

## Background

- The price of foods like fresh fruits and vegetables tend to be prohibitively higher than healthier options (i.e., sugar-sweetened beverages, ready-to-eat foods, energy-dense snack foods)<sup>1</sup>
- Such pricing structures discourage purchase of healthier options and encourage purchase of unhealthy options
- Pricing strategies have been identified as a promising avenue to inform policy for behavior change<sup>2</sup>

## Objectives

- To test a series of pricing manipulations in a retail grocery store setting
- To assess impact on sales of healthy and unhealthy foods

## Methods

- The study took place at a small, retail grocery store in Baltimore City
- The prices of 35 healthy foods were decreased over time by 10, 20, 30, and 40 percent
- Simultaneously, the prices of 45 unhealthy foods were increased at similar rates from January 2020-January 2021
- Foods were grouped into healthy and unhealthy market baskets for analysis examining trends in sales over each manipulation period

## Results

- Monthly total sales of healthy foods within the healthy market basket remained relatively stable over time
- Given the decreased prices, this indicates that total quantity sold increased
- In contrast, total sales of healthy foods within the unhealthy market basket and within each food group generally declined during the study period
- Given the increased prices, this indicates that total quantity sold decreased
- Similar trends were found for weekly and daily data (not shown)

	Average (SD) Total Monthly Sales <sup>a</sup>	Total Monthly Sales <sup>b</sup>	Total Monthly Sales <sup>b</sup>	Average (SD) Total Monthly Sales <sup>c</sup>	Average (SD) Total Monthly Sales <sup>d</sup>
	Baseline	10% Price Reduction	20% Price Reduction	30% Price Reduction	40% Price Reduction
<b>Healthy Market Basket</b>	\$1,113.82 (\$236.97)	\$1,092.76	\$315.62	\$716.14 (\$241.48)	\$667.34 (\$119.04)
	Baseline	10% Price Increase	20% Price Increase	30% Price Increase	40% Price Increase <sup>d</sup>
<b>Unhealthy Market Basket</b>	\$2,689.66 (\$1,213.43)	\$3,315.07	\$1,473.11	\$3,145.29 (\$1,221.50)	\$1,592.44 (\$30.33)

<sup>a</sup>Total sales averaged over 4 months

<sup>b</sup>One month manipulation period, no average (SD) calculated

<sup>c</sup>Total sales averaged across 8 months due to COVID-19 restrictions

<sup>d</sup>Total sales averaged across 2 months due to COVID-19 restrictions

## Implications

- In this store, we found that both healthy and unhealthy foods may be sensitive to pricing manipulation strategies
- While these data represent sales at just one food store, the findings support an emphasis on public health pricing strategies that focus on simultaneously incentivizing purchases of healthy foods and disincentivizing purchases of unhealthy foods
- Of note, this study took place during the COVID-19 pandemic which may have impacted store sales, and the store ultimately closed in February 2021

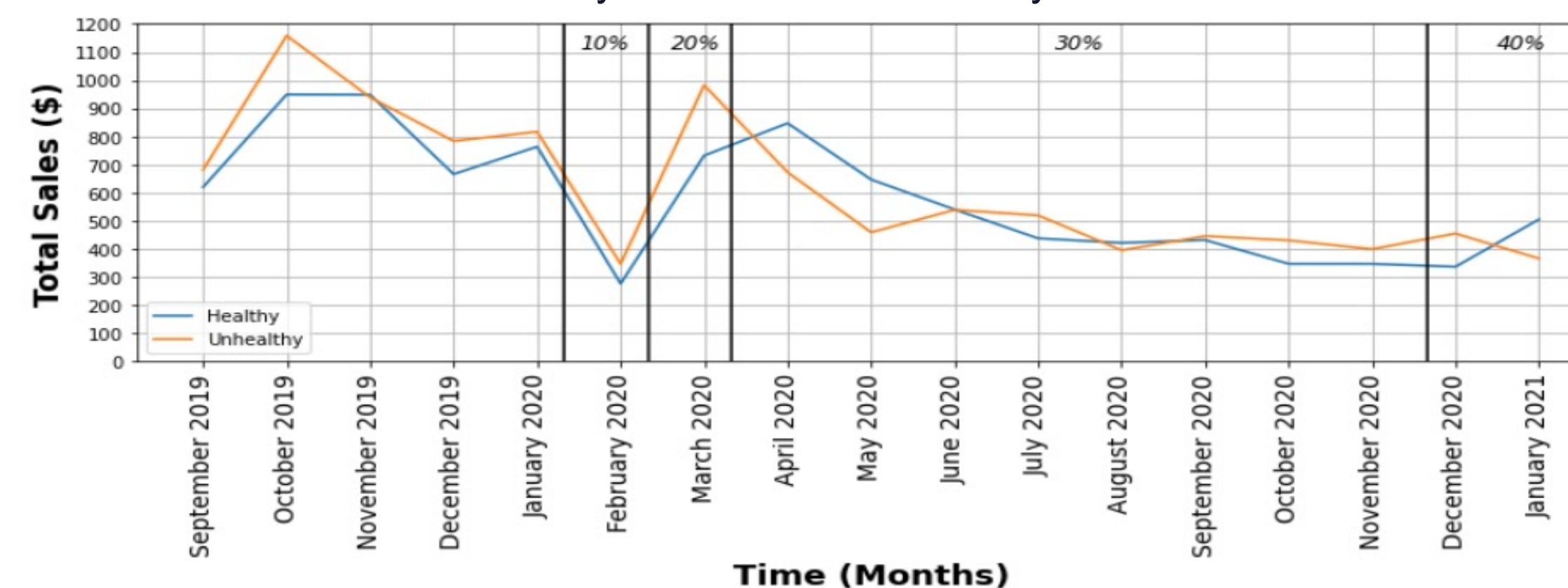
## Acknowledgements

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## Data Visualization

Total Monthly Sales Across the Study Period



## References

1. Drewnowski A et al., 2020
2. Zorbas C et al., 2020