

New Study Looks at Cost of Sugar



By *Chuck Dinerstein, MD, MBA* — April 15, 2019



Courtesy of designfoto [1]

The FDA has delayed labeling of our foods “added sugar” content until 2020, a new paper in *Circulation* tallies the costs and benefits of the policy in general. They find net savings, suggesting that “times a wasting” and implementation should be sooner than later.

The researchers used a model for their predictions, incorporating characteristics of our population, our dietary intakes of sugar, the effects on disease and the cost of the disease. It is a thorough model as models go, but as all models are wrong, we should look at the qualitative more than the quantitative findings.

The primary model variable is body mass index, BMI. I find this an intriguing decision, because in many ways it is a summation of our demographics and lifestyle choices, acting here more like a biomarker than a risk factor. The primary assumption was that labeling would reduce consumption of these added sugars by 6.8%. A deeper dive into the source of that assumption finds that it is based on how labeling reduces our energy intake and is not specific for sugars let alone added sugars. With these two variables in hand, the researchers applied a model of the impact of BMI on cardiovascular disease (CVD), and type 2 diabetes.

Over the 20-year simulation, labeling resulted in 600,000 cases of type 2 diabetes and 350,000 cases of cardiovascular disease (coronary artery disease and stroke). Those health benefits went to those with the highest intake of sugar and higher baseline BMI – men, young adults, and African Americans. The reduction in type 2 diabetes was the driver of declining health costs, accounted for 60% of the savings.

The researchers also considered a scenario in which the labeling prompted manufacturers to reduce added sugars; the anticipated reformulations were based upon FDA estimates. [1] With

reformulation, in addition to labels, the reductions in diabetes and CVD doubled. In both scenarios, the costs of government oversight and for relabeling was far less than the health benefits.

The primary assumption about labeling reducing consumption was varied to see at which point benefits no longer exceeded costs (a sensitivity analysis). At a 1% reduction in consumption, the program would be cost savings, reduction to 0.5% would be cost-effective, i.e., the cost of the program would equal the savings. But that only seemed to apply to the scenario of labeling and reformulation, the scenario with twice the reduction in diabetes and CVD.

According to data cited by the authors, the consumption of sugar has been declining from 2003 to 2012 in the US, primarily due to a reduction in the total calories we ingest. This is a period before the recent push to tax away sugar-sweetened beverages. This computer simulation addresses the additional lives saved if the trend towards fewer calories continues.

The model is well thought out, populated with well-considered estimates. But the fundamental assumption is the effect of labeling on our behavior because it is only the scenario of label and reformulation that survives the sensitivity analysis. Here is an interesting thought, is the real value of the labeling, not its educational value but it's social signaling – that I am eating “healthy.” And in the end, the social signaling shifts the market and the market responds with what we demand.

[1] You can choose for yourself whether the industry reformulations were a means of differentiating themselves in the marketplace or out of a public health concern.

Source: Cost-Effectiveness of US Food and Drug Administration Added Sugar Labeling Policy for Improving Diet and Health Circulation DOI: 10.1011/circulationaha.118.0365751

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