

Making CHOICES in a Health Department

CHOICES Case Study #2 (Advanced)

Teaching Note

Introduction

This teaching note provides teachers with the information and guidance needed to adopt this case in your classroom. The teaching note covers background material on the case narrative, including synopsis, explanation of its real-world basis, teaching objectives, target audience, and a list of case materials and required readings for students. It also includes a detailed lesson plan and brief PowerPoint mini-lecture presentation for the teacher designed with a 1.5 hour session in mind. Of course, teachers can modify the lesson plan to accommodate a class period of a different length. At the end of this teaching note are a written homework assignment and in-class assignment instructions. The written homework assignment should be given to students along with the required reading one week before the class session in which the case will be discussed. The instructions for the in-class assignment should be handed out to students in class at the time the activity will begin after the class discussion of this case.

Synopsis

In this second of two CHOICES teaching cases, the Bird County health team has received results from their research partners at the CHOICES collaborative suggesting their preferred childhood obesity intervention, Active Recess for young schoolchildren, won't prove as cost-effective as they hoped. Still, they want to pursue it, as a healthy practice for children that will effectively teach them healthy habits for later life, but it needs to be paid for. Could the necessary investment be tied to a potential new tax on sugary drinks that is not only shown, in the same CHOICES study, to be exceptionally cost-effective but also a source of revenue? As their local state legislator becomes involved, the Bird County health team faces a fresh challenge: the arena of state politics, and the complex interplay of health policy, legislation and communications.

This case builds on case 1, in which a county health team from a Southern state joins the Childhood Obesity Intervention Cost-Effectiveness Study (CHOICES) learning collaborative that investigates cost-effective approaches to address childhood obesity. With lots of ideas on how to encourage healthy eating and physical activity for children, the team realized they lack evidence for what actually works. Through CHOICES, they narrow down the list of possible interventions using principles of cost, reach, and effectiveness to identify an intervention that has a real chance of reducing the childhood obesity rate in Bird County at a relatively low cost.

Evidence-Basis: CHOICES Overview

The Childhood Obesity Intervention Cost-Effectiveness Study (CHOICES) is working to help reverse the U.S. obesity epidemic by identifying the most cost-effective childhood obesity interventions. Adults and children in the U.S. consume more calories from foods and beverages than they are expending. Over the past few decades, this trend has created an obesity epidemic. Identifying what works to prevent childhood obesity has become a priority for public health researchers, policymakers, and the general public. Little attention has been paid, however, to identifying solutions that not only work, but that deliver the best results for the dollars invested in them. Some interventions can even produce cost savings. CHOICES is focused on identifying these cost-effective interventions.

The CHOICES study has generated cost-effectiveness estimates for more than 40 of the most widely promoted or implemented childhood obesity prevention interventions, many of which have never been fully evaluated for comparative- or cost-effectiveness. Our research identifies cost-effective childhood obesity intervention strategies within four key settings:

- **School:** Strategies in the school setting involve policies and programs that impact formal educational settings for children, where students learn under the direction of teachers. Typically, this setting refers to elementary and secondary educational spaces for children in kindergarten through 12th grade.
- **Early Care and Out of School Time:** Strategies in the early care and education and out of school time setting involve policies and programs that impact formal programs for infants, toddlers and preschoolers (often referred to as early care and education) and formal programs for school age children during out-of-school time, such as afterschool and before school care and summer programs.
- **Clinical/Treatment:** Strategies in the clinical setting involve policies and programs that impact children either in medical care settings (such as pediatric primary care offices, hospitals or community health centers) or in connection with medical care providers (for example referrals from primary care providers to group nutrition and physical activity counseling programs). These strategies will include treatment strategies for children with obesity.
- **Community:** Strategies in the community setting involve policies and programs that often involve a range of actions by various entities, like revenue/finance (taxes), health agencies (inspectional services), nutrition assistance programs (like SNAP, WIC) and transportation/planning (e.g. safe routes to school engineering road and crossing changes). Multi-setting strategies will often be included in this group.

The CHOICES Learning Collaborative Partnership is one way in which the CHOICES team works with health agencies to create new evidence to inform decision-making. This training, technical assistance and modeling initiative is designed to build capacity among state and local decision-makers to understand and use cost-effectiveness analysis to identify childhood obesity prevention strategies that offer the best value for money.

This teaching case is a fictionalized composite of real-world experiences of individual stakeholders who have participated in the CHOICES Learning Collaborative Partnership. With realistic story elements and characters, the case allows students to step into the alliance of researchers, public health practitioners, and community partners who are working to help reverse the U.S. obesity epidemic by identifying the most cost-effective childhood obesity interventions. Along the way, students will learn the principles and techniques they will need to identify solutions with good evidence for effectiveness and integrate concepts of reach and cost into decision-making processes.

Learning Objectives

Upon successful completion of this case study module, participants and students should be able to:

1. Compare effective intervention strategies and identify those that have the largest impact on reducing obesity
2. Compare effective intervention strategies and identify those that are most cost-effective at reducing obesity

3. Think strategically about what organizations and individuals need to be involved in developing policy and programmatic interventions to reduce obesity

Target Audience

The primary target audience for this teaching case is graduate students in public health, particularly in courses focused on obesity, nutrition, public health planning, intervention design, and health policy. The case is also suitable for graduate students in other disciplines, such as community medicine, communications, community health, and for advanced undergraduate students in similar courses. Journalists and nonprofit organizations interested in health-based academic collaborations with practitioners might also be interested.

Case Materials

The complete case consists of the teaching case narrative with cast of characters (“stakeholders”), a teaching note, which includes a lesson plan, written homework assignment, in-class activity instructions, a PowerPoint mini-lecture that teachers can present in class to introduce the case, plus two companion technical documents that are available at no cost via the Internet and several required scientific articles, lay articles, and investigative journalism pieces.

Provided in Teaching Case:

1) Cover page, authors, suggestion citation, and funding (1 page) & case narrative for students “Making CHOICES in a Health Department: Case 2” (10 pages)

2) Teaching note document, including introduction, synopsis, evidence-basis and CHOICES overview, learning objectives, target audience, reading for students, acknowledgments and funding, and lesson plan (5 pages)

Keep in mind that teachers can modify the lesson plan and assigned readings to accommodate a shorter or longer class period or to extend the case over two class periods to spend more time introducing key concepts about cost, effect, and reach of interventions.

3) Case Pair Activity (1 page)

4) Additional materials including data tables on cost, effect, and reach of sample childhood obesity prevention interventions (1 page), PowerPoint mini-lecture (11 slides), comparison of relevant interventions (1 page), and a definitions document (1 page)

Teachers can present the brief mini-lecture with slides in class to introduce students to key concepts related to cost, effect, and reach.

Reading for Students

1) Provided case narrative document plus Appendix with cost/effect/reach terms and peer-reviewed and news articles. Teachers should distribute the readings to students at least one week before the class session in which the case will be discussed.

2) Required peer-reviewed article: **Three Interventions That Reduce Childhood Obesity Are Projected to Save More Than They Cost to Implement.** Gortmaker SL, Claire Wang Y, Long MW, Giles CM, Ward ZJ, Barrett JL, Kenney EL, Sonnevile KR, Afzal AS, Resch SC, Cradock AL. *Health Affairs*, 34, no. 11 (2015):1304-1311.

3) Recommended articles (including Appendices):

Using cost-effectiveness analysis to prioritize policy and programmatic approaches to physical activity promotion and obesity prevention in childhood. Cradock AL, Barrett JL, Kenney EL, Giles CM, Ward ZJ, Long MW, Resch SC, Pipito AA, Wei ER, Gortmaker SL. *Prev Med.* 2017 Feb;95 Suppl:S17-S27.

Cost-Effectiveness of a Clinical Childhood Obesity Intervention. Sharifi M, Franz C, Horan CM, Giles C, Long M, Ward Z, Resch S, Marshall R, Gortmaker S, Taveras E. *Pediatrics.* 2017; 140(5): e20162998.

Forecasting Trends in Child Obesity with Zach Ward. <https://vimeo.com/245188474>

Simulation of Growth Trajectories of Childhood Obesity into Adulthood.

Ward Z, Long M, Resch S, Giles C, Cradock A, Gortmaker S. *N Engl J Med.* 2017 Nov 30;377(22):2145-2153.

“More than half of U.S. kids will be obese by the time they’re 35, study predicts” LA Times. Nov 30, 2017
<https://www.latimes.com/science/sciencenow/la-sci-sn-childhood-obesity-future-20171130-story.html>

“Prudent Ways to Fight Childhood Obesity” New York Times. June 22, 2015
<https://well.blogs.nytimes.com/2015/06/22/seeking-efficient-paths-to-slimmer-children/>

4) Companion website: <http://choicesproject.org/actionkit>

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Questions and Feedback

Please send an email to HPRC@hsph.harvard.edu to submit any questions or feedback.

Lesson Plan

| Activity | Time allocated |
|---|----------------|
| Introduction to the Case with Overview Slides | 25 minutes |
| Case Pair Activity (2 students per group) (see separate document) | 45 minutes |
| Class Testimony sharing & Wrap up | 20 minutes |

Introduction

- 5 minute overview of case and plan for the day
- 10 minute class discussion
 - Before we start the small-group work, let's take a look at the case and its underlying narratives together:
 - Q1: What surprised you about the readings?
 - Q2: What were the conflicts in the case?
 - Q3: What did you learn about cost, effect, and reach from the readings?
- 10 minutes of slides: Use existing CHOICES slides on the basics of cost, effect, and reach to get class on the same page with the terms being discussed

Case Pair Activity

(See separate document to share with students)

- The Bird County Team is interested the **Active Recess** school intervention and local politicians see the appeal of an **SSB tax** address obesity. Use the CHOICES action kit to compare these two interventions. (30 minutes)
- Create talking points for lobby day: Select metrics/visuals that will be most persuasive. (15 minutes)

Class Testimony Sharing

- 15 minutes for pairs to practicing delivering testimony
- 5-minute wrap up: share most successful and challenging part of the testimony