*Can messages on trash cans reduce litter?*

**Project Summary**  
Litter is a pervasive problem in Washington, DC and in cities throughout the world. Through a randomized evaluation, the Department of Public Works and The Lab tested whether we could reduce litter by placing signs with research-based “nudges” on trash cans. We found that the signs did not on average reduce visible litter on the street or increase the amount of garbage in the trash cans. The signs were not scaled up across the city (but we got many compliments on the design!).

**Why is this issue important in DC?**  
Litter costs the District money to clean up, can cause property values to decline and has obvious environmental consequences, including collecting in the Anacostia River.

**What did we do?**  
Together with the DC Department of Public Works (DPW), we designed signs to encourage residents not to litter. The sign’s undemanding instructions, DC colors, and the city's geographic outline were carefully crafted based on previous research on the value of activating a sense of community and drawing attention to the trash cans.

In seven busy areas, we [randomly assigned](http://thelabprojects.dc.gov/randomized-evaluation) 196 street block sides⁠—the north side of a street is one block side, the south side is another block side⁠—to receive signs on public trash cans. We measured the impact of the signs by monitoring sensors that measured trash can fill levels two weeks after the signs were installed. In addition, trained volunteers walked the corridors to observe and count litter levels around the trash cans.

**What did we learn?**  
We found that the signs didn’t reduce the amount of litter in or around trash cans on average. There may have been a larger reduction in visible litter in areas that already had high levels of litter, but we cannot be sure that the difference between high and low litter areas is due to the signs or simply due to chance.

**What comes next?**  
Due in part to these results, DPW decided not to expand signage across the city. However, in May 2019, the agency launched a new citywide litter prevention campaign⁠—Not in My DC⁠—with new street signs, bus and metro advertisements, and yard signs.

**What happened behind the scenes?**  
So much! We were very grateful to involve volunteers from the Mayor’s Leadership Engagement Achievement and Development (LEAD) program to count litter, but we also had to be careful that they did not know about the experiment, so that knowing about the signs didn’t affect their litter counts.

People also liked our signs so much that they occasionally stole them. So, we don’t know if missing signs affected the results, and we did not have the capacity to monitor how many were missing from their assigned blocks.

1 [Huffman, et al. (1995).](https://journals.sagepub.com/doi/abs/10.1177/0013916595272003)

<https://thelabprojects.dc.gov/smart-cans>