The CHOICES project at the Harvard T.H. Chan School of Public Health is working to help reverse the U.S. obesity epidemic by identifying the most cost-effective childhood obesity interventions.

**Obesity prevalence likely to grow worse**

The majority of today's children will have obesity at age 35

- Age 7: 9%
- Age 10: 12%
- Age 15: 26%
- Age 20: 26%
- Age 25: 32%
- Age 30: 40%
- Age 35: 55%
- Age 40: 59%

Projections show that 59% of today's 2-year-olds will have obesity when they are 35.

**DENVER PUBLIC HEALTH**

Participation in the CHOICES Learning Collaborative Partnership

Denver Public Health participated in a 12-month training, technical assistance and modeling initiative to identify childhood obesity prevention strategies that offer the best value for money.

The Denver team examined the expected costs, health outcomes, and health care costs avoided if the following interventions were implemented in Denver over 10 years:

1) Clinical counseling in pediatric care settings
2) A local excise tax on sugary beverages

The selected interventions aim to leverage existing partnerships and efforts to prevent childhood obesity.

**How does CHOICES work to combat childhood obesity?**

CHOICES uses cost-effectiveness analysis to compare the costs and outcomes of different policies and programs promoting improved nutrition or increased physical activity over 10 years.

**The CHOICES cost-effectiveness analysis examines:**

- How many and what types of people would be affected by the policy/program?
- What the effect of the policy/program would be on health?
- What the implementation costs of a policy/program intervention will be and what the potential health care cost savings will be?
DENVER: Study of Technology to Accelerate Research (STAR)

As part of the CHOICES Learning Collaborative Partnership, Denver Public Health examined the projected cost, population reach, and impact on obesity to implement the STAR intervention in Denver Health’s pediatric primary care settings. Using local data, the Denver team worked with CHOICES to create a virtual population that is representative of people living in Denver. CHOICES cost-effectiveness analysis compared the costs and outcomes of the implementation of STAR within pediatric primary care practices in Denver Health with the costs and outcomes associated with not implementing STAR over a 10 year time period (2017-2027).

Implementing STAR in Denver Health pediatric primary care settings is an investment in the future. By the end of 2027:

- **19,400 CHILDREN REACHED**
  - in the Denver STAR intervention over 10 years

- **303 CASES OF CHILDHOOD OBESITY PREVENTED**
  - in 2027

- **$32.80 COST PER CHILD**
  - to implement Denver STAR over 10 years

**What is STAR?**

The Denver STAR intervention leverages EHR decision support tools, operated by EPIC software, to promote recognition of pediatric obesity and facilitate recommended screening and management during pediatric well-child care visits. Denver STAR intervention includes direct-to-parent communications in which parents receive text messages to support behavior change for their children. Families would also have access to a webpage that shares local health and wellness resources. Primary Care Physicians (PCPS) who see pediatric patients at Denver Health clinics would be trained in the EHR changes and motivational interviewing techniques to facilitate weight management discussions with the patients and families.
DENVER: Sugary Drink Excise Tax ($0.02/ounce)

As part of the CHOICES Learning Collaborative Partnership, Denver Public Health examined the projected cost, population reach, and impact on obesity to implement a $0.02/ounce sugary drink excise tax in Denver. Using local data, the Denver team worked with CHOICES to create a virtual population that is representative of people living in Denver. CHOICES cost-effectiveness analysis compared the costs and outcomes of implementing the $0.02/ounce excise tax on sugary drinks with the costs and outcomes associated with not implementing a sugary drink tax over a 10 year time period (2017-2027).

Implementing a $0.02/ounce excise tax on sugary drinks is an investment in the future. By the end of 2027:

- 78 deaths prevented
- 5,580 cases of obesity prevented
- $11 health care costs saved per $1 invested

What is a Sugary Drink Tax?

A sugary drink tax is an excise tax by the city at the manufacturer or distributor level. The proposed tax amount would be $0.02 per ounce. It is assumed that, over 10 years, there is a 100% pass through of tax. Administered by Denver Department of Revenue, this tax would apply to all beverages with caloric sweeteners, but not 100% juice or milk.

Over 10 years, the tax would cost...

- $3.1 million to implement
- $33.9 million in health care costs
- HEALTH CARE COSTS SAVED PER $1 INVESTED

$11
Research suggests that there is disproportionate marketing of sugary drinks to Hispanic/Latino and non-Hispanic Black populations. We project that, on average, greater health benefits will accrue to communities of color who, on average, consume more sugary drinks than non-Hispanic White residents in Denver. As a result, disparities in obesity outcomes will decrease following implementation of the proposed tax.

**Reduction in obesity prevalence (in 2027) by race/ethnicity**

- **Hispanic/Latino**: 1.09% reduction
- **Non-Hispanic Black**: 0.56% reduction
- **Other**: 0.45% reduction
- **Non-Hispanic White**: 0.28% reduction

1. Represents percentage point reduction in obesity prevalence
2. Reference category

**COMMUNITIES OF COLOR**

- 48% of Denver's total population
- 78% of projected total cases of obesity prevented from excise tax