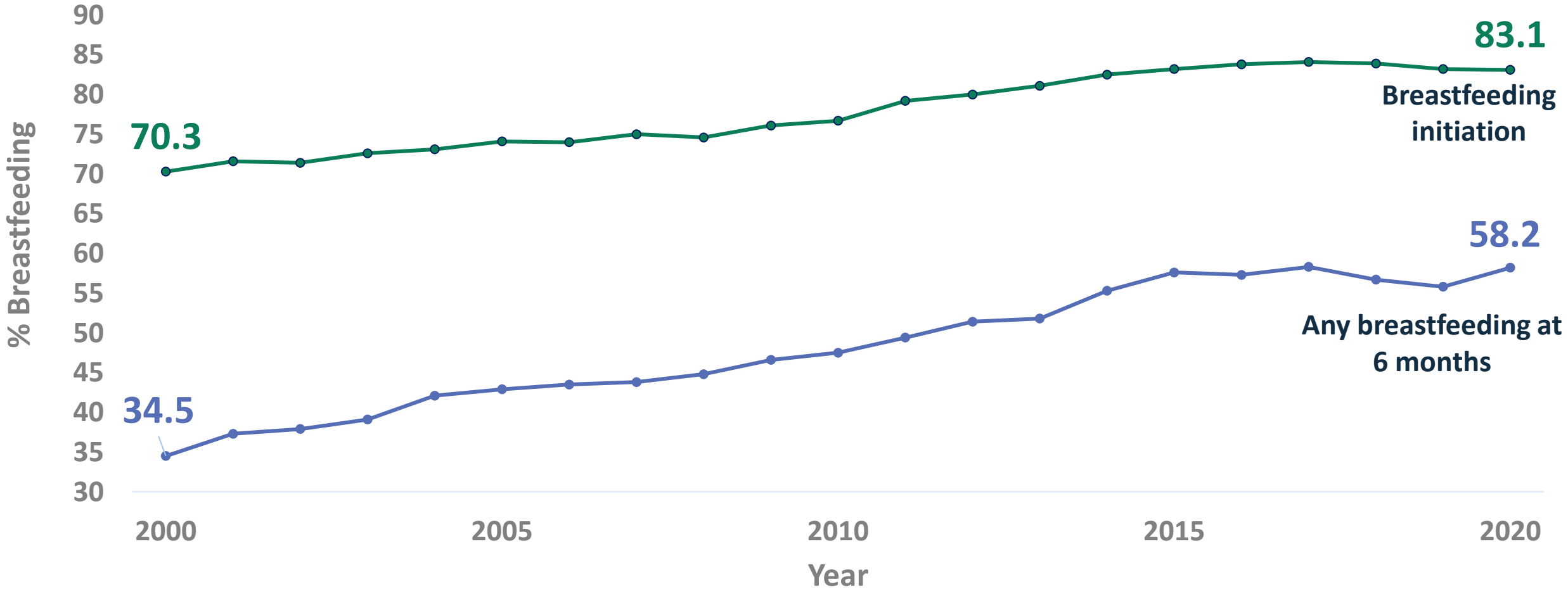




	Pregnancy		<1 y		1-5 yr		6-11 yr		12+ yr	
	National	State	National	State	National	State	National	State	National	State
Iron*	Limited, 2018	--	--	--	Limited, 2018	--	--	--	Yes, 2018	--
Anemia	Limited, 2018	**	--	**	Yes, 2018	**	Yes, 2018	--	Yes, 2018	--
Iodine	Limited, 2018	--	--	--	3-5 y, 2018	--	Yes, 2018	--	Yes, 2018	--

- **Limited data during first 1,000 days**
- **Limited data at state level**

*NHANES iron indictors not collected 2011-2014. Pregnant women not oversampled after 2006. Men 12+y started 2017-2018.
**State-based estimates among WIC participants prior to 2012 obtained via PNSS and PedNSS.

Breastfeeding initiation and duration rates have increased over the past two decades



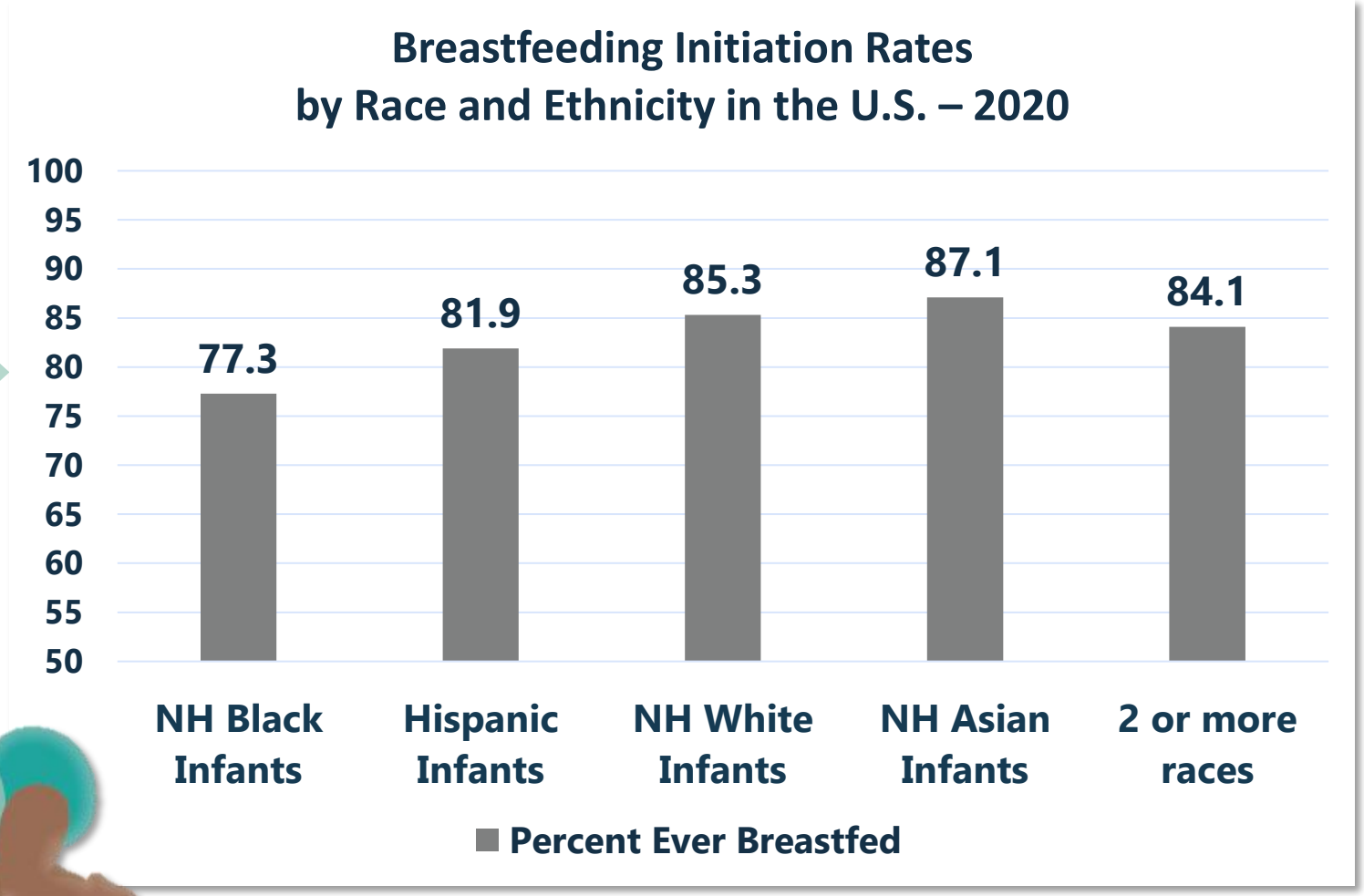
Source: National Immunization Survey

Gap: Disparities in Breastfeeding Rates by Race and Ethnicity

Breastfeeding rates are rising overall, but disparities remain:

Community efforts to increase access to support for ALL MOMS

Narrowing the Gap



Source: https://www.cdc.gov/breastfeeding/data/nis_data/rates-any-exclusive-bf-socio-dem-2020.htm

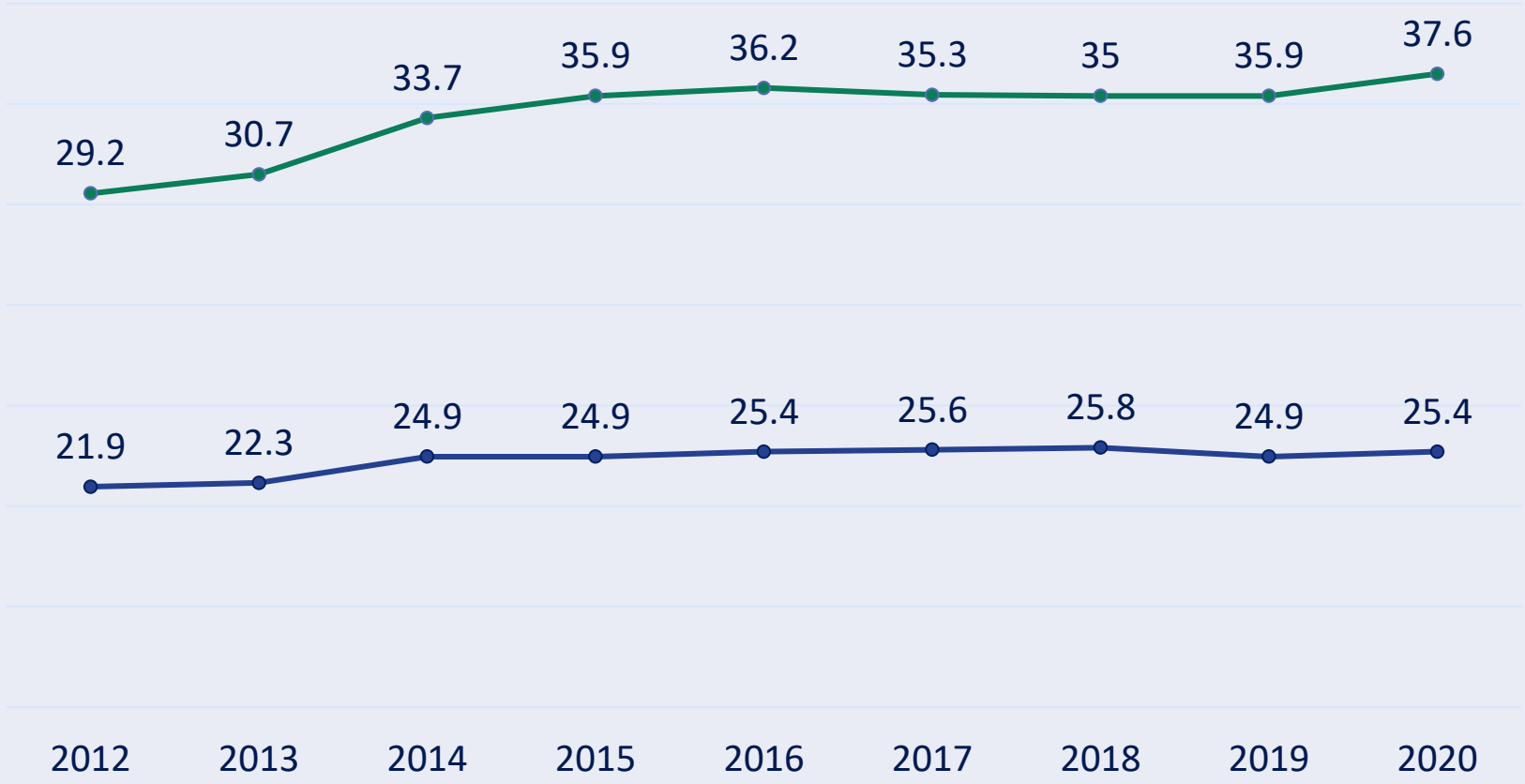
Fun Fact #3

True or False: We have met our **Healthy People 2030 goals** for any breastfeeding at 12 months and exclusive breastfeeding at 6 months.

A. True
B. False

Breastfeeding rates have increased over time but are not meeting national targets

Percentage of U.S. Children Who Were Breastfed, by Birth Year



Any breastfeeding at 12 months

Healthy People 2030 Goal: 54.1%

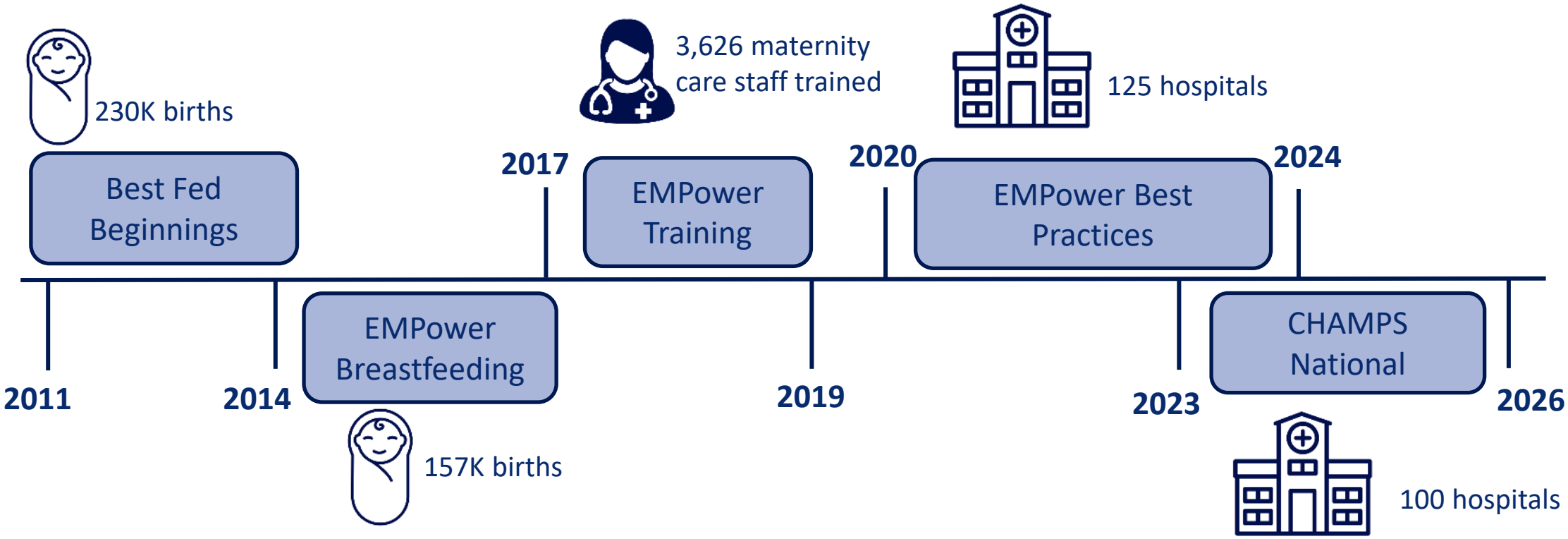
Exclusively through 6 months

Healthy People 2030 Goal: 42.4%

Source: National Immunization Survey

Opportunity:
Maternity care practices in hospitals in the first hours and days after birth make a difference in whether and how long infants are breastfed.

Hospital quality improvement projects make a difference

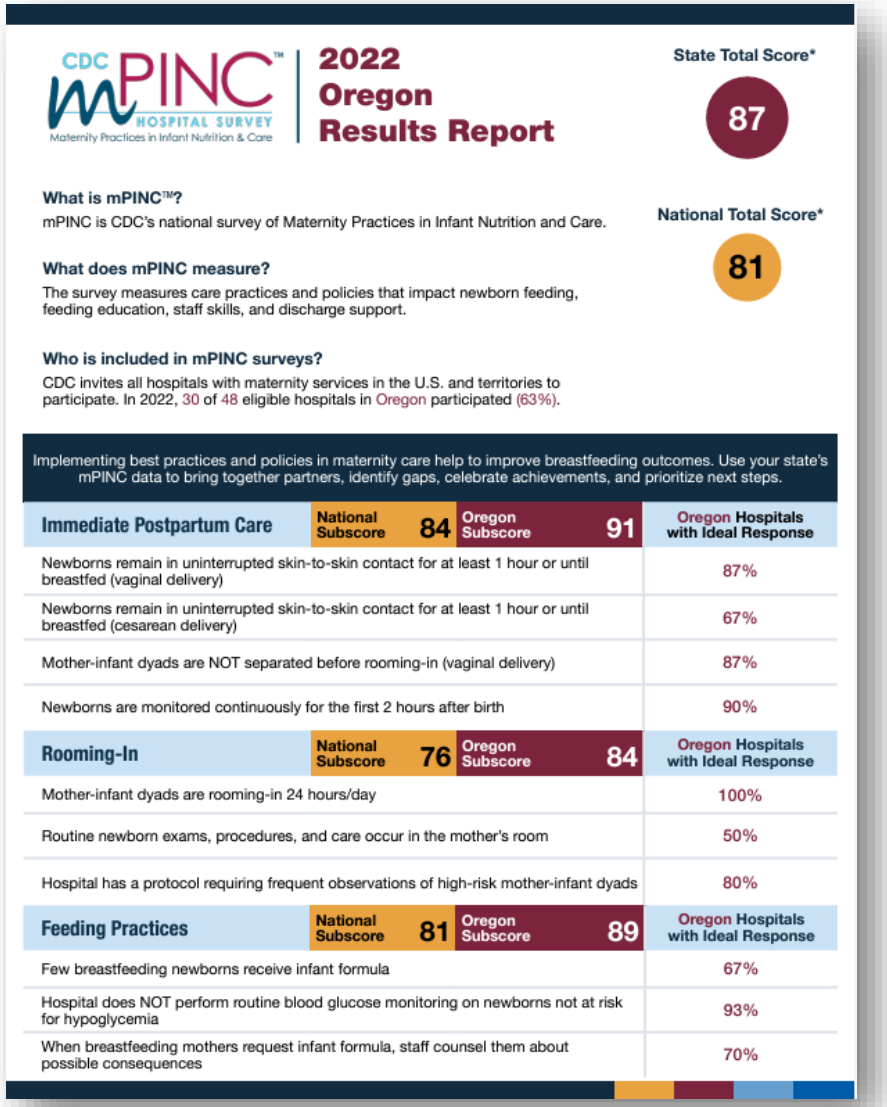


Resource: CDC's Maternity Practices in Infant Nutrition and Care (mPINC) Survey

CDC mPINC™ HOSPITAL SURVEY
Maternity Practices in Infant Nutrition & Care

GOAL:	Provide actionable data for hospitals to increase breastfeeding initiation and duration in the U.S.
HOW:	Assess maternity care practices and provide feedback to encourage hospitals to make improvements that better support breastfeeding.
WHO:	All hospitals with maternity services in the U.S. and territories invited to participate (72% of eligible hospitals participated in 2022).

Helping hospitals better support breastfeeding



CDC mPINC™ HOSPITAL SURVEY
Maternity Practices in Infant Nutrition & Care

2022 Oregon Results Report

State Total Score*: 87

National Total Score*: 81

What is mPINC™?
mPINC is CDC's national survey of Maternity Practices in Infant Nutrition and Care.

What does mPINC measure?
The survey measures care practices and policies that impact newborn feeding, feeding education, staff skills, and discharge support.

Who is included in mPINC surveys?
CDC invites all hospitals with maternity services in the U.S. and territories to participate. In 2022, 30 of 48 eligible hospitals in Oregon participated (63%).

Implementing best practices and policies in maternity care help to improve breastfeeding outcomes. Use your state's mPINC data to bring together partners, identify gaps, celebrate achievements, and prioritize next steps.

	National Subscore	Oregon Subscore	Oregon Hospitals with Ideal Response
Immediate Postpartum Care	84	91	
Newborns remain in uninterrupted skin-to-skin contact for at least 1 hour or until breastfed (vaginal delivery)			87%
Newborns remain in uninterrupted skin-to-skin contact for at least 1 hour or until breastfed (cesarean delivery)			67%
Mother-infant dyads are NOT separated before rooming-in (vaginal delivery)			87%
Newborns are monitored continuously for the first 2 hours after birth			90%
Rooming-In	76	84	
Mother-infant dyads are rooming-in 24 hours/day			100%
Routine newborn exams, procedures, and care occur in the mother's room			50%
Hospital has a protocol requiring frequent observations of high-risk mother-infant dyads			80%
Feeding Practices	81	89	
Few breastfeeding newborns receive infant formula			67%
Hospital does NOT perform routine blood glucose monitoring on newborns not at risk for hypoglycemia			93%
When breastfeeding mothers request infant formula, staff counsel them about possible consequences			70%

Visit: https://www.cdc.gov/breastfeeding/data/mpinc/index.htm

Life Stage: Early Childhood and Adolescence

Fun Fact #4

Among children 1-5 years old, what portion **did not eat a daily vegetable**?

A. One tenth
B. About a quarter
C. About half
D. All

Gap: Young Children Consume too few Vegetables & too many Sugar-Sweetened Beverages

Morbidity and Mortality Weekly Report (*MMWR*)

Fruit, Vegetable, and Sugar-Sweetened Beverage Intake Among Young Children, by State — United States, 2021

Weekly / February 17, 2023 / 72(7);165–170

Heather C. Hamner, PhD[1]; Carrie A. Dooyema, MPH, MSN[1]; Heidi M. Blanck, PhD[1]; Rafael Flores-Ayala, DrPH[1]; Jessica R. Jones, PhD[2]; Reem M. Ghandour, DrPH[2]; Ruth Petersen, MD[1] (VIEW AUTHOR AFFILIATIONS)

Among children 1-5 years:

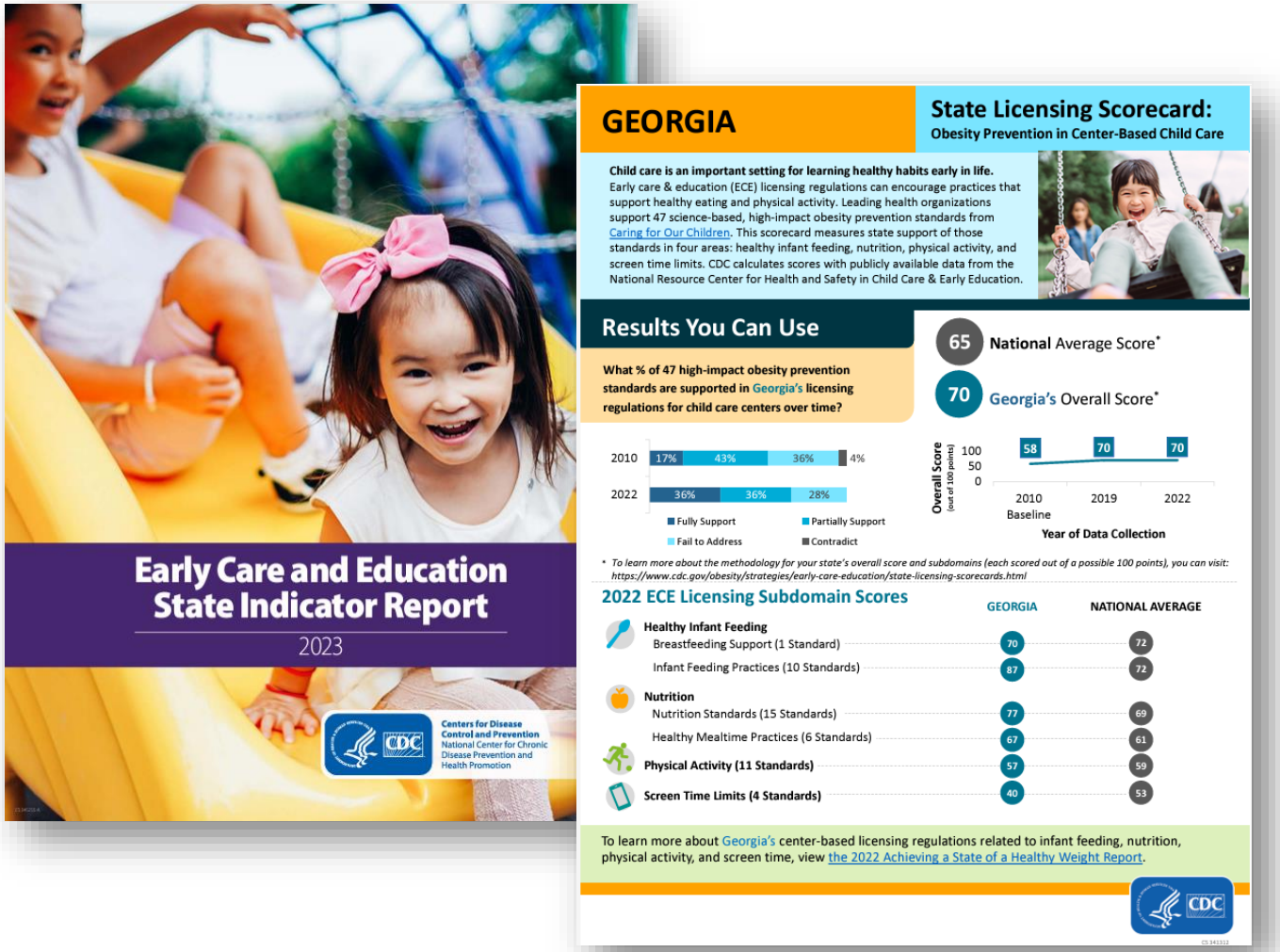
Almost a third (32%) did not eat a daily fruit

Nearly half (49%) did not eat a daily vegetable

Over half (57%) drank SSB ≥1 time per week

Source: National Survey of Children's Health

Resource: CDC's ECE State Indicator Report & State Licensing Scorecards



GOAL:	Provide actionable data for states to evaluate and improve requirements and supports for ECE facilities.
HOW:	Assess state licensing regulations and supports for ECE facilities for alignment with best practices for obesity prevention.
WHO:	50 U.S. states and D.C. are included in the 2023 ECE State Indicator Report & State Licensing Scorecards.

Helping states improve their policies and supports for healthier ECE facilities

Visit: https://www.cdc.gov/obesity/strategies/ece-state-indicator-report.html

Opportunity: CDC-Recognized Family Healthy Weight Programs

GOAL:	Establish supply and demand for family-based lifestyle change programs to treat overweight and obesity.
HOW:	Work with insurance and health care providers to cover and offer evidence-based family healthy weight programs.
WHO:	Health care, community, and public health settings can offer family healthy weight programs to families who are eligible.

Helping treat overweight and obesity early through positive family lifestyle change

Current list of CDC-recognized family healthy weight programs that are evidence-based, proven to be effective, and packaged for widespread dissemination:

- **Mind, Exercise, Nutrition…Do It! (MEND)**
- **Healthy Weight and Your Child**
- **Smart Moves for Kids/Bright Bodies**
- **Healthy Weight Clinic**
- **Family-based Behavioral Treatment (FBT)**
- **Building Healthy Families**

Visit: https://www.cdc.gov/obesity/strategies/family-healthy-weight-programs.html

Life Stage: Adulthood

Gap: Fruit and Vegetable Intake Among Adults is Low

Centers for Disease Control and Prevention
MMWR
Morbidity and Mortality Weekly Report
Weekly / Vol. 71 / No. 1
January 7, 2022

Adults Meeting Fruit and Vegetable Intake Recommendations — United States, 2019

Seung Hee Lee, PhD[1]; Latetia V. Moore, PhD[1]; Sohyun Park, PhD[1]; Diane M. Harris, PhD[1]; Heidi M. Blanck, PhD[1]

Among adults:

Only 12% met daily fruit recommendation
Only 10% met daily vegetable recommendation

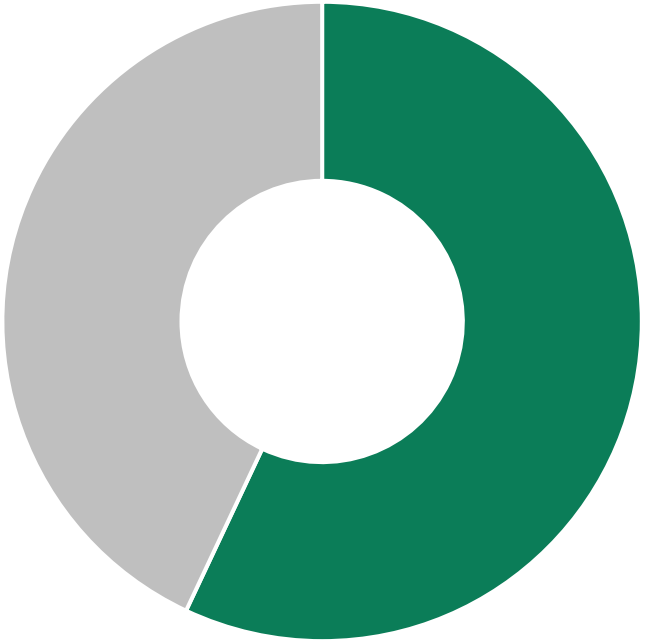
Source: Behavioral Risk Factor Surveillance System (BRFSS)

Fun Fact #5

Which **beverage type** accounts for the largest portion of adult sugar-sweetened beverage consumption?

A. Sweetened fruit drinks
B. Sweetened coffee/tea drinks
C. Sports/energy drinks
D. Regular soda

Gap: Adults Consume too many Sugar-Sweetened Beverages



63% of adults drank sugar-sweetened beverages ≥1 time per day

PREVENTING CHRONIC DISEASE
PUBLIC HEALTH RESEARCH, PRACTICE, AND POLICY
Volume 18, E35 APRIL 2021

RESEARCH BRIEF

Prevalence of Self-Reported Intake of Sugar-Sweetened Beverages Among US Adults in 50 States and the District of Columbia, 2010 and 2015

Jennifer R. Chevinsky, MD, MPH[1,2]; Seung Hee Lee, PhD[1]; Heidi M. Blanck, PhD[1]; Sohyun Park, PhD[1]

Opportunity: Food Service Guidelines & Healthy Nutrition Standards

GOAL:	Implement food service and nutrition guidelines and associated healthy food procurement systems to increase healthy food availability & help more people meet the Dietary Guidelines for Americans.
HOW:	Promote model policies and practices where food and beverages are served to increase local and sustainable procurement and reduce food waste and related emissions.
WHO:	Hospitals, college campuses, worksites, cafeterias, food banks and pantries, community settings, federal facilities, corner and convenience stores, and more.

Helping increase healthy options where food is served and sold

Visit: https://www.cdc.gov/nutrition/state-and-local-strategies/priority-nutrition-strategy.html

Opportunity: Fruit and Vegetable Voucher Incentive & Produce Rx Programs

Fruit and vegetable voucher incentives are coupons or cash incentives that consumers can use at the point of purchase.

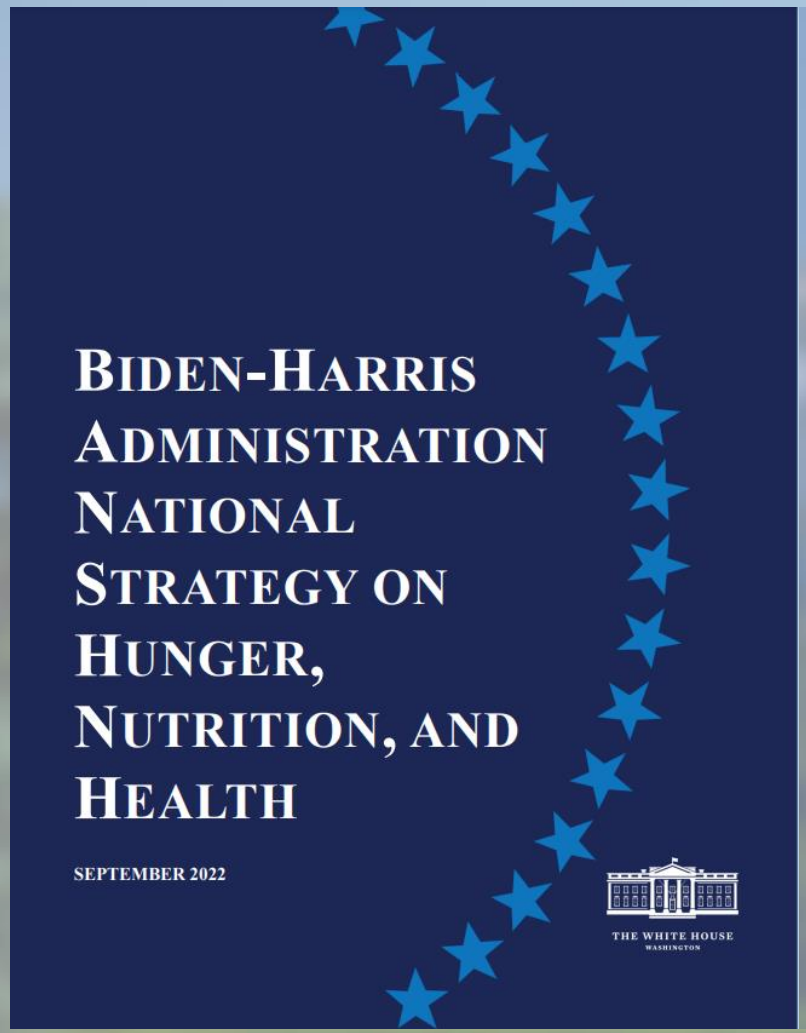
Produce prescriptions (Rx) are prescriptions for fruits and vegetables to be used in a health care setting or in the patient's community.

GOAL:	Strengthen nutrition security and improve affordability and availability of produce and healthy food options.
HOW:	Expanding existing nutrition assistance programs such as fruit and vegetable voucher incentive programs and produce prescription programs.
WHO:	Cross-sector partnerships between health care, public health, transportation, and agriculture. Includes food growers, food retailers, and community members.

Helping improve nutrition security and healthy food affordability

Visit: https://www.cdc.gov/nutrition/state-and-local-strategies/priority-incentives-prescriptions.html

Harvesting the Crop: This is our time!

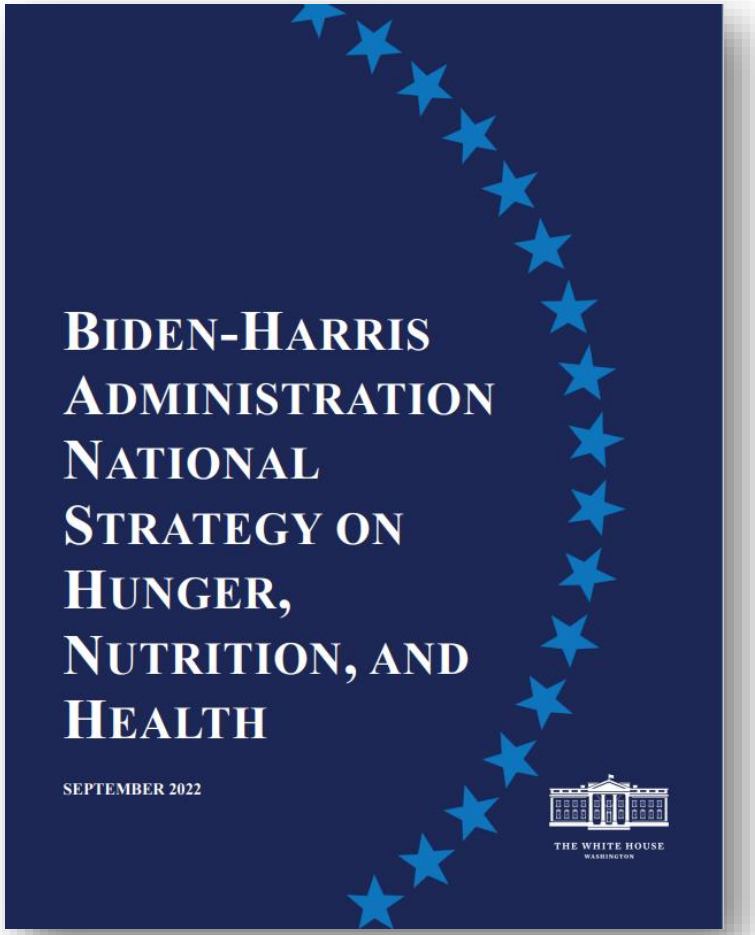


Opportunity: White House National Strategy on Hunger, Nutrition, and Health

White House National Strategy

Key DNPAO Strategies in the White House Strategy on Hunger, Nutrition, and Health:

- **State Physical Activity and Nutrition (SPAN) Program**
  - Expand to 50 State Program
- **Food Service Guidelines**
  - Expand in Federal Facilities
- **Family Healthy Weight Programs**
  - Expand access through funding opportunities – includes screening for food security and referral to nutrition resources



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Scan me!

THE INSIDER

News and Updates from CDC's
Division of Nutrition, Physical Activity, and Obesity

February 2024

Greetings,

Last year we asked groups applying for two of our funded programs to consider Family Healthy Weight Programs (FHWPs) as a strategy to help treat childhood obesity. This was the first time we included FHWPs as possible work in the funding opportunity.

Twenty-two recipients of funding for Racial and Ethnic Approaches to Community Health (REACH) and the High Obesity Program (HOP) are including FHWP in their workplans. We applaud the recipients who embraced this new opportunity to make FHWPs more accessible and sustainable.

FHWPs are family-centered, intensive health behavior and lifestyle treatment programs. They focus on nutrition, physical activity, and behavior change strategies. FHWPs can be adapted for cultural context and family needs. They can be delivered in a clinical or community setting by trained program staff.

Though FHWPs are a new optional strategy for our recipients, they have a longstanding evidence base and are the foundational treatment for childhood obesity. They are included in national guidelines from the US Preventive Services Task Force, the American Academy of Pediatrics, and the American Psychological Association.

Research RoundUP

Division of Nutrition, Physical Activity, and Obesity (DNPAO)

DNPAO Publication List - January and February 2024

Physical Activity

Few U.S. Municipalities Have Vison Zero Plans

Vision Zero is a strategy to eliminate traffic fatalities and to promote equitable mobility options for all road users. For a recently published paper, CDC authors used a nationally representative survey to estimate the prevalence of Vision Zero action plans or strategies.

Overall, just 1 in 12 U.S. towns and cities has a Vison Zero plan. Such plans are more common in larger municipalities. Vision Zero plan prevalence was:

- 7.7% in municipalities with at least 1,000 residents.
- 4.8% in municipalities with 1,000 to 2,499 residents.
- 37.8% in municipalities with more than 125,000 residents.

The authors noted that adoption of Vision Zero plans and strategies could help address traffic fatalities.

Prevalence of Vision Zero action plans or strategies: USA, 2021

Webber BJ, Whitfield GP, Rose KM, Stowe EW, Zaganjor H, Ederer DJ, Fulton JE. *Inj Prev.* February 20, 2024.

Questions?

Thank you!

For more information, contact: DNPAOPolicy@cdc.gov

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