ORIGINAL ARTICLE

# Rethinking Soda Taxes

*Elena Pellicer*

Obesity is one of the most prevalent public health concerns facing the United States. According to the Center for Disease Control and Prevention's report, in 2007-2008 68% of American adults aged 20 and older were either overweight or obese.[7] Obesity directly increases the risk of developing diabetes, cardiovascular disease, stroke, some cancers, hypertension, and more.[7] In response, politicians and academicians have proposed food taxes in the form of either a "Fat Tax" or a "Soda Tax" as the most realistic means of battling this epidemic. So far, the debate has focused on the regressive nature and legality of these taxes. Less attention has been paid to how the revenue generated would be spent; I explore a strategy that uses this revenue to study a primary care model of obesity intervention.

The logic behind the study is as follows: a long-term solution for obesity necessitates a lifestyle change; lifestyle changes are most effective when independently arrived at by a patient and maintained by an educated support system; primary care medicine is appropriately structured for this type of care but lacks the time and resources to do so; it is the insurance driven fee-for-service system that undervalues primary care, pointing out that no data supports primary care as the most effective type of obesity intervention. Therefore, as an amendment to current Soda Tax proposals, I propose a revenue-spending package that funds a single-state pilot program to test the long-term efficacy of adequately funded primary care obesity interventions. My proposal is based on the economic theories of Arthur Pigou, whose approach to taxation is particularly applicable to the American obesity epidemic.

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## EXISTING SODA TAXES AND THEIR INHERENT FLAWS

Dr. Kelly D. Brownell and New York Governor David Patterson are two of the best recognized proponents of food taxes. Brownell, a renowned obesity expert and director of the Rudd Center for Food Policy and Obesity at Yale University, proposed the first Fat Tax in the early 1980s. Brownell's proposal has since evolved into a Soda Tax, a more politically palatable option because unlike many fattening foods, soda has little to no nutritional value to justify consumption. Governor Patterson proposed a Soda Tax in 2008 as part of a statewide proposal aimed at preventing obesity. Though rejected by legislature, Patterson continues to adapt the proposal and advocate its implementation.

Both Dr. Brownell's and Governor Patterson's proposals lack specificity in regard to revenue spending. In 2009, Brownell and colleague Dr. Frieden published an article in the *New England Journal of Medicine* calling for "a penny-per-ounce excise tax on sugared beverages".[3] Citing results from previous studies, they predict their tax would reduce consumption by 10%, ultimately "reduc[ing] the risk of heart disease and other conditions".[3] However, Brownell's proposal only briefly mentions the "considerable revenue"[3], discussing it in light of the current economic downturn.

Governor Patterson's proposal for a Soda Tax is nearly identical to Dr. Brownell's, and equally vague. Initially he declared that the revenue would fund obesity prevention programs in New York State. However, according to The Lancet, "officials confirm that the projected $14 billion budget shortfall this year…presented a new opening for this type of tax" [11], implying Patterson intentions to redirect the revenue towards deficit reduction. This new direction lacks both specificity and any mention of obesity prevention.

The effects of both versions of this tax depend solely on the punitive value of the tax without considering more intensive interventions. This could have political implications, as Dr. Brownell's own poll of New York residents "found that 52% supported a soda tax, but the number rose to 72% when respondents were told that the revenue would be used for obesity prevention".[3] Unfortunately, Patterson's revenue redirection ignores these numbers and even with this information, Brownell too failed to incorporate the revenue into any specific plans to prevent obesity. Both of these proposals fail to demonstrate obesity related spending of taxpayer's money, threatening the longevity, and thus effectiveness of the taxes.

## PIGOU'S ECONOMIC THEORY

A better approach would adhere to the principals set forth by renowned 20th century economist Arthur Pigou. Pigou defined economic externalities as costs or benefits that affect even those who do not partake in the original action.[1] Externalities can be divided into positive externalities that benefit the greater population, and negative ones that harm the greater population.[1] He used smoking as an initial illustration

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to both compensate for and prevent the negative effect.[1] The reasoning being that the preventative efforts from the revenue would compensate for the broad negative effect on society, adding to the individual punitive effect of the tax alone. Addressing the societal effect results in a more just tax because, in the case of obesity, the not-obese would equally benefit from improved health care and decreased insurance premiums. The American excise tax on tobacco is an excellent example of a Pigovian success. Tobacco tax revenues are largely devoted to anti-smoking education campaigns. These campaigns have added to the economic disincentive to individual smokers and resulted in a 21.4% decrease in smoking prevalence over the last 44 years. [12, 13]

Through a Pigovian lens, it becomes clear that the "cost" of obesity affects society as a whole, whether by decreasing national productivity or increasing healthcare costs paid through taxation or higher insurance premiums. This "cost" is applied regardless of weight, health or consumerist choices, making it a perfect negative externality. A Soda Tax would help correct this discrepancy, charging only those who continue the unhealthy behavior. However, to create a true Pigovian tax, the revenue needs to compensate for the broader social "cost" by improving treatment and, as a result, contributing to the long-term prevention of obesity.

## THE CATCH-22 IN CURRENT OBESITY CARE

Obesity is a behavior-based disease that requires long-term efforts to improve unhealthy lifestyles. Lifestyle change is extremely difficult to achieve and even quick fix solutions like diet pills or surgery are often unsustainable when not accompanied by a lifestyle change. Primary care medicine is the field most often associated with long-term, preventative intervention. Dr. Kelvie Johnson, a pediatrician from Olympia, WA, points out that lifestyle changes are far more successful if the patient "decides to change instead of having the change imposed on them".[8] However, guiding a patient to this sort of realization can be a lengthy process and requires time that is not readily available to Primary Care Physicians (PCPs).

Currently, the national average for primary care visits is between 12.8 and 16.5 minutes per patient.[9] Many obesity cases demand extra time in order to develop a relationship with patients, earn their trust, and help guide them towards the realization that a lifestyle change needs to occur. There is also the factor of co-morbidities, other diseases that commonly accompany obesity and can take up a substantial portion of a visit, leaving little time for the equally important counseling on how to improve the root problem of obesity.

The current fee-for-service system that America uses to pay physicians significantly undervalues primary care, as has been noted in numerous journal articles including the New England Journal of Medicine [14], Journal of General Internal Medicine [2], and New York Times.[4] By not paying Primary Care Providers (PCPs) adequately for hours spent on weight related visits, insurance companies limit the time PCPs devote to patients and create a disincentive to providing preventative medicine, especially for complex, weight-related cases. In their defense, many insurance companies argue that they will not fund this type of obesity care until PCPs can demonstrate a more statistically significant effect on obesity reduction. Looking at it from an insurer's perspective, this is a valid concern. While there have been promising studies and pilots that demonstrate the effectiveness of PCP intervention [5,10], none have looked at a representative sample of the American population or subsidized primary care to enhance treatment options. To date, there is no data to support primary care as the most effective means for treating obesity. The appropriate roles for therapeutic counseling directed by PCPs, pharmacologic therapies, and at the extreme, surgical interventions in obesity treatment and prevention still remain in question and need to be clarified before obesity policy can be most effectively implemented.

To break the Catch-22 cycle of inaction due to lack of knowledge, I propose spending the revenue from a Soda Tax to determine whether or not primary care directed treatment is, in fact, more efficacious than its alternatives in long-term obesity reduction. While the initiative for this type of study could be taken by any state, let us consider a state like New York where potential revenue has already been calculated: "A penny-per-ounce excise tax would raise an estimated $1.2 billion in New York State".[3] My proposed pilot would subsidize primary care obesity interventions in New York and track patient progress to ultimately evaluate the program's efficacy. By both treating patients as well as working towards a clearer understanding of the most effective obesity intervention, this pilot would better satisfy Pigovian criteria.

## THE PILOT PROGRAM

I propose that this program incorporate ideas put forth by Dr. Kelvie Johnson as a representation of PCP services that are currently limited by the fee-for-service based funding. Dr. Johnson identified "integrated physical activity and nutrition education programs for the whole family; motivational health coaches; and more frequent and longer visits with these patients" [8] as the most important resources for effective primary care intervention in weight loss. I found additional support for these types of methods in a pilot program for childhood obesity that successfully used "group education with peers" and a "patient empowerment readiness model," to lower children's BMI.[10]

Physical activity and nutrition education programs that include whole families provide vital health knowledge while simultaneously developing an internal support system, improving the likelihood that a weight-loss program will be adhered to in the long-term. Even for healthy children, these programs hold an important preventative value that if started with younger generations are more likely to evolve into social norms.

Motivational health coaches allow for more constant tracking of a patient's progress and encouraging input from an outside source. Johnson remarked, "from a primary care standpoint, if we had health coaches that could work with motivational interviewing and help people stay on track that

**“ The obese and overweight population in America cost us over $200 billion in anual healthcare spending.”**

could be huge”.[8] Coaches utilize a technique known as “motivational interviewing” that leads patients to discover their own drive through tactical interviewing techniques, a vital component of achieving the important lifestyle change. With this funding, coaches could be integrated into a primary care practice’s staff and become part of the standard of care for obesity.

Finally, the request for frequent and longer visits would enable PCPs to spend more time on the therapeutic counseling side of obesity care while still having time to address the more clinical aspects and co-morbidities. Lengthier visits enable both acute treatment and long-term prevention, both of which are key in reducing obesity’s overall effect on Americans.

## CONSIDERING THE STAKEHOLDERS

The obese and overweight populations in America cost us over $200 billion in annual healthcare spending.[6] We need to move forward establishing the best practices for treatment and prevention of obesity while also considering the most effective applications of taxation to achieve these goals. The proposal I have put forth presents a pilot program that would produce revenue, treat patients, and help clarify questions on best practice. I believe that this approach will result in the best outcomes for the most people: doctors being appropriately paid and valued for their contributions, patients receiving the necessary interventional care to make lasting changes, taxpayers feeling less cheated by the system, a healthcare system less strained by rapidly increasing diseases rates, and ultimately a healthier and more sustainable society.

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### Soda Taxes: A Recurring Theme

TuftScope has explored the issues concerning a proposed soda tax in the past. For more information check out the Oppossing Viewpoints article from the Fall 2009 edition of TuftScope. In this article, Lauren-Elizabeth Palmer and Jeremy Nowak debate the question, “Should sugar in beverages be taxed to improve public health?”

OPPOSING VIEWPOINTS

# Should doctors refuse treatment to unvaccinated children?

***Virginia Saurman** argues that doctors should have the right to refuse treatment to unvaccinated children, as they put vaccinated children at risk. **Eriene-Heidi Sidhom** counters that ultimately parents have the right to care for their child's health as they see fit.*

## YES

Doctors should have the right to refuse to treat children whose parents refuse to get them vaccinated. There are those who believe that some vaccines cause more harm than good, such as that the MMR (measles, mumps, rubella) vaccine is responsible for autism. This fear has no scientific support since British surgeon Andrew Wakefield's 1998 study in the Lancet journal was retracted in February 2010.[1] Based on a study of 12 patients, Wakefield claimed there was a link between the MMR vaccine and an autism-like disorder. An investigation into Wakefield's methods revealed fraud and conflicts of interest. The results of his study corresponded with plummeting MMR vaccination rates in the UK, and an increase in cases of measles causing 100 hospitalizations and 3 deaths.[2] Wakefield's license to practice medicine in the UK has since been revoked. Unfortunately, the damage caused by this paper, the anti-vaccine movement's propaganda, and Jenny McCarthy's belief that her son's autism was caused by an MMR vaccine has only ensured that this fear remains alive.

The problem with this belief is that it not only endangers the unvaccinated child, it endangers other children who have yet to be vaccinated (because they are too young), those who cannot be vaccinated (because their immune systems are compromised), and those who have been vaccinated. Why is this so? A vaccine campaign is only effective if 95% of the population in a given area has

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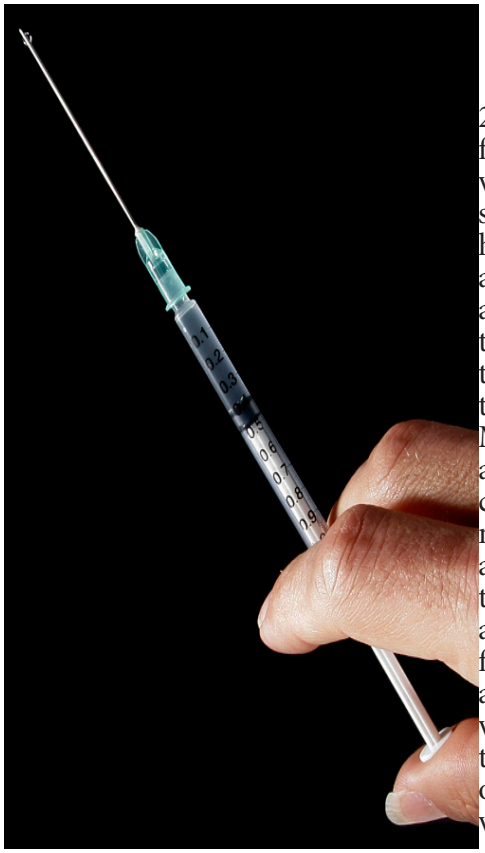

## NO

Jennifer and Ronnie Prine are the parents of a 20-year-old son who has suffer a severe reaction to his DPT vaccine at 7 months old. Due to seizures that began 14 days after his vaccine he has regressed and now at 20-years-old he is at a six-month's level. Due to the family's negative experience they do not want to vaccinate their 11-year-old daughter.[1] Most states have laws which allow parents to exempt their children from vaccinations: a medical exemption is issued if an immunization could injure the child or a family member; a religious exemption is issued for members of religious sects against vaccinations, like Jehovah's Witnesses and Christian Scientists; a conscientious objection can be issued for a variety of reasons and allows parents to have more control over which vaccines are administered to their children.[2] Additionally, in 1990 the federal government established the Vaccine Adverse Event Reporting System (VAERS) to determine the risks of different vaccinations and the time between the vaccination and the appearance of symptoms. Recently, despite these state-approved exemptions, some pediatricians have decided to not treat unvaccinated children.[3] This decision on the part of physicians is taking away parents' fundamental rights while evidence for the associated risks still exists.

A physician's decision to refuse treatment to unvaccinated children puts well-meaning parents in an unfair position: while caring for their child's health, they are putting them at risk by preventing them from receiving

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