Collaborative Sciences Center for ROAD SAFETY

RESEARCH BRIEF

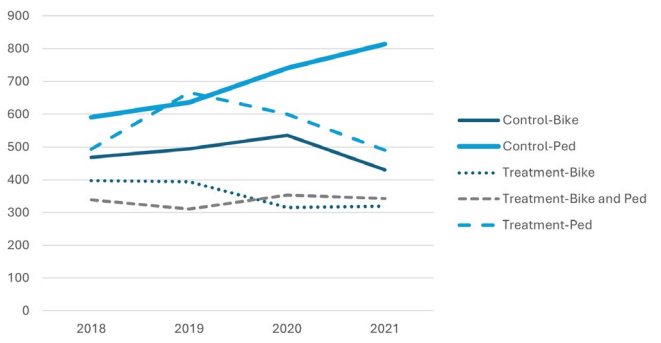
COVID-19 Streets: Evaluating the impacts of rapid rollouts of pedestrian and bicycle facilities

This study analyzed the impacts of rapid-rollout shared streets programs implemented in response to changes in travel demand brought on by the COVID-19 pandemic. Shared streets have been converted to pedestrian- and bicycle-priority zones using temporary materials, typically for traffic calming or diversion.

The research sought to understand the impacts of these shared streets on pedestrians and cyclists, with respect to safety, equity, and mobility by (1) comparing pedestrian and bicycle traffic volumes in 9 treatment cities (cities that implemented robust shared streets programs during and because of the pandemic) and 7 peer control cities, and (2) exploring the motivations, planning processes, and outcomes of shared streets in the treatment cities.

Pedestrian and bicycle traffic volume data analysis did not support the hypothesis that shared streets were associated with increased pedestrian and bicycle traffic compared to pre-pandemic patterns. Travel patterns shifted from commute-oriented to recreation-oriented, but effects were stronger in control cities more than treatment cities. Volumes increased near pre-pandemic recreation sites and decreased near commute sites, but again with stronger effects in control cities.

Qualitative analysis of planning processes and outcomes revealed that shared streets programs aimed to provide safe outdoor space for physical distancing as well as opportunities to demonstrate new approaches to traffic calming.



Annual average daily bicycle and pedestrian traffic: 2018-2021

Locations for interventions were based on existing plans, ease of implementation, equity, and traffic conditions. Public engagement but increased in most cases. Impacts included new perspectives on street spaces and uses, increased appetite for experimentation, public demands for faster implementation of pedestrian and bicycle facilities, and new public engagement approaches based on in situ trials.

With increasing likelihood of massive disruptions in transportation systems in the future, cities should work now to ensure transportation plans are adapted to rapidly changing conditions and to develop more intentional data collection approaches to accurately assess impacts of crisis-related interventions.

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