



HARVARD
T.H. CHAN

SCHOOL OF PUBLIC HEALTH
Prevention Research Center
on Nutrition and Physical Activity



Childhood Obesity Intervention
Cost-Effectiveness Study

Making CHOICES in a Health Department: Case 2

Narrative for Students

A teaching case from the CHOICES Project at the
Prevention Research Center on Nutrition and
Physical Activity

Harvard T.H. Chan School of Public Health

Written by Eric Weinberger,
with contributions from Angie Cradock,
Steven L Gortmaker, Katie Giles, Rebekka Lee.
Do not cite or quote without permission.

Suggested Citation:

Weinberger E, Giles C, Cradock A, Gortmaker S, Lee R. *Making CHOICES in a Health Department: Case 2* [Teaching Case Study]. The CHOICES Project at the Prevention Research Center on Nutrition and Physical Activity, Harvard T.H. Chan School of Public Health, Boston, MA; May 2021.

For more information, email: choicesproject@hsph.harvard.edu

Funding:

This work has been supported by grants from The JPB Foundation and the Centers for Disease Control and Prevention (U48DP006376). The findings and conclusions are those of the author(s) and do not necessarily represent the official position of the Centers for Disease Control and Prevention, or other funders.

Making CHOICES in a Health Department: Case 2

Narrative for Students

Sandra Richards could see on her phone that the call was from Ruth at the CHOICES program at Harvard, so she picked it up. “There’s no savings, Sandra,” she heard her say.

“None at all?”

“I should be exact. The savings don’t exceed what it takes to carry out the initiative. Every dollar you put in, you get *something* back in obesity-related health care costs, down the line. But those dollars aren’t more than what you spent on staff time, activities, equipment.”

It wasn’t as bad as it sounded. In terms of cost effectiveness, the intervention did produce something for the dollars, and it wasn’t that expensive when you considered how much it cost, per child. And since the intervention was Active Recess, it meant that the little kids in Bird County’s elementary schools were still moving more than they would, ordinarily, each day. “Active Recess” wasn’t just turning small children loose in the schoolyard and hoping they kept themselves moving. It required some investment (as much as six hundred dollars per school) in activities led by trained personnel, new playground markings and portable play equipment.

“I’d say it’s a powerful investment in children,” said Ruth, the Harvard researcher.

“And there good evidence it’s effective,” Richards replied. “If we’re going to take care of children in our county, it’s going to cost money. I think we have to emphasize that.” A nurse educator still in her first year on the county health team,

she'd taken over leadership of the collaborative with the Harvard researchers when her former boss, a Bird County mainstay for decades, retired earlier that year.

Still, Richards indicated, it would be nice to report a result that everyone could understand in a tidy infographic: that for every dollar invested in Active Result, the County saved... more than that dollar. She mentioned her concern to Ruth.

"You've seen some of our state infographics, haven't you? Let me email one right now." On the phone, they could review it together.

"Bottom right hand corner illustration, page one. 'Active Recess, an investment in the future.'"

The document outlined that, by 2027, over one million children in that particular state would be reached, at a \$25 cost per child over ten years of the initiative. "Yes, it costs nearly \$25 million dollars, but that's across an entire state, over ten years. But think about it: that's \$25 per child over the decade, not even three bucks annually. Call it a cup of coffee per child each year."

"Our cups of coffee are cheaper than yours in Boston, I think. But you're right, that will go down better. I hope."

As they talked, Richards expressed fear that interest in Active Recess would die just there, with the cost-effectiveness data from the Harvard microsimulation. The partnerships weren't robust enough; the county education team, for instance, had been absent when the Harvard researchers conducted their recent site visit in a local library. Their involvement could have built momentum and goodwill and spread word throughout the state that an Active Recess intervention might be a not-too-expensive way to keep young children healthy. Now there was this figure that might complicate the message; since, as Richards said, "it's hard to get people to invest in prevention when they can't see the health impact right away, when it takes years."

What would be great, Richards and Ruth agreed, would be to do something they'd seen some other locations put into place: a strategy that could improve health, produce health care savings that outweighed implementation costs, and even—could this happen too?—raise revenue to plow back into kids' health through

programs like Active Recess. More physical activity could not just help kids grow up at a healthy weight, but also improve their ability to focus in class, react calmly to stress and sleep better. The obvious intervention, both of them knew, was an excise tax on sweetened and sugary beverages (SSB), which reached everybody in the districts where it was imposed, and, the CHOICES modeling demonstrated, would save about \$30 in health care costs for every single dollar invested over the next ten years, while producing nearly twenty-five million dollars a year in revenues. Like tobacco, you taxed a vice to pay for a virtue. “But that’s not the kind of thing I can make happen on my own,” said the first-year nurse educator on the county health team.

Richards, truth be told, hadn’t been too interested in a sugary-drink tax, which had been added quite late to the list of Bird County’s preferred interventions that were being modeled by the CHOICES team. Active Recess made much more sense to her—intuitively, viscerally—but now they were learning that for every dollar they spent, they might get just nine cents back. Which wasn’t a reason not to do it, as, again, an investment in teaching kids healthy habits for life, but it wasn’t the exciting lesson to communicate. Bird County’s involvement in CHOICES was, she realized, becoming a communications project, at her level anyway. If she wanted parents and teachers to become excited about Active Recess, she needed partners in public education. If she wanted people to know how it could be paid for, she needed to offer information about something that could raise the funds, like a sugary-drink tax. She’d learned at the CHOICES kick-off session that in a number of states, cities had successfully passed local sugary-drink taxes. But she didn’t know how to thread all these audiences and messages on her own. What she had was data, and the Harvard name behind it. Everything else that had to happen would be in Bird County itself.

After her phone call with Ruth, Richards began composing emails—to her counterparts in education, to state health officials, to people in county administration. She didn’t send any of the emails, but brought them as printouts to a meeting with her new boss in the county health office, Steven Faldo, an

epidemiologist at the state university who took early retirement to work on-the-ground, as he put it, in public health. It was their first long conversation about the CHOICES collaborative, which up to now hadn't involved him. At one point while Richards was talking, he politely interrupted.

“Sandra,” he said, “why assume we’re sharing any of this information?”

The question flummoxed Richards. “Oh,” she replied. “I guess I just assumed of course we would, and that we would need help.”

“Help to do what?” A county health team, Faldo explained, wasn't in a strong position to be lobbying, or appearing to lobby, for a new excise tax, even for the very best reasons. Many would argue it shouldn't.

“Can we talk about Active Recess?” Richards asked.

“What's your sense of why the education folks didn't even show up for the site visit where it was discussed with the Harvard team present? Did anyone follow up?”

No, no one had, since they'd been so short staffed—this effort at drafting emails was, Richards suggested, her effort at a follow-up. Suddenly a whole raft of questions from the CHOICES kick-off session in the winter came back to her: Do we share? Who do we share with? *When* do we share? When and how will industry—in the case of something like a sugary-drink tax—get hold of results? Richards was realizing there were no assumptions, from the Harvard experts, that anything public would necessarily come from the collaborative, apart from communicating the results with their local partners. There was no implementation obligation baked into the CHOICES agreement. “You know your local context better than anyone,” one of the CHOICES staff members had said, “and we don't presume to advise or organize you on that. We're not allowed to advocate. But certainly we're here to help and to listen.”

It was fortunate, Richards later thought, that the boss had an innate sense of all that—the politics, the strategic plan. That might have been giving the career academic a little too much credit for his political savvy. Then again, a career spent at a state university, watching colleagues battle the legislature for every dollar in their budget, taught him caution about things like taxes that aggravated the legislators

more. Advising her to put away her email drafts for now, Faldo said he would make a few calls and do some further thinking.

Before he made his first call, however, Faldo received one. A state legislator from Bird County called to ask if it were true that county health officers were promoting the effect of a sugary-beverage tax.

“Not promoting, studying,” Faldo replied. “There’s a context. We’re studying it against other childhood obesity interventions—or even against doing nothing. Like Active Recess for kids in school. Where’s the benefit to spending more in a program to get kids more physically active? Can we put a dollar figure to what we gain? Or if we tax beverages?”

“What happens when you tax soft drinks?”

“You gain a lot more in health benefits—and also revenues. Sugary juices, too.”

“Why is that?”

Faldo explained that a so-called SSB tax reached everybody, including adults, who purchased a sugary or soft drink, unlike Active Recess, which reached only a number of small children in public elementary schools. Adult health care costs are much more than a child’s. “So anything you can do to improve an adult’s health and keep anyone’s health costs down has good evidence for cost-effectiveness.”

“But you’re a children’s health program.”

“And a chronic disease program. And a prevention program.”

“You know that three hundred Bird County residents work at the Raptor plant, right?”

So many famous soft drinks had originated in the American South—Coca-Cola, of course, in Atlanta; Pepsi from North Carolina and Dr. Pepper in Texas—and if there was one thing famous about Bird outside the county, it was the cream soda-like beverage known as Raptor, bottled in a local plant and shipped across the southeast.

“Oh, yes,” Faldo replied. “But there’s no reason not to collect the data, run the study, share the results. Especially since we’re grant-supported.”

“It’s Harvard,” he added, then wondered if that was a mistake. Harvard didn’t work as a selling-point everywhere in the country.

“Raptor’s going to be against any attempt to tax sugary drinks,” the state legislator, said.

Faldo paused. He didn’t know this legislator, Tim Jeffries, beyond his name and some of his local activities like turning up at fairs or speaking at the local library. He didn’t know who were the donors to his campaigns, for instance. Probably Raptor was one of them. Bird was a poor county, and poor people spent an inordinate amount of their federal SNAP dollars on sugary drinks. The beverage industry always claimed that an SSB tax is a regressive tax, and Faldo envisioned a giant publicity machine gearing up and grinding all of them down.

“The politics are your expertise,” Faldo said. “Nothing actually happens, except we’re sharing the information. But I would like to learn from you, and work with you, in any way that helps our people’s health. And for the kids I’d really like to find a way to fund Active Recess.” Faldo was pleased with himself for this answer and recalled it for some time to come.

It was a day for unexpected phone calls. Richards had one, too—but she missed it. Returning from lunch, she clicked on her office voicemail to hear a message from a woman called Cecile Valdez in the district education office. “I’m so sorry about Active Recess. Please give me a call. I want to fill you in.”

*

Afterwards Richards would reflect at length on what happened, and wonder how often, across the country and in all kinds of public policy debates, it *did* happen. The district education team hadn’t shown up to the CHOICES site visit to Bird County months ago. They had gotten an invitation, of course, and accepted; but during that time the longtime chief county health officer, Gus Pacheco, retired; and at some point one of Valdez’s colleagues, not knowing this, had tried calling Pacheco, left a message that wasn’t returned, then called two weeks later to find someone in a completely different county office answering, then gave up—or, more accurately, plain forgot about it.

“Straight out of mind,” Valdez recounted to Richards. But Active Recess, or a version of it, was something the school district was working on already, and that work continued. They had plans, diagrams, training materials, and estimates from play equipment suppliers.

“It’s going to sound crazy,” Valdez finished with. “But we just hadn’t thought of it as a health issue. It was just our schools, our kids in our playgrounds, and I think we carried on with that tunnel vision.”

At the CHOICES kick-off session and subsequent check-ins, the Harvard team had suggested this kind of thing could happen. But it was something that only occurred to Richards now, when it *did* happen. Who owns the intervention? Who’s the implementer? Does the left hand know what the right one is doing? In some of the big states, one of the CHOICES speakers said when the project kicked off, it’s challenging even to get a sit-down meeting with the revenue people or those in public schools.

“What made you think of calling us now?” Richards had asked many questions but this was the last.

“It’s the strangest thing. We got a call from Tim Jeffries, our state representative. He said he’d been talking to the county health team. He said he’d heard something interesting—‘promising,’ he said—about Active Recess in the schools, and what did we know about it?”

The approach and materials that the school district team had devised for Active Recess weren’t the same as those Ruth and her team had discussed with the CHOICES team—that meant the costs would be different. Did that mean having to run the CHOICES cost-effectiveness algorithm all over? Faldo, when the situation was explained to him, said he didn’t think it mattered in terms of implementation costs. “The difference won’t be significant.” (Of course, the effectiveness might be, he added, depending on whether the chosen intervention was evidence-based or not.) The school district plan cost closer to \$550 per school, whereas the one from the health office was six hundred dollars. “In any case, both are dwarfed by the impact of real savings and real revenue from the tax on sugary drinks.”

At least the two teams were talking now. Progress! Richards said. “Progress,” Faldo agreed. But who was Tim Jeffries in the State House, what was his real interest, and could he be counted on?

“If he calls again,” Faldo said, “I’ll just put him straight through to comms.”

That was the wrong move. Seeing himself as “a policy guy,” Jeffries did not like being routed to a communications officer when he wanted to talk to the resident experts. It made him think there was someone with something to hide.

When the health office communications director came to see him, Faldo had looked up Jeffries’ campaign contributions online. For each election going back four cycles, Raptor had donated between one and three thousand dollars.

“Kind of the enemy, isn’t he?” Faldo asked.

“He isn’t running for re-election, Steve.”

“What’s that mean?”

“He doesn’t say it in so many words, but he wants to go out with a big piece of legislation. Not expecting it to win, but to get it out there, start the conversation. He might just be the one to put a sugary-drink tax on the floor of the legislature.”

“That’s too crafty for me to follow.”

“Steve. He can be your ally, or he can just move on. I would try to work with him on this.”

No state had passed a sugary-drink tax, only a handful of cities—big, well-known cities like Philadelphia; San Francisco and Berkeley; Seattle. Bird County, run by a commissioner and county board, wasn’t like this. But the state could be the first. Or, Faldo’s colleague was suggesting, fail trying to be the first, which was being put to him as still a kind of triumph.

“What about Active Recess?”

“What about it?”

He explained that if the bill tied funding Active Recess to an SSB tax, a failed bill meant no funding and no Active Recess.

“Yes, that’s true. But look, you’re not likely to get it any other way.”

Faldo had been trained as a geographer, and messing around with GIS maps was what he still tended to do when stuck. The CHOICES project had given him a chance to make a new one, showing projected childhood obesity in each census tract in Bird County. When he showed Jeffries his work, during a visit to the State House the following week, the legislator peered carefully at the map and diagrams and said, “there’s still something like a one percentage point increase in childhood obesity in ten years even if we *do* Active Recess and a sugary-drink tax.”

“It would be several percentage points more if we didn’t,” Faldo replied.

“You mean childhood obesity is going up, no matter what?”

Yes, Faldo explained. It was a national crisis and the solution was not in hand.¹ Or rather, there was no one solution. It certainly wouldn’t be medical treatment. There were going to have to be many different approaches at the same time, tailored to the local context, and Americans weren’t going to treat their way out of it.

“Treat our way out?”

“You know what’s an effective intervention everywhere it’s been studied? Bariatric surgery. But it’s ‘effective’ because you reduce body mass index among you who already have severe obesity so this approach is very limited because it won’t prevent any children from developing obesity in the first place.”

Jeffries seemed lost. “I’m sorry, what are we talking about now?”

The Bird County health communications officer, Helen Shapiro, was becoming a regular visitor to Faldo’s office.

“Helen, have I screwed up again? Would you like some coffee?”

“Steve, our job is to focus Tim Jeffries,” she said. “Not distract him, or overwhelm him. Let’s just try to give him one big thing.”

“But there isn’t one. You know that.”

“There’s a frame. He wants to do a sugary-drink tax. Does he frame it as a revenue measure, solely? Does he tie it to something quite specific, even small, like

¹ Ward ZJ, Bleich SN, Cradock AL, Barrett JL, Giles CM, Flax CN, Long MW, Gortmaker SL. Projected U.S. State-Level Prevalence of Adult Obesity and Severe Obesity. *N Engl J Med.* 2019;381:2440-50. doi: [10.1056/NEJMsa1909301](https://doi.org/10.1056/NEJMsa1909301)

Active Recess? Or does he make it generally about paying for health—children’s health? Or, since everyone is worried about the schools, does he play that up? After all, as we know, Active Recess is educational policy, too.”

“Surely that’s his job. He’ll listen to everything we give him and pick one.”

“Steve, he wants us to pick it for him. That’s what I’m trying to tell you.”

Faldo pondered for several moments what Shapiro might be trying to tell him.

Meanwhile Sandra Richards had slipped in to join them. At some point, during a lull in the conversation or strategizing, she said—it sounded to her like blurting out—
“What about dentists?”

“What about them?”

“Wouldn’t they go hard for a sugary-drink tax?”

Of course they would. Surely they would, all three agreed. Someone should be reaching out to them, if they hadn’t already. And clinicians, too: endocrinologists and cardiologists. But then they caught themselves. Shapiro and Faldo started to feel they were tying themselves up in knots. Who were they? A small county health office that had landed a grant that linked them up to Harvard University and provided some very interesting data on cost-effectiveness in childhood obesity treatment. What were they doing assembling coalitions on the SSB tax, which wasn’t even their principal interest, Active Recess? Tim Jeffries, inadvertently to be sure, had spun their heads right round.

“Maybe we should just get back to work,” Faldo said.

When they heard from Jeffries next, it was in the form of a request to make a presentation in the State House to a group he had organized. *“We would be grateful to review the results of the interventions modeled in conjunction with the Harvard CHOICES researchers, particularly on the health and revenue aspects of an excise tax on sugary and sweetened beverages,”* the invitation stated. They would have 20 minutes. Mentioned in the letter, as attendees—or were they presenters?—were representatives from the state dental board and the American Diabetes Association. But also, in the five-minute slot before them, as if it was entirely separate, was the district education team.