Cal/Amp® K-12
powered by Synovia

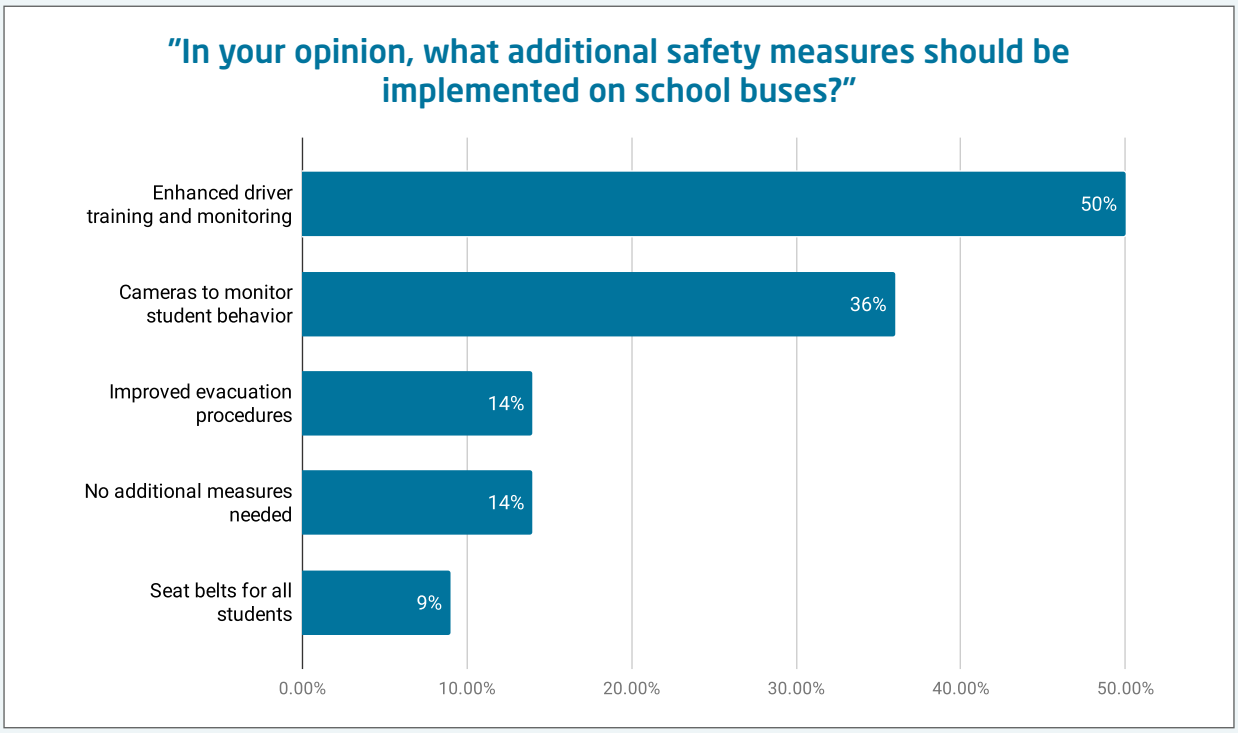
E-Book

Why 50% of K-12 Transportation Officials Want Enhanced Driver Training and Monitoring

calamp.com

Demand to Bolster Driver Training

50% of school transportation officials recently highlighted "enhanced driver training and monitoring" as the top added safety measure need for buses. This informative statistic was uncovered in survey results published by School Bus Fleet in September 2023.



Specific percentages not shown in original survey were provided separately by the survey author.

As shown, the need for driver training exceeded demand for cameras monitoring students, evacuation procedures, "no measures needed", and seat belts, in increasing order of margin.

At 36%, it seems likely that onboard cameras may not have garnered more support based on the adoption rate to date. These solutions are already widely deployed. Perhaps the same can be said about evacuation procedures.

Only 14% of respondents indicated no additional safety measures are necessary. This is another way of saying decision-makers should do more.

As for individual seat belts, the benefits and trade-offs continue to be debated. Some argue compartmentalization is sufficient and seat belts may actually do more harm than good. Hence, the low score of 14%.

Why did driver training and monitoring score highest? Keep reading to explore factors driving this demand and learn more about technologies offering right the capabilities to address this challenge.

How Safety is Evaluated

US school districts and contractors operated 580,000 buses in 2022-23, logging 3.2 billion miles on routes. Fundamentally, school district transportation departments are chartered with the safe and efficient transport of students on these routes as well as to and from school-related activities.

Per this safety imperative, administrators and officials commendably focus on school bus safety records as they relate to students. The California Department of Education, for example, points out that students are eight times safer riding on a bus versus in a car, based on student fatality statistics. When evaluating the effectiveness of current safety initiatives, however, it is essential to analyze the problem more broadly. Specifically, it is necessary for decision-makers to look at the:

- Overall fatality and injury rates for school bus accidents, including impacts to individuals not riding on school buses.
- Fully burdened economic impact of avoidable incidents, including added costs for repairs, vehicle replacement, vehicle and driver downtime, replacement driver recruitment and training, and insurance.
- Need to shield and defend drivers from erroneously being deemed at-fault when there are mitigating circumstances in driving incidents.
- Incident rates and related costs for the multitude of white fleet vehicles engaged in district maintenance and operations activities.

A Closer Look at the Statistics

According to a National Safety Council analysis of National Highway Traffic Safety Administration (NHTSA) data, there were 11 fatalities on school buses in 2021, including six drivers and five passengers. In the same year, however, there were 108 total fatalities resulting from school bus crashes. This amount included 97 deaths among occupants of other vehicles, pedestrians, and bicyclists. In other words, 90% of the people who died in school bus incidents were not actually riding on school buses.

Deaths in school bus-related crashes, 2012-2021

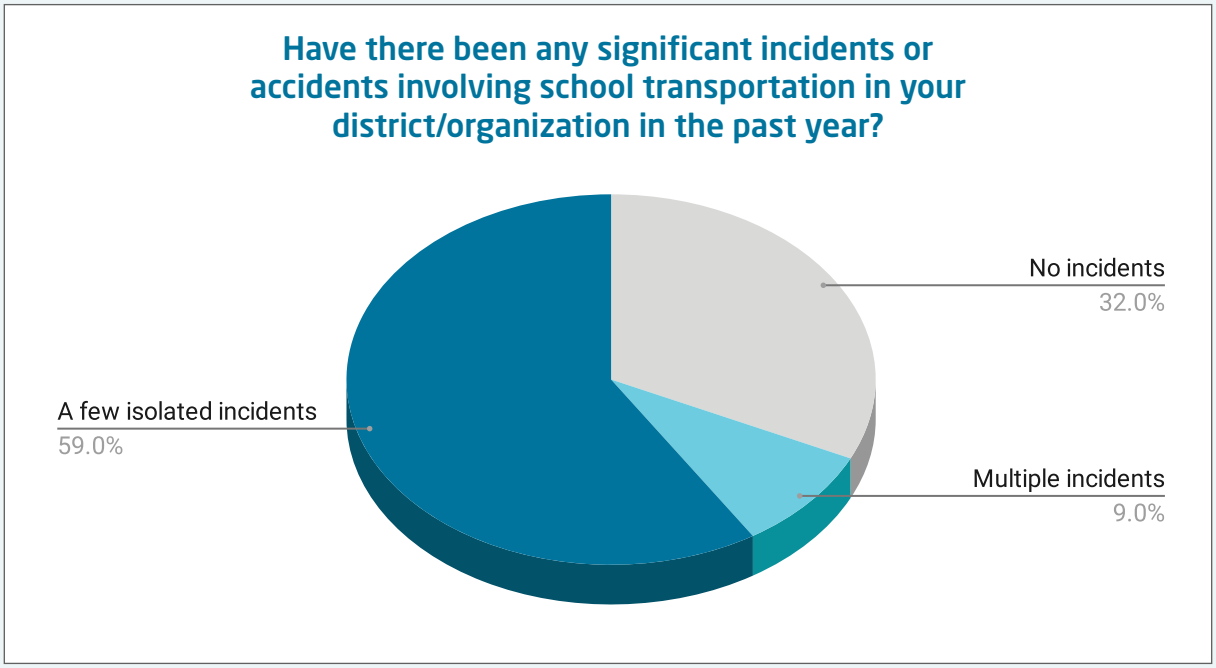
Person type	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Total	131	130	120	115	125	96	117	111	54	108
Occupant of other vehicle	87	92	77	87	85	71	80	81	42	74
Pedestrian	27	22	28	11	20	10	23	15	6	21
School bus passenger	8	6	7	5	9	4	9	4	1	5
School bus driver	6	5	4	8	5	8	3	5	1	6
Bicyclist	3	3	4	4	4	2	2	6	2	2
Other non-occupants	0	2	0	0	2	1	0	0	2	0

Totals bracketed in red represent 2021 fatalities among individuals not riding on buses.

Beyond fatalities, injury statistics from the same analysis reflect a similar pattern. In 2021, 9,700 total injuries were recorded in school bus accidents. Fewer than 20% of these injuries affected bus drivers and bus passengers. The bulk of the injuries occurred among occupants of other vehicles, pedestrians, etc.

Officials that neglect to consider the overall fatality and injury rates for school bus crashes clearly underestimate the totality of risk exposure faced by school districts.

Additional evidence indicates that the vast majority of school fleets are experiencing at least a few worrisome driving incidents. Specifically, the same 2023 School Bus Fleet survey discussed previously found that 68% of transportation professionals reported seeing significant accidents in their respective school fleets. This data suggests the problem is broadly based as opposed to being localized to a small number of poorly performing fleets.



As shown, the question about frequency of incidents did not establish the difference between yellow bus and white fleet-involved accidents. But anecdotal information collected by CalAmp, combined with general driving incident patterns data, and backed by common sense, suggests that the problem very likely pervades all vehicle classes. Meaning, white fleet safety needs should not be ignored.

The Fully Burdened Cost of Driving Incidents

Beyond human costs, school fleet accidents add economic pain and hinder transportation departments from operating at peak efficiency. Consider the following:

- In 2023, 97% reported a continued spike in prices for school bus parts such as tires, batteries, brakes, fluids, electronics, and engine components. Clearly, accident repair costs put increasing pressure on already strained school budgets.
- The number of bus drivers working in K-12 schools declined 15% from 2019 to 2023. With the driver shortage, driver downtime due to accidents is untenable.

- Similar to buses, repair costs for trucks and vans have continued to climb. This trend adversely affects white fleet operational costs.
- Schools are already paying more for insurance.

The cumulative impact of economic and operational costs makes it essential for transportation professionals to complete a sober assessment of current safety programs and performance to meet fiduciary and budgetary responsibilities. One has to assume that the 50% of survey respondents who indicated a need for improved driver training and monitoring made a similar calculation, reaching the conclusion that more is needed to elevate safety among school fleets.

Tackling Safety with Technology

As indicated previously, 36% of surveyed transportation professionals highlighted "cameras to monitor student behavior" as a desired safety measure. The straightforward value of continuously recording students and drivers is the ability to empirically identify or clarify misconduct or other incidents identified by drivers as safety hazards.

With these systems, drivers may have the option mark a point in time while an incident is occurring to streamline future review by supervisors and school officials. Otherwise, review requires a manual scan of footage based on time estimates. Although this can be helpful, the training value is of this technology is quite limited because it requires drivers to raise specific incidents for review.

To a lesser extent, cameras are also used to record stop-arm violations, a commonly cited safety threat. These recordings can be utilized for:

- Increasing transparency into the frequency of stop-arm violations.
- Documenting evidence of fault following a serious event, such as a collision involving a pedestrian.
- Forwarding to law enforcement officials for issuing citations.

Both of these camera solutions certainly offer the potential for incrementally improving safety. However, they do not tackle the pressing need to elevate driver training and monitoring. For this goal, AI-enabled dash cameras provide the optimal solution.

AI-enabled dash cams, such as CalAmp Vision, afford transportation officials with the optimal training and monitoring solution for drivers operating yellow bus and white fleet vehicles.

Advanced AI-enabled dash cams automatically detect and record adverse driving behaviors and incidents, providing high resolution clips of road-facing and optional driver-facing video. Automated clips include before and after footage to provide helpful context for reviewers. A host of supported video triggers includes distracted driving, speeding, harsh braking, and more. Videos are then uploaded to the cloud and curated for expedited review and follow up with drivers. Systems also offer optional audio coaching, signaling drivers to take immediate corrective action when needed. These systems are purpose-built to efficiently and effectively improve driver training and monitoring.

Beyond training and monitoring capabilities, dash cams can also help protect drivers and school districts by documenting mitigating circumstances that otherwise could not have been proven.

Contact CalAmp today to discuss your driving safety needs.
https://www.calamp.com/request-a-demo/

CalAmp®

15635 Alton Parkway, Ste 250, Irvine, CA 92618
Tel: 888.3CALAMP • calamp.com