

Purpose

The purpose of the Cooper Jones Active Transportation Safety Council (CJATSC) Study Team is to review and discuss observations made from detailed case materials of fatal crashes involving bicyclists, walkers or people using other forms of active transportation to identify modifiable risks and protective factors that if present or absent could prevent future fatalities.

Review and discussion of case materials are organized around modifiable risk factors within the [Safe System Approach](#). Within each Safe System Element, modifiable risk and protective factors are identified across the [Spectrum of Prevention](#) framework.

The observations reported by the Fatality Case Review Study Team are not the official recommendations of the CJATSC or the Washington Traffic Safety Commission (WTSC). The Study Team submits a summary of their observations to the CJATSC and WTSC for consideration when developing actionable recommendations. The official recommendations of the CJATSC are published in their Annual Report and are found at <https://wtsc.wa.gov/programs-priorities/active-transportation-safety-council/>.

Scope of Review

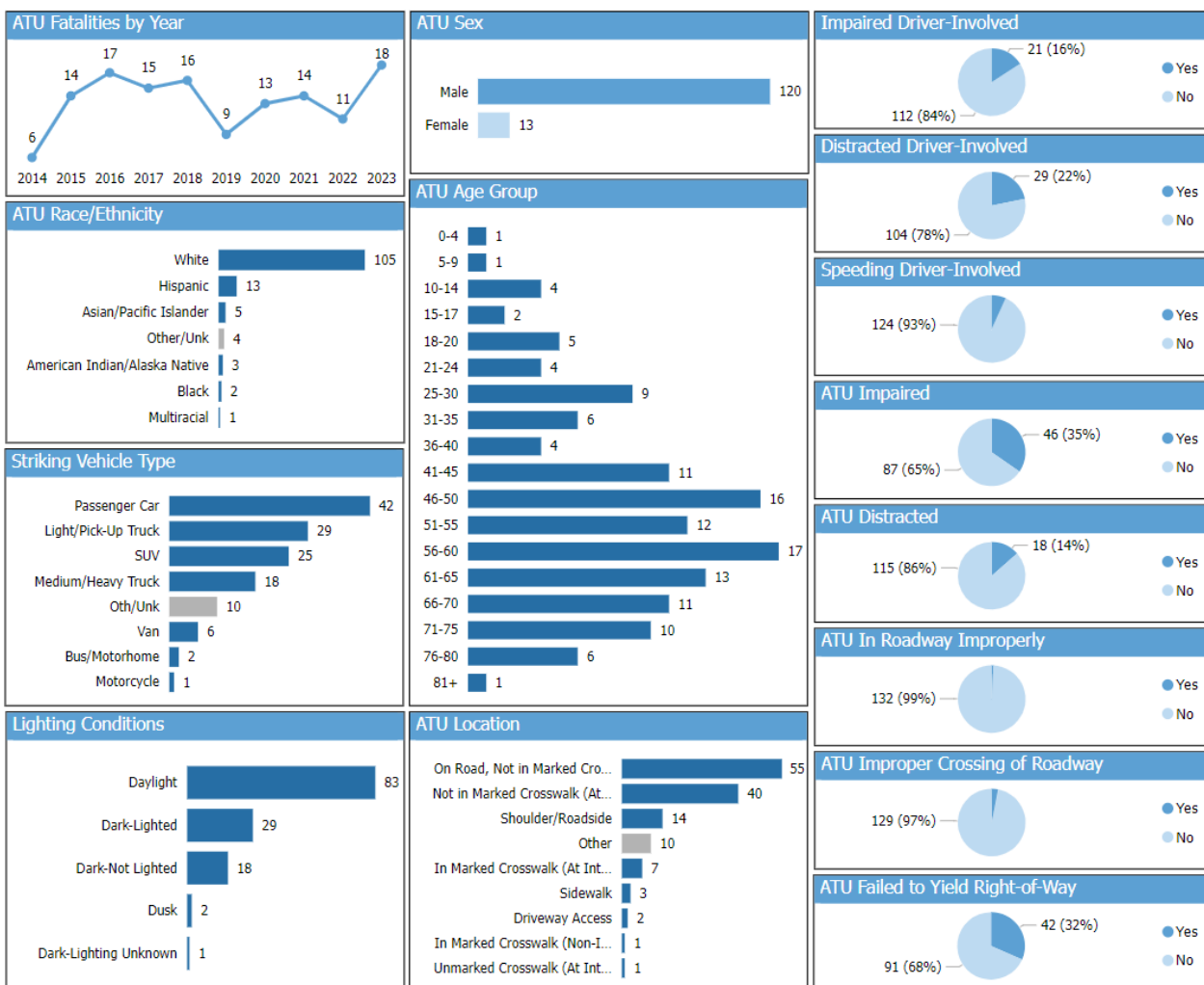
Meeting Date:	August 26, 2024
Case Selection Topic for Review:	Pedalcyclist Fatalities in 2023
Case Selection Criteria:	There were 18 pedalcycle fatalities in 2023. Ten cases were selected for review. Of the 10 cases, nine occurred on city streets and one occurred on a state route posted at 25 mph. There was one eBike fatality in 2023, which is included in the review.

Data Sources:

- Fatalities Dashboard: <https://wtsc.wa.gov/dashboards/fatalities-dashboard/>
- Fatal Crashes Dashboard: <https://wtsc.wa.gov/dashboards/fatal-crash-dashboard/>
- Drivers in Fatal Crashes Dashboard: <https://wtsc.wa.gov/dashboards/drivers-involved-in-fatal-crashes/>
- Active Transportation User Fatalities Dashboard: <https://wtsc.wa.gov/dashboards/active-transportation-user-fatalities/>

2014-2023 Pedalcycle Fatalities Data Summary

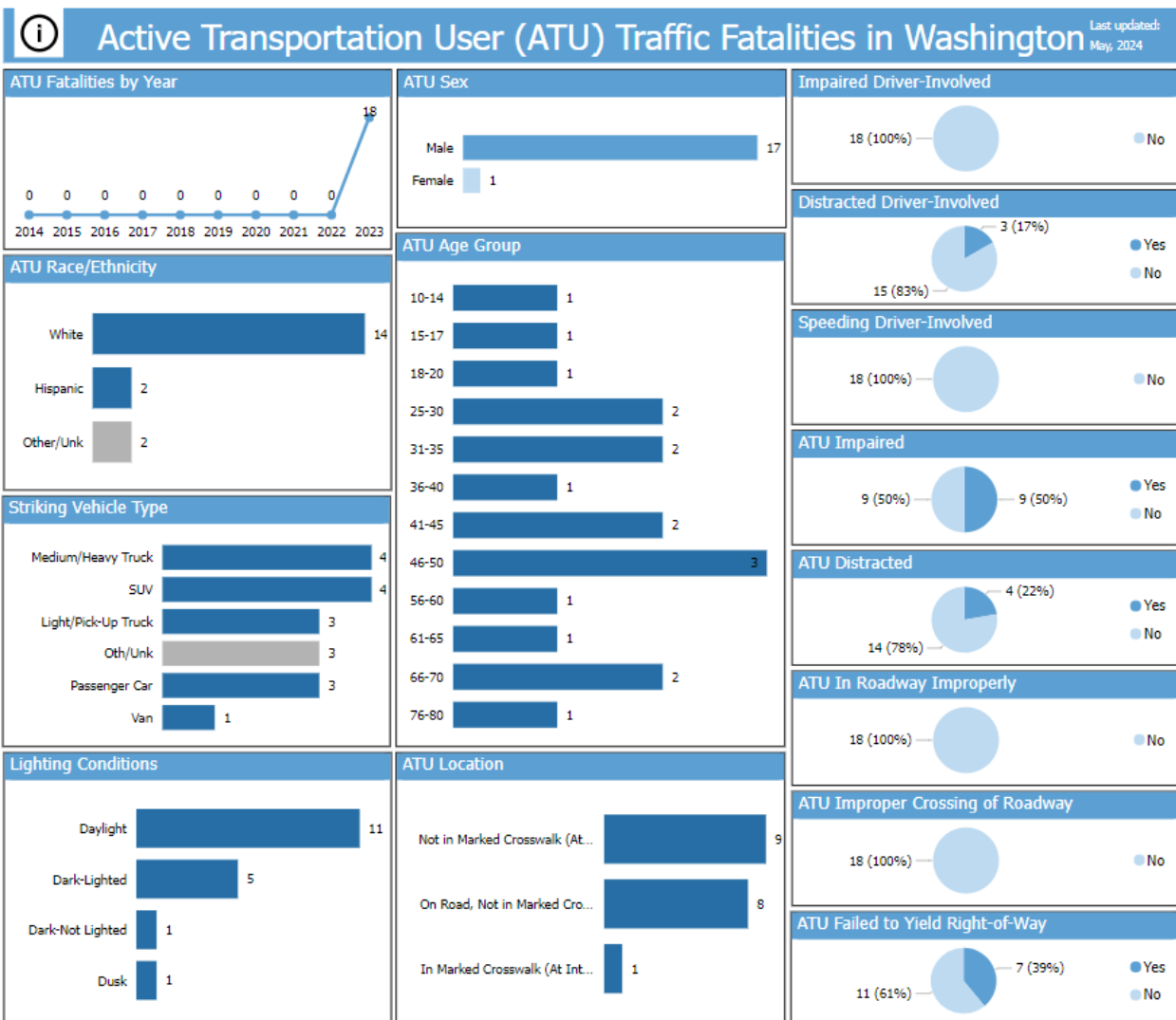
- From 2014-2023, there were 133 pedalcyclist fatalities.
- Of those fatalities: 90% were male, 42% were aged 40-60 and an additional 31% were over age 60.
- Just over half occurred either on the roadway or on the shoulder/roadside and one-third occurred at or related to intersections.
- One-fifth of the fatalities involved a distracted driver, 16% involved an impaired driver, and 7% involved a speeding driver.
- One-third of pedalcyclists were impaired and 14% were distracted.
- Nearly half (44%) of pedalcyclist fatal crashes occurred between July, August, and September.
- Nearly half (46%) occur on city streets.
- Over half (56%) occur where the posted speed limit is 25-40 mph.



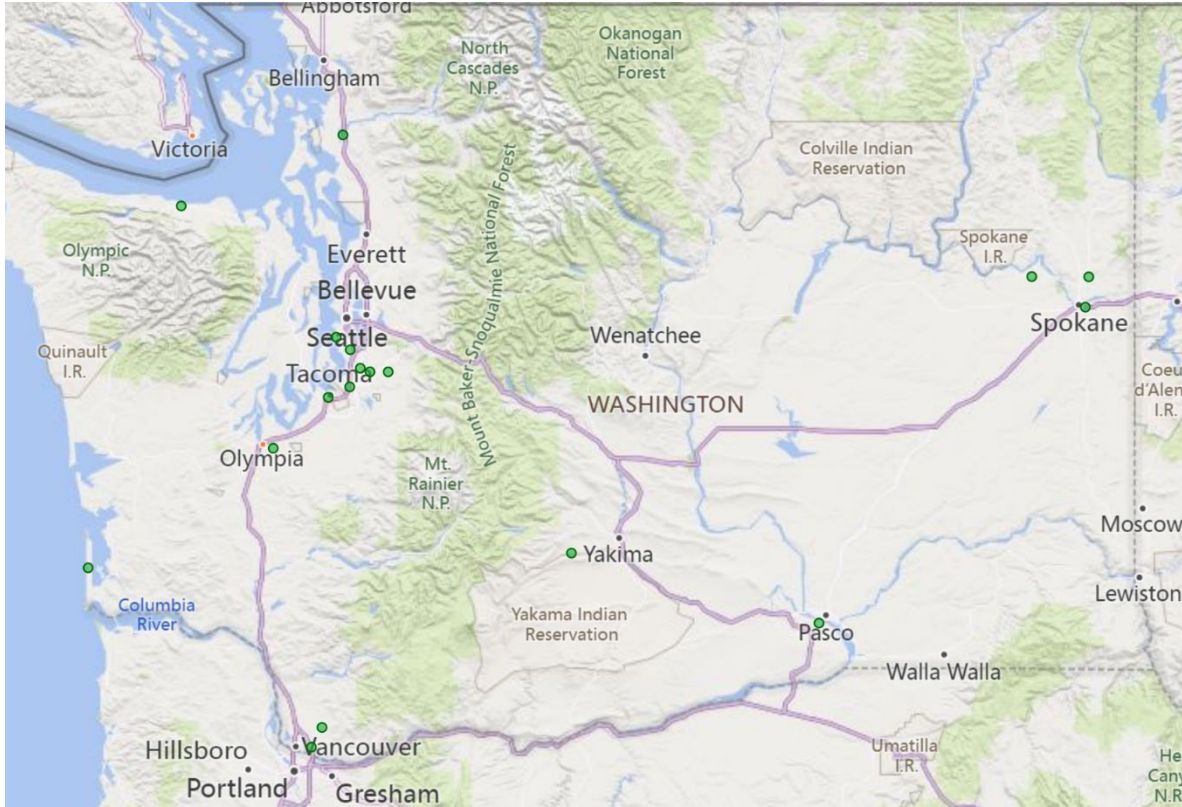
2023 Pedalcycle Fatality Data Summary

Among the 18 pedalcycle fatalities that occurred in 2023:

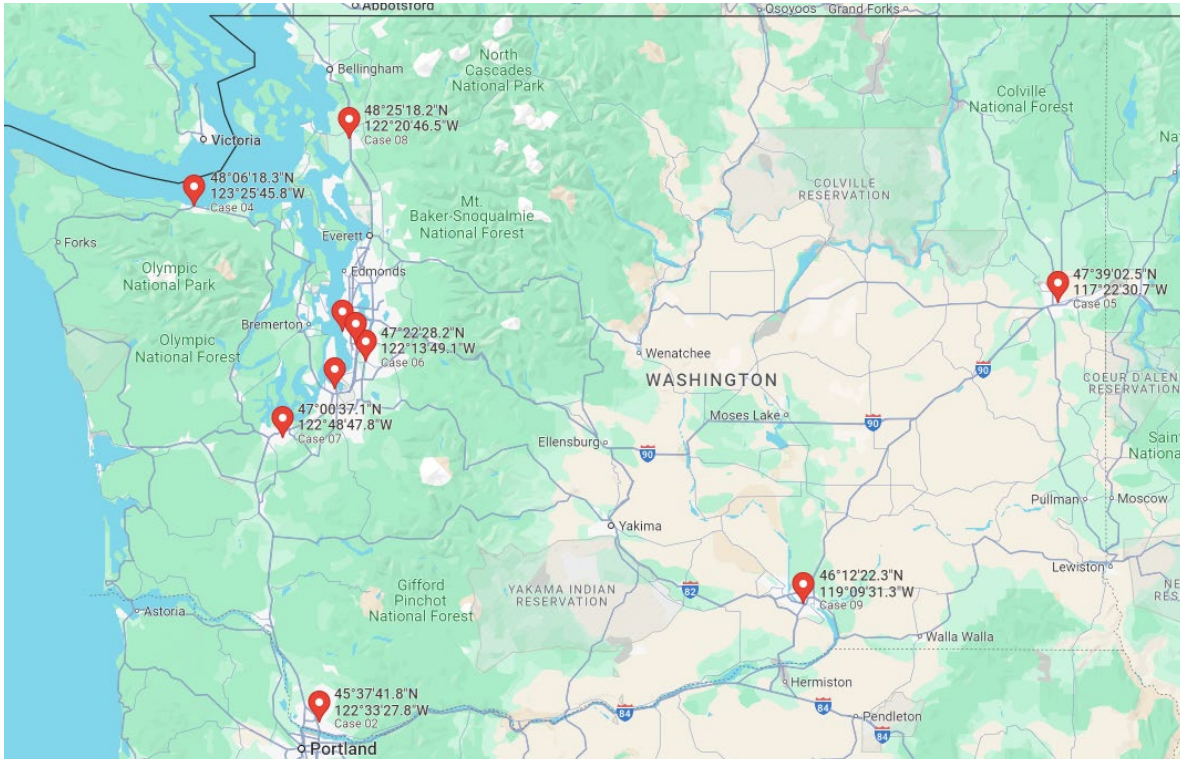
- None involved an impaired or speeding driver.
- Nearly one-fifth involved a distracted driver.
- Half the pedalcyclists were impaired and nearly one-quarter were distracted.
- Eight fatalities involved a medium/heavy truck or SUV.
- Two involved a hit-and-run driver.
- Ten pedalcyclist fatalities occurred at an intersection.



Map showing location of the 18 pedalcycle fatalities that occurred in 2023:



Map showing location of the 10 pedalcycle fatalities included in fatal case review:



Observations

The observations and findings from case reviews presented in this report are based on the discussion of the factors involved in the individual cases selected for review by the team.

Safer Road Users

- While driving at night, the driver of the striking vehicle made a left turn, following the vehicle in front of them also making a left turn, and did not see the pedalcyclist approaching in the oncoming lane of traffic.
- The driver of the striking vehicle chose to drive with a suspended license and without a required ignition interlock device.
- A pedalcyclist was riding at night and using the required white front light and red rear reflector ([RCW 46.61.780](#)). It was noted that a single front-facing bike light has one point in space, which is harder for a driver to see than two points of light. It also makes it hard to judge speed of approach.
- Multiple pedalcyclists did not possess a driver's license. Two were underage for a license and others were eligible but didn't have one.
- One case involved an electric-assisted pedalcycle that was traveling at 45 MPH that was misclassified as an ebike. The rider was unlicensed.
- Multiple cases involved the pedalcyclist entered the roadway against traffic laws
- Two cases involved young pedalcyclists (12-15 years old). The review team noted that education alone does not change developmental nature and lack of executive function in youth. As such, it's unrealistic to expect youth to always or consistently follow the rules of the road just because they are aware of them.
- Multiple cases involved pedalcyclists positive for amphetamine, methamphetamine, fentanyl, and norfentanyl at varying levels. It was noted that a high or low level does not indicate level of impairment.
- In multiple cases, pedalcyclists did not behave "as expected." How do we design a system to expect the unexpected?
- One case involved a 78-year-old driver that did not follow the "three-foot law" to give a pedalcyclist space.

Safer Vehicles

- Multiple crashes involved a medium/heavy truck or SUV as the striking vehicle and small-framed pedalcycles (i.e., a BMX). In this scenario, the driver's visibility of the pedalcyclist is reduced and the size of the striking vehicle contributes to the increased severity of injury or likelihood of fatality.
- One crash involved a food delivery driver operating a vehicle in unsafe working condition due to poor tires. The review team noted more people are driving for work that aren't regulated the same as other occupations that require people to drive. For example, independent contractors delivering groceries and restaurant orders.

Safer Speeds

- Three of the crashes occurred on arterial roadways and the drivers were not driving above the posted speed limit according to investigation reports. In all three, reducing the speed limit to 25 MPH could have increased the driver's ability to see a pedalcyclist and react accordingly to avoid a collision. It was noted there is also a need for contextual changes (i.e., multimodal integration).
- Multiple crashes lacked speed analysis. It was noted that law enforcement agencies continue to deal with a shortage of staff which impacts their ability to send officers to collision reconstruction training.

Safer Roads

- One crash occurred at an oddly shaped Y-intersection and lacked markings to indicate exactly where to make a left turn. The review team questioned how intersection design impacts the focus and choices made by drivers and active transportation users
- Multiple crashes occurred at locations that lacked dedicated bike lanes. It was noted this would not prevent crashes where the pedalcyclist uses the roadway for travel or at intersections.
- In multiple crashes, landscaping on private and public property reduced the ability of the driver of the striking to see a pedalcyclist in enough time to react and avoid a collision. The review team noted the challenge of regulating private property landscaping and the competing needs of city planner/engineers when designing roadways and adjacent infrastructure. For example, vegetation planted along sidewalks to reduce heat can also reduce visibility for drivers and walkers/rollers.
- In one crash, the crosswalk signal lacked a yellow reflective border around the indicator which helps project it at night.

Safer Land Use

- One case involved a young pedalcyclist, 15 years old, riding home from school and was struck within a couple blocks of home – within a crosswalk. This crash occurred on an arterial with three schools located on it and in a residential area.

Post-Crash Care

- Multiple cases lacked a thorough collision investigation documentation.
- Two cases involved a pedalcyclist labeled as "transient" and in both cases first responders initially assumed the condition they were found in was drug related.
- A collision investigation report noted the driver of the striking vehicle and witnesses stating the pedalcyclist was going "fast." The review team noted this is a subjective and there was a lack of speed analysis to confirm the actual speed of the vehicle and pedalcycle.
- Multiple toxicology reports noted drugs that may have been administered by EMS or at the hospital as part of post-crash care (i.e., fentanyl) or used for therapeutic purposes. The WTSC receives some EMS records, will cross reference reports, and remove those drugs from the agency's coded crash files and aggregated crash data. However, the WSTC (nor the review team)

receives hospital or other medical records so there are gaps that may result in those drugs inaccurately recorded as an impairment factor.

- One crash involved an electric-assisted pedalcycle that was misclassified as an ebike in the investigation report. The collision report noted the pedalcycle was traveling at 45 MPH. This implies the power output was more than 750 watts, and it was misclassified per RCW 46.04.169. However, the review team was unsure what it would be classified as – moped, motorcycle, or? As such, it was noted that this is unclear for collision investigators, too.
- Newer vehicles possess a black box with information that can aid in a crash investigation. Investigators might feel like a crash requires criminal offenses to justify requesting the black box.
- Multiple collision investigation reports lacked information about pedalcycle helmets. Currently, the only option for officers is to note whether a helmet was used or not. However, the electronic reporting system used for police traffic collision reports does not clearly identify helmet use related to pedalcyclists – rather, it implies a focus motorcyclist helmets (see image below).

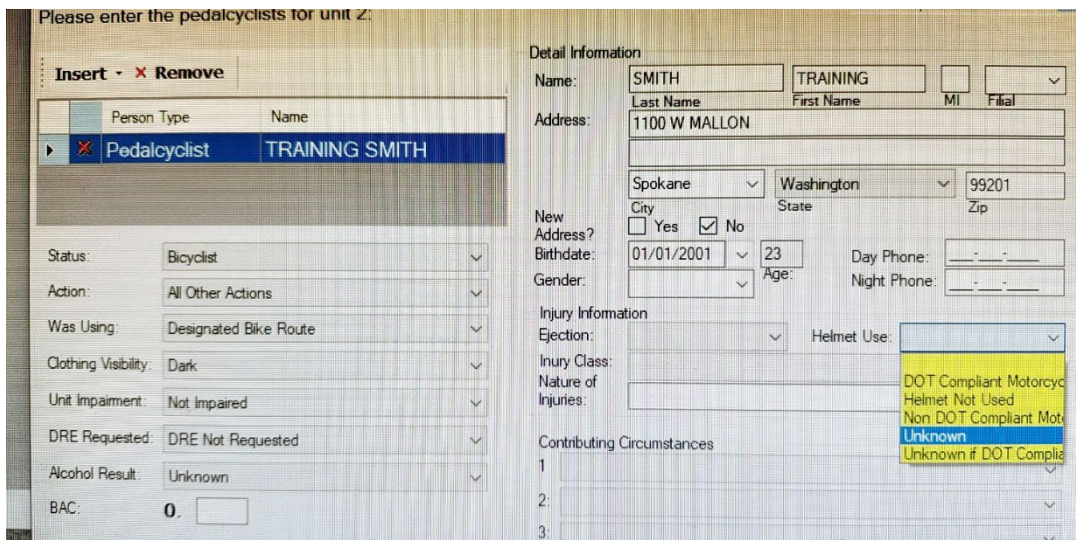


Image 1: A screenshot of what an officer sees in the electronic reporting system when completing a police traffic collision report and attempting to capture pedalcyclist helmet use information.

Actions to Consider

Safe Road Users

- Research if different risk behavior patterns exist between people that lose their license due to not being able to afford one versus due to moving violations.
- Research companies that hire independent contractors to provide delivery services. Specifically, regulations (or lack thereof) about verifying their delivery drivers are legal to drive (driver's license, proof of insurance, etc.), safety training, and vehicle inspections; and the practice of a company sending notifications to a driver's phone while driving (increasing distractions).

- Educate the public about the importance of vehicle safety inspections to ensure they are safe to operate. Research programs that provide free safety inspections and funding for repairs (worn tires, blinkers, headlights, etc.) and share that information. If those programs don't currently exist, support their creation.
- Develop policies that support zero tolerance for drivers involved in fatal crashes and positive for prohibited drugs (i.e., methamphetamines).
- Research school zone regulations and this distance defined in each regulation (i.e., reduced speeds with flashing lights up to 200 feet, speed cameras up to a mile). If school zones were extended and traffic was slower, would this increase drivers' response time to stop for walkers and rollers?
- Support campaigns that educate drivers about pedalcycle laws and the need to move over, when possible, to give space.
- Support required and continued education courses for drivers throughout their lifetime.
- Research what ebike education programs currently exist or are on the horizon, identify gaps, and promote programs to improve user education and safety.

Safer Vehicles

- Require medium to large trucks/SUVs be equipped with systems that detect and alert drivers of walkers and rollers approaching them as soon as possible.

Safer Speeds

- Research current speed management policies, specifically for arterial corridors, and identify how to improve policies and remove barriers that impact the ability to implement policies (i.e., funding).

Safer Roads

- Research roadway revision and upgrade requirements. What triggers when a road must be revised to support active transportation users?
- How do we increase funding opportunities to install flashing lights at crosswalks?

Safer Land Use

- Identify the schools that are not operating a safe route to school program, such as bike trains and walking school buses. Research the barriers those schools' face to adopt this program and develop action plans to address those barriers. If this information already exists, share the report(s) or invite a subject matter expert to educate the CJATSC and review team.

Post-Crash Care

- Research law enforcement training regarding [classified electric-assisted bicycles](#) to identify gaps and determine additional actions for consideration to improve collision investigations and data collection.

- Train law enforcement agencies to include a picture of the helmet worn by a pedalcyclist in their investigation report and note factors such as whether it was properly secured.
- Update law enforcement's electronic report system used to complete PTCRs to better capture pedalcyclist helmet information.

Fatal Case Review Considerations

- Research feasibility of requesting autopsy reports for FCRs.
- Redevelop FCR summary reports to best capture observations, track factors that aren't included in the coded fatal crash files, countermeasures, and action items.

Summary of Considerations

The Fatal Case Review Study Team is referring the following actions to the CJATSC for discussion by all members and consideration for further research, applicability, and evidence base to develop Study Teams, white papers, policy, and recommendations of the CJATSC to prevent death and serious injury among active transportation users.

- Research laws, public education programs, and law enforcement training regarding [classified electric-assisted bicycles](#) to identify gaps and determine additional actions for consideration to improve user knowledge and safety, collision investigations, and data collection.
- Research current speed management policies, specifically for arterial corridors, and identify how to improve policies and remove barriers that impact the ability to implement improvements (i.e., funding).