PACE

COMMENTARY

Saving Money by Making it Safer to Walk and Bicycle to School

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In recent years, federal, state, and local government initiatives have focused on ways to increasewalking and bicycling by making routes to school safer, offering encouragement to walkers and bikers, and providing safety education. The rationale behind these initiatives, such as the Safe Routes to School (SRTS) program, is to improve public health by reducing injuries and increasing physical activity. While numerous studies have shown that the Safe Routes to School program has been effective at meeting these goals, few analyses have looked at how increasing walking and bicycling can reduce student transportation costs for school districts and families. American schools spent $22.3 billion on student transportation expenses according to U.S. Department of Education data for the 2010–11 school year. This amounted to 4.2% of all education spending or $450 per US student. Family costs of school transportation are generally untallied but include driving 30 billion miles per year or the equivalent of 4 round-trips from Earth to Pluto.

Schools and families drive students when distances to school are too long to allow walking or bicycling. However, unsafe walking conditions near schools also prevent students from walking even when distance is not a barrier. In this study, we estimated that $100 to $500 million of current student transportation funding is spent to bus students short distances to overcome dangerous walking conditions. This practice, known as "hazard busing," is a critical way to provide safe transport to school but fails to address the underlying safety issues. Using case studies and school bus routing simulations, we investigated whether engineering improvements that reduce hazardous walking conditions near schools could also decrease school busing costs for districts over the long-term. Our analyses showed that it is cost-effective to make engineering improvements to remove hazardous conditions rather than continuing to pay for busing in perpetuity. Real world examples corroborate the findings of the simulation analysis. For example, the City of Austin built a pedestrian bridge that connected a large apartment complex to the elementary school attended by most of its children. While the bridge cost $750,000 to build, the school district estimated that it would save $130,000 per year because students no longer needed to be bused to school.

Our findings highlight the need for school districts to plan for all travel modes, not simply school buses, and for schools and municipal officials to work together to prioritize safety improvements near schools and key routes to schools. In the United States, infrastructure improvements are generally the responsibility of the municipality or the state department of transportation. When school districts provide school bus service, the costs are borne locally and may be partially offset through reimbursements from the state department of education. So the costs and benefits of reducing hazard busing accrue to different agencies. Overcoming these barriers requires agreement between the city, schools, and parents that safe school travel requires busing for students living beyond a walkable distance and safe streets for students living close to school.

Beyond the shared vision, cities and schools must also work together so that cities are aware of the need for infrastructure improvements and schools have advance warning about improvements. State departments of education must also consider how

pupil transportation assistance to districts encourages or discourages walking and bicycling. Our analysis highlighted how some reimbursement formulas that focus on costs per bused student might actually encourage inefficient busing practices among school districts. In order to reduce per student cost calculations, districts may provide busing to students living near schools who might otherwise walk, thereby encouraging inefficient use of public resources. Simple fixes, such as including language that eliminates reimbursement for students living within walking distance, would remove this incentive and encourage school districts to work with municipal governments to eliminate hazardous walking conditions near schools.

Finally, the removal of hazard busing due to the elimination of dangerous conditions can only be considered fully successful if families utilize the infrastructure and children begin to walk and bike. If the removal of hazard busing simply shifts the costs of getting students to school onto families, then there is little benefit to society. Thus, schools and cities working together to identify and mitigate hazardous conditions is not enough; families must be part of the process as well. Cutting hazard bus routes—even if conditions no longer warrant them—can feel like cutting a public service to families. Unless the city and district communicate the proposed changes and provide extra services, such as crossing guards, to aid in the transition, families may not like the change and may even oppose implementation.

The full study can be found in Noreen C. McDonald, Ruth L. Steiner, W. Mathew Palmer, Allison N. Bullock, Virginia P. Sisiopiku, Benjamin F. Lytle, "Costs of school transportation: quantifying the fiscal impacts of encouraging walking and bicycling for school travel," Transportation, forthcoming. An ungated version is available here.

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