

A Community-Based Anti-Idling Campaign to Reduce Exposure to Traffic-Related Air Pollutants at Schools

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Introduction

- Traffic-related air pollution (TRAP) has been shown to exacerbate existing asthma, though its impact in school settings is unknown.
- This study measured the impact of an anti-idling campaign using pre and post training session tests during school bus driver training and a staff survey for staff and administrators.
- School buses and passenger vehicles were monitored for length of idling during drop off and pickup at a school. Monitoring was done both before and after the anti-idling campaign.

Objectives

The three goals of this project are:

- Measure the impact of an anti-idling campaign on children's exposure to TRAP at schools.
- Determine the effects of an anti-idling campaign on asthma morbidity.
- To measure the impact an anti-idling campaign has on idling practices by school buses and passenger vehicles at schools during pick up and drop off times.

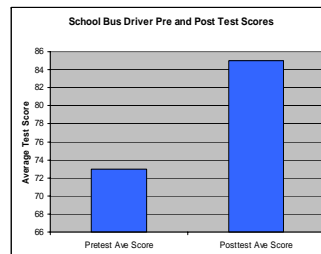


Methods

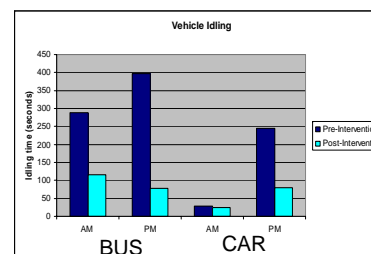
- Use of an anti-idling education intervention which targeted;
 - School bus drivers
 - School staff and administrators
 - Students and parents
- The anti-idling education included student assemblies and presentations for school bus drivers, staff and parents that utilized videos, power point presentations and surveys with a pre and post test.
- At one of the four schools, volunteer staff and students monitored school bus and passenger vehicle idling when children were dropped off and when they were picked up at school.

Results

- The school bus drivers scored 73% on the pretest. After learning about the impact diesel particulates had on their health, the bus drivers scored an 85% on the post test.
- Bus idling time decreased 60% when dropping off students and 80% when they picked up students after the intervention.
- Passenger vehicles idling decreased at drop off by 15% and decreased 68% at pick up after the intervention.

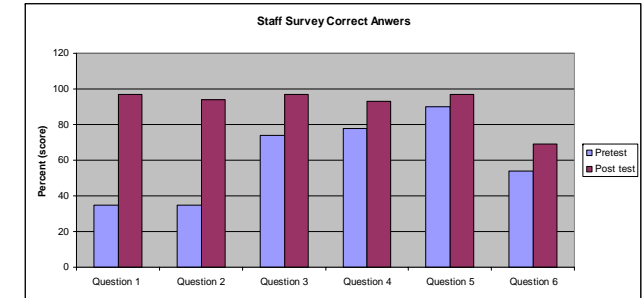


p < .05, using a paired t-test
n=324



Staff Survey questions:

- Does Cincinnati Public Schools (CPS) have an anti-idling policy?
- Does the yellow bus service provider for CPS have an anti-idling policy?
- It is important to warm up the engine with an idling period of 5 minutes or more, especially in cold weather?
- It is better for an engine to run at low speed (idling) than run at regular speed (i.e., 30 MPH)?
- It is better to leave the engine idle because a "cold start" produces more pollution.
- Children and adults are equally sensitive to air pollution.



n=290

Summary and Conclusions

- The data collected from the pre and post tests on the training of the bus drivers and survey of the staff indicate that once people were educated about the health impacts and school policy on idling their scores improved.
- Positive reinforcement by the school staff to the school bus drivers and cars picking up students resulted in a significant reduction in idling times of the vehicles. Further study need to be done to see if the idling reduction is a long term behavior.
- Study limitations
 - Only one of the 4 schools was able to complete a pre and post intervention monitoring at this time.