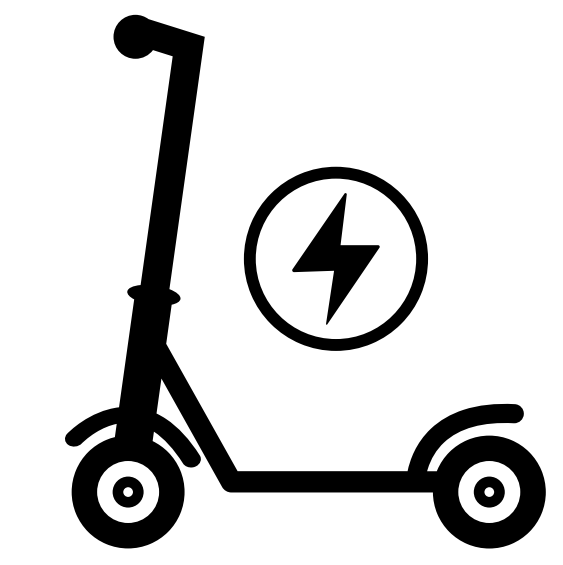


Speed, Safety, Scooters: Adapting to Increased Micromobility at UC Davis

Kangsong Du and Tselot Abdissa

BACKGROUND

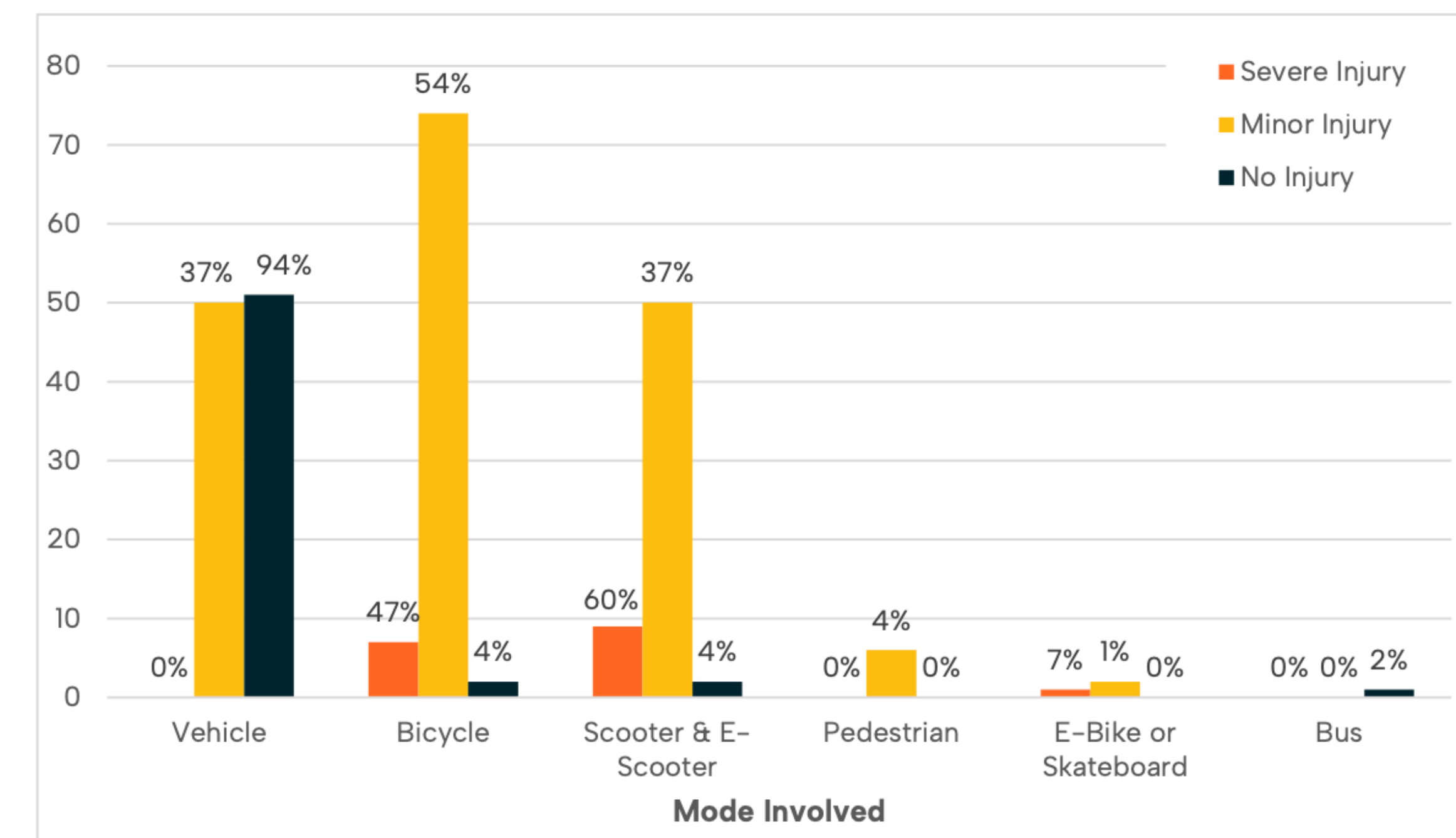


UC Davis is a leading university campus with exceptional bike infrastructure and culture. In recent years, there has been an increase in micromobility with the introduction of e-bikes and e-scooters. However, severe and minor injuries have become a campus-wide safety concern as more road users travel using these battery powered devices. As road users navigate this complex landscape, understanding factors contributing to safety risk and integration of micro mobility is essential.

FINDINGS: CAMPUS COLLISION ANALYSIS

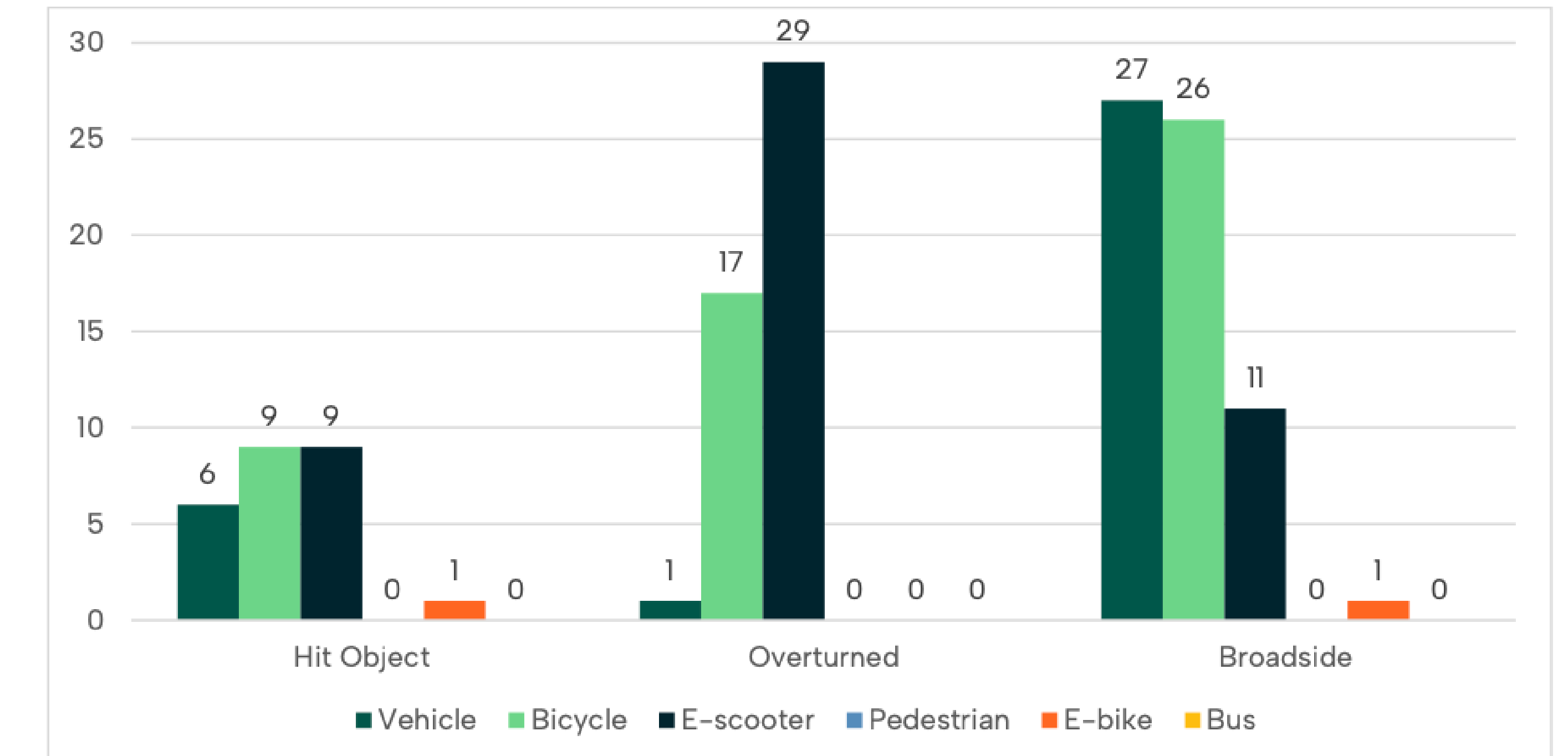
“2024-2025 academic year, e-scooters were involved in 34% of reported collisions in the UC Davis Police data and 36% of Student Health and Counseling Services patient data.”

Chart 5: On-Campus Collisions by Mode Involved and Injury Status, Spring Quarter 2024 – Spring Quarter 2025



Note: Share of Collisions is calculated with respect to total number of collisions by severity (5 severe, 136 minor, 54 no injury). Since a collision may involve more than one mode, the percentages add up to a value greater than 100%.

Chart 7: On-Campus Injury Collisions by Type and Mode Involved, Spring Quarter 2024 – Spring Quarter 2025



Sources: UC Davis Campus Police Department, 2024 – 2025; Fehr & Peers 2025.

“Micromobility device users, specifically e-scooter users experienced a disproportionately high rate of severe injuries despite being a smaller share of roadway users state.”

OBJECTIVE

- Build evidence-based policy recommendations targeting unsafe e-scooter speeds on campus
- Propose infrastructure improvements at high-risk locations identified through collision data
- Develop education programs and best practice guidelines for safer e-scooter riding

METHODS

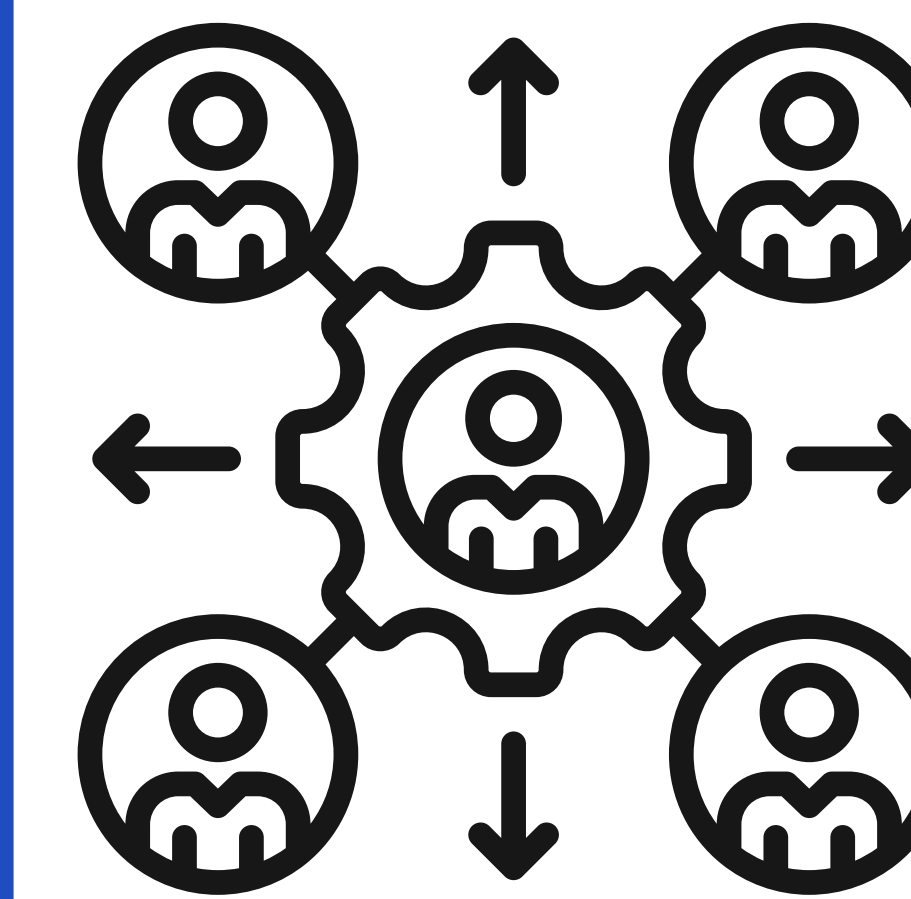
- Analyze UCD Police collision reports (566 cases, 2022–2025) to identify unsafe speed patterns and high-risk locations
- Analyze collision and camera data to identify unsafe speed patterns at high-risk locations
- Conduct literature review of e-scooter safety interventions from other campuses and cities



BEST PRACTICES

- Helsinki reduced e-scooter injuries by 64% after implementing speed caps and nighttime restrictions (Vasara et al., 2023)
- Lower speed limits significantly reduce sidewalk riding and high-speed operation (Cicchino et al., 2023)
- Geofencing technology can automatically enforce speed limits in high-risk pedestrian zones (Nikiforiadis et al., 2023)
- Regulation without enforcement has no measurable impact — Princeton's partial ban showed zero change in ridership behavior (Princeton Alumni Weekly, 2024)
- Helmet use can reduce head injury rates by 58–60% and non-fatal injury rates by 20% (WHO, 2022; Graz University of Technology, 2023)
- Mandatory safety training programs significantly improve rider awareness and reduce risky behavior on shared pathways (Useche et al., 2022)

RECOMMENDATIONS



- Develop map of relevant stakeholders and primary decision-makers
- Education curriculum
 - Mandatory safety training for all newly enrolled students, faculty, and university staff on navigating campus as a pedestrian, driver, biker, and/or scooter rider
 - One unit seminar on the forensic approach to scooter accidents
- E-Scooter registration program with free scooter helmets and lights the beginning of fall and spring quarter when collisions are at a peak.

EQUITY

E-scooters alleviate financial burdens and accessibility limitations for many users around UC Davis. It is important to consider the unintended consequences of safety enforcement. Approaching safety through educational programs per the recommendations will contribute to the University's long history of bicycle culture by leading the way to adapt to this new landscape.

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