

AUSTIN'S BAG BAN DID NOT CAUSE A RISE IN FOODBORNE ILLNESS

Data following city's comprehensive single-use bag ordinance contradicts industry-financed predictions

SUMMARY

Data from before and after implementation of Austin's single use bag ordinance indicates that the ordinance had no negative impact on health, discrediting claims from industry-financed researchers that such policies can lead to more foodborne illnesses.

BACKGROUND

In 2012 a paper¹ produced by researchers Jonathan Klick and Joshua D. Wright—associated with Koch Brother financed think tanks—claimed that because reusable bags have been shown to harbor harmful bacteria and San Francisco's 2007 ban on single use plastic bags led to a major increase in reusable bags, bag bans could mean a major increase in foodborne illnesses and even deaths. They proceeded to present data which they claim indicated a major increase in just these illnesses at just the time of San Francisco's ordinance.

These claims were immediately suspect because the bases for their conclusions had been debunked already. First, the University of Arizona study² which justified the claim that reusable bags harbor bacteria was shown by Consumer Reports³ to actually only report that bags were home to harmless, ubiquitous bacteria. They failed to find any harmful bacteria on any bag, even those left unwashed for months. Second, San Francisco's ordinance had NOT led to a large-scale switch to reusable bags, but rather to paper bags. This drew skeptical eyes to the Klick and Wright study, and ultimately it was debunked by San Francisco Department of Health Officer Tomas Aragon in February of 2013⁴.

FINDINGS

Despite this, the Klick and Wright study has been presented as fact in the press on June 23, 2014 in the Laredo Morning Times. This prompted us to examine data from Travis County, where Austin (home to 77% of the county's population) implemented a single-use bag ordinance in March of 2013. This ordinance is actually better for testing Klick and Wright's hypothesis than San Francisco's, in that it actually banned both plastic and paper single-use bags, leading to a big rise in reusable bag use. Data from the Austin/Travis County Health and Human Services Department Epidemiology and Health Statistics Unit demonstrate that Klick and Wright's predictions did not hold for the Austin policy.

1. There was **NO** meaningful increase in overall food borne illnesses after Austin's single-use bag ordinance went into effect. In the 14 months before the ordinance went into effect there were an average of 36 cases of foodborne illness in Travis County each month and in the 15 months since the ordinance the average was 36.6. The standard deviation in cases before the ban was high (13 cases a month), meaning that the 0.6 case increase is statistically insignificant and the ordinance had no effect on foodborne illness at all.
2. The median number of foodborne illnesses actually **DECREASED** slightly—from a median of 40.5 cases a month to 36.375 a month. This is also statistically insignificant, but it also indicates that the bag ordinance did **NOT** result in any new illnesses.
3. If ordinances led to an increase in foodborne illness this would be expected to be seen in the months immediately following a ban on single-use bags. In fact foodborne illnesses were 32% **LOWER** in the three months immediately following implementation of the bag ordinance (March-May 2013) than the same three calendar months the year before (March-May 2012).



4. Klick focused his data on a few bacteria which cause the most illnesses—salmonella, campylobacter and e. coli. Again, the average increase in these illnesses was statistically insignificant (34 to 34.3) while the median incidence **DECREASED** (36.5 to 29).
5. For these illnesses the three months following the ban (March-May 2013) also saw lower incidences than the year before (March-May 2012)—30% lower.
6. Klick and Wright also referred to deaths from intestinal illnesses reported by the Centers for Disease Control. Such statistics are not yet available for 2013, but it is unlikely that such deaths would increase when overall illnesses did not.

The experience of Austin/Travis County would indicate that fears over foodborne illnesses and reusable bags are not warranted by evidence. This is good news for environmental advocates seeking to address the real harms posed by single-use bags. These bags damage infrastructure, harm recycling equipment and make recycling more expensive, they are a major cost for litter clean up, kill livestock and wildlife and blight greenspaces and other landscapes. With the new evidence out of Austin we can definitively say that bans of these problem materials are not linked to increases in foodborne illness.

The bag ordinance went into effect March 1, 2013. We compared rates from January 2012 to May 2014. Figure 1 shows the year to date average cases of foodborne illness for each of these months, the black line indicates when the ordinance went into effect--March of 2013. Data from 2011 was used to calculate 2012 year to date averages.

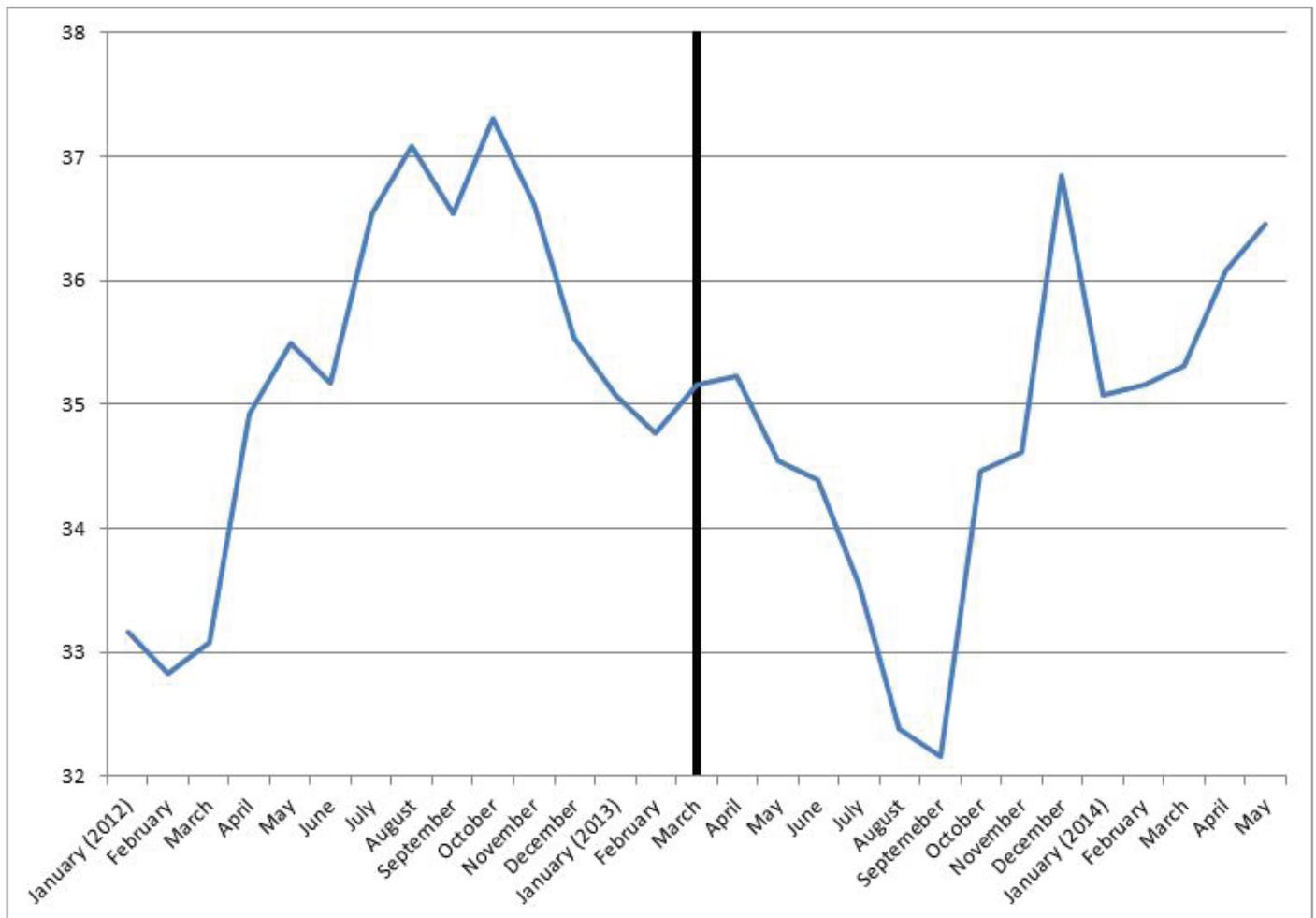


Figure 1 Year to Date Average Foodborne Illnesses per Month in Travis County January 2012-May 2014

More narrowly, we can see that reported foodborne illnesses were lower in the three months following implementation of the ordinance than during the same three calendar months the year before.

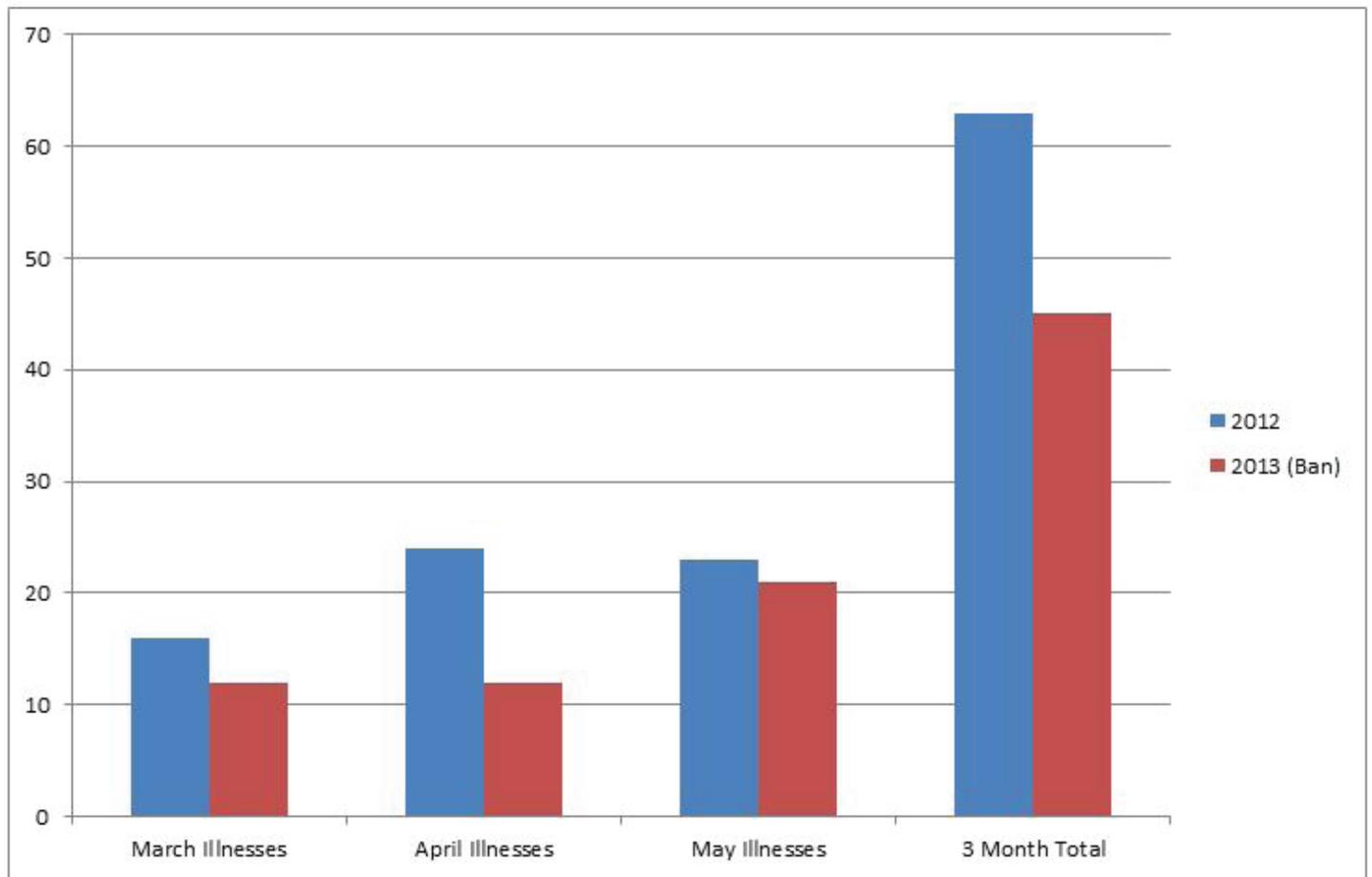


Figure 2 Reported Foodborne Illnesses March-May 2012 vs. March-May 2013 (Immediately following ban)

This is precisely the opposite of what we would expect if Klick and Wright’s hypothesis were correct. It also directly contradicts the data they purport to present from San Francisco 2007.

Austin/Travis County Health Department collects data on 11 notifiable foodborne illnesses: amebiasis, botulism, brucellosis, campylobacteriosis, e. coli, hemolytic uremic syndrome, listeriosis, salmonellosis, trichinosis, vibrio, yersiniosis. Klick and Wright focused their attention on only three illnesses (the most common)--salmonellosis, campylobacteriosis and e. coli. For all of these illnesses Travis County saw only statistically insignificant increases in average incidences and declines in the median number of cases reported.

Average/Median Cases Per Month of All 11 Notifiable Illnesses in Travis County

Average cases/month before ban	36
Average cases/month after ban	36.6
Average cases/month Jan 2012-May 2014	36.3

Median cases/month before ban	40.5
Median cases/month after ban	36.375
Median cases/month Jan 2012-May 2014	39

Average/Median Cases Per Month of 3 Illnesses Considered in Klick/Wright Paper

Average Klick/Wright illnesses before ban	34
Average Klick/Wright illnesses after ban	34.3
Average Klick/Wright illnesses 1/12-5/14	36.3

Median Klick/Wright illnesses before ban	36.5
Median Klick/Wright illnesses after ban	29
Median Klick/Wright illnesses 1/12-5/14	35

None of the Klick and Wright illnesses showed any meaningful increase after Austin's ordinance went into effect. Outbreaks of salmonella in particular have occurred nationally in communities with and without ordinances, and foodborne illnesses increase and decrease in incidence on a seasonal basis. A look at the calendar year surrounding implementation of the ordinance (September 2012-September 2013) shows that while each of the most common foodborne illnesses saw rises and falls, the year to date average over that time declined.

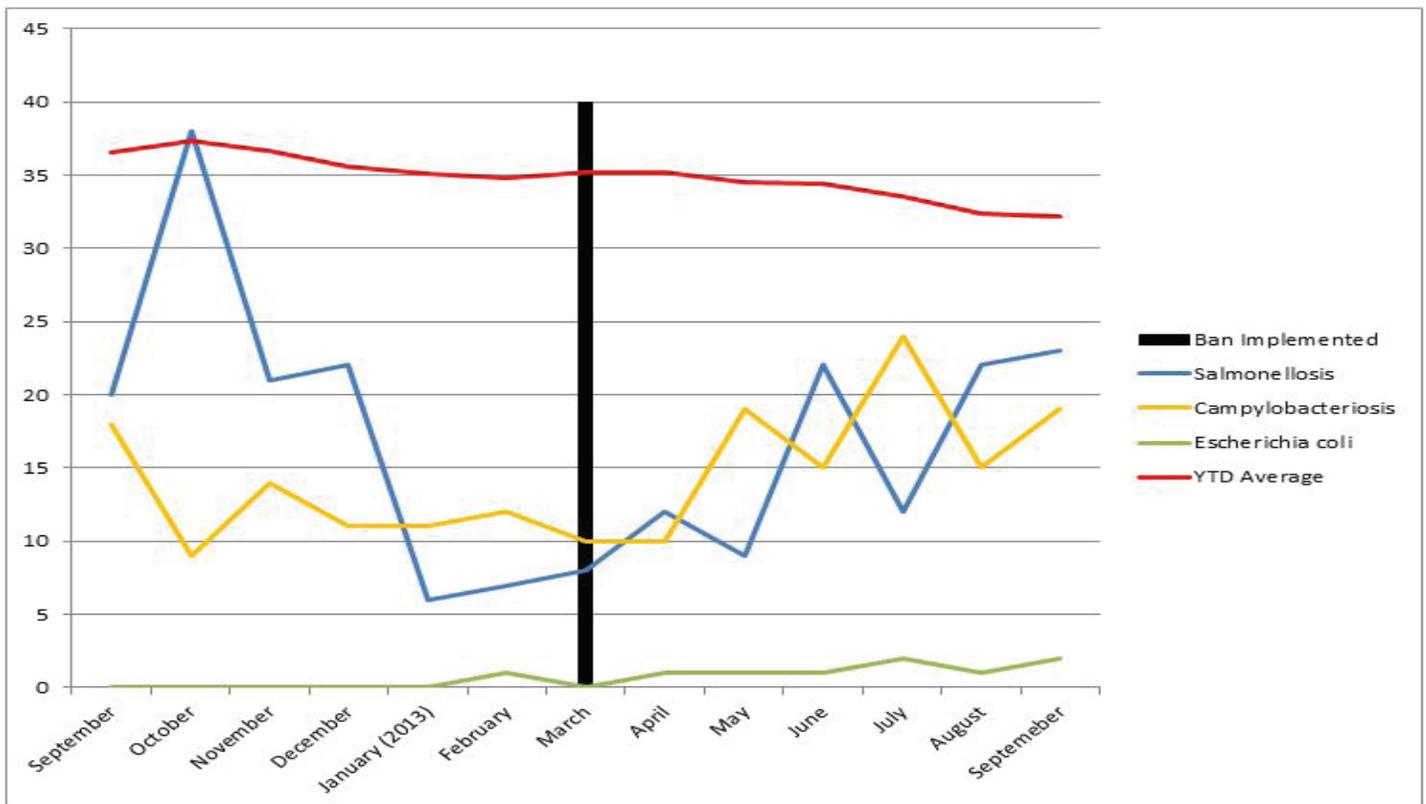


Figure 3 Incidence of Klick and Wright Illnesses and Year to Date Average Total Incidence September 2012-September 2013

CONCLUSION

Klick and Wright argued that single-use bag ordinances would inevitably lead to an increase in foodborne illnesses, but the data from Austin/Travis County is clear: one of the country's most comprehensive single-use bag ordinances, which not only banned single-use plastic bags, but also paper, did not result in any meaningful increase in foodborne illness. In fact, the median number of cases month to month actually decreased, and in the months immediately following implementation of the ordinance--when accidental contamination would be most likely--foodborne illnesses were nearly a third lower than those same months the year before. Note finally that Austin's public education efforts to prepare its residents for the ordinance did not stress the need to wash bags, and discussion of the risks of foodborne illness were minimal. Public education cannot be credited for the data; bag bans do not lead to meaningful increases in foodborne illness.

Powerful interests have often tried to manipulate science for their own selfish, deceptive aims. This appears to be the case in this instance, but readily available data and basic statistics have debunked yet another misinforming "study." We encourage media and policymakers to refute the Klick and Wright claims wherever they are brought up.

1. Klick, Jonathan and Wright, Joshua D., Grocery Bag Bans and Foodborne Illness (November 2, 2012). U of Penn, Inst for Law & Econ Research Paper No. 13-2 <http://ssrn.com/abstract=2196481>
2. Gerba, Charles, Williams, David and Sinclair, Ryan, Assessment of the Potential for Cross Contamination of Food Products by Reusable Shopping Bags (June 9, 2010) Food Protection Trends, Vol. 31, No. 8, Pages 508-513 <http://www.llu.edu/public-health/news/news-grocery-bags-bacteria.page>
3. "Can reusable grocery bags make you sick, or is that just baloney?" ConsumerReports.org. Consumer Reports, July 22, 2010. Web. 10 July, 2014.
4. Aragon, Tomas. Tomas Aragon, MD, DrPH, Health Officer to Eileen Shields, Public Health Information Officer, February 10, 2013. In *The Berkley Blog*. Posted by Tomas Aragon. http://blogs.berkeley.edu/wp-content/uploads/2013/02/SF-Health-Officer-MEMO-re-Reusable-Bag-Study_V8-FIN1.pdf