Equity Approaches for Vision Zero: San Francisco

Challenge

Every year in San Francisco, approximately 30 people lose their lives and more than 500 are severely[1] injured while traveling on city streets. Seventy-five percent (75%) of these severe and fatal traffic crashes occur on only 13 percent of San Francisco streets, which comprise the City's High-Injury Network.[2] According to San Francisco's Vision Zero 2021 End of Year Report:[3]

- Fifty-nine percent (59%) of all fatal and severe injury crashes occur in Equity Priority Neighborhoods,[4] which San Francisco defines as areas with high concentrations of households with low incomes, people of color, seniors, and other vulnerable populations. Equity Priority Neighborhoods are almost twice as likely to be on the High-Injury Network, even though they contain only a third of city streets.

- 59 percent of traffic fatalities occurred on the Vision Zero High-Injury Network.

- 15 percent of all traffic fatalities occurred among people experiencing homelessness[5] even though people experiencing homelessness only make up 1 percent of the city population.[6]

- 22 percent of traffic fatalities were Black individuals, even though Black people only make up 5 percent of the population.

San Francisco is committed to prioritizing roadway safety and reaching zero deaths by adopting the Safe System Approach's principle that fatalities and severe injuries on city streets are unacceptable and preventable as detailed in their 2021 Vision Zero San Francisco Action Strategy:[7]

> ### *High Injury Network*
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> Based on both hospital and police data, 13 percent of San Francisco streets account for 75 percent of the City's severe and fatal traffic crashes. Half of this High-Injury Network is located in Equity Priority Neighborhoods.

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[1] Severe is the preferred term used by San Francisco. "Serious" is the term utilized by the U.S. Department of Transportation

[2] Link to High-Injury Network: https://sfgov.maps.arcgis.com/apps/webappviewer/index.html?id=fa37f1274b4446f1bdddd7bdf9e708ff

[3] Link to San Francisco Vision Zero 2021 End of Year Report: https://www.sfcta.org/sites/default/files/2022-06/SFCTA_Board_VisionZeroTrafficFatalities2021EndofYearREPORT_2022-06-07.pdf

[4] Equity Priority Neighborhood is the preferred term used by San Francisco. "Underserved communities" is the term most often utilized by U.S. Department of Transportation.

[5] San Francisco defines homelessness as persons with no fixed address.

[6] Link to San Francisco City Performance Scorecard on Homeless population: https://sfgov.org/scorecards/safety-net/homeless-population

[7] Link to 2021 Vision Zero SF Action Strategy: https://www.visionzerosf.org/wp-content/uploads/2021/11/VZSF_AS_111021_spreads-FINAL.pdf

2021 Vision Zero Traffic Fatalities by Travel Mode: San Francisco, CA
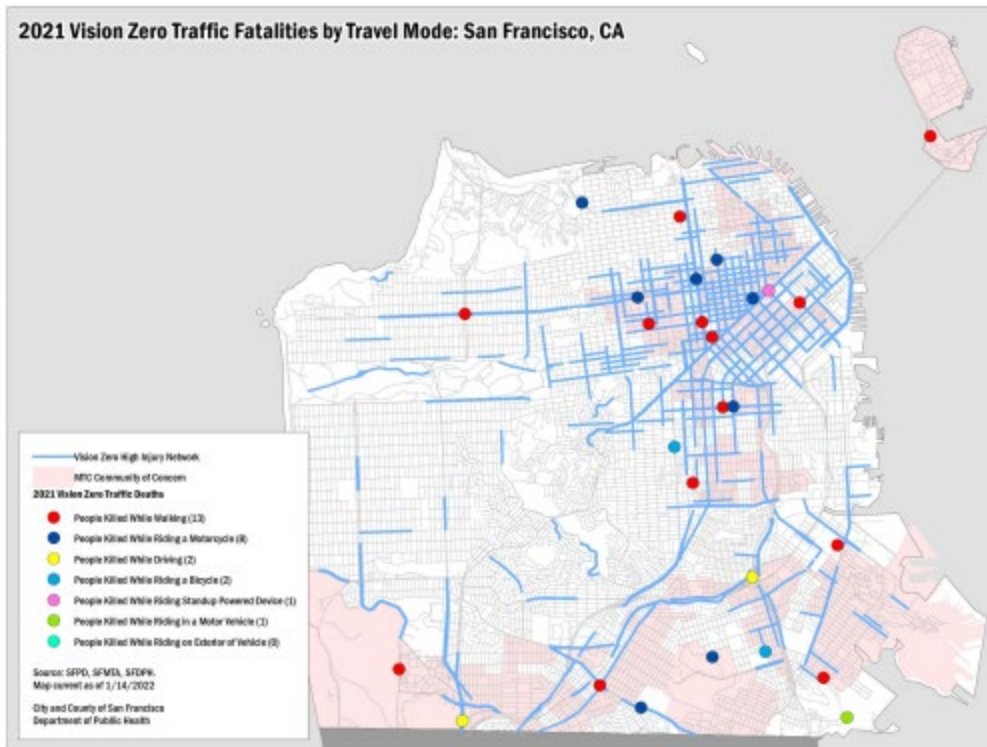
Vision Zero

To meet their ambitious goal of zero deaths by 2024, the City adopted a Vision Zero policy in 2014 that reflects the City's commitment to prioritize street safety and eliminate traffic deaths, particularly for the most vulnerable populations.[8]

A Vision Zero Task Force was established to provide input to key decision-making. This Task Force is co-chaired by the San Francisco Municipal Transportation Agency (SFMTA) and the San Francisco Department of Public Health (SFDPH).[9] The inclusion of SFDPH is notable because it reflects the City's view that traffic injuries and fatalities are a public health crisis. In addition to city and county agencies, the Task Force includes 40 community members who represent communities across the City to address roadway safety. The Task Force meets quarterly to advance projects, programs, and policy changes for Vision Zero, and they report on the progress of this citywide initiative.

In addition, a community-led Vision Zero Coalition comprised of more than 30 organizations and led by WalkSF,[10] regularly engages with both the Task Force and city agencies to advance Vision Zero and hold the city accountable to its commitments for safe streets.

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[8] Link to the current San Francisco Vision Zero Action Plan: https://www.visionzerosf.org/wp-content/uploads/2021/11/VZSF_AS_111021_spreads-FINAL.pdf
[9] Link to Vision Zero Task Force: https://www.visionzerosf.org/whos-involved/vision-zero-sf-taskforce/
[10] Link to Walk San Francisco: https://walksf.org/

Equity in Vision Zero

> ### *Equity is a Core Principle of Vision Zero*
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> San Francisco operates under the principle that a transportation system should be safe for all road users, for all modes of transportation, in all communities and for people of all incomes, races and ethnicities, languages, ages, abilities, and housing status.

San Francisco recognizes that vulnerable communities are disproportionately impacted by traffic fatalities and severe injuries, and it prioritizes and monitors safety improvements throughout its Vision Zero Action Strategy and programs. Currently, the City is engaged in the following activities:

- Maps Equity Priority Neighborhoods,[11] which include locations with a concentration of individuals who are experiencing homelessness, individuals with low-income, people of color, seniors, people with disabilities, and communities with limited English proficiency.

- Creates and maintains TransBASE,[12] an online public database and analytical tool that makes data available to communities, so people are able to understand health impacts of transportation systems, including safety, access, physical activity, air and noise quality, and health disparities.

- Engages with community leaders and local stakeholders to ensure that strategic actions reduce injury inequities and do not exacerbate existing inequities. For example:
  - The City identifies and builds relationships with community organizations and members of the public and encourages them to become traffic safety champions. One of the ways this is accomplished is through the "Left Turn Calming Project" where drivers are guided through a behavior change educational campaign to grow their understanding and knowledge about the dangers posed by left-hand turns, and once this knowledge and understanding is achieved, become champions for safety within their communities on making safe left-hand turns.
  - The City further invests in community engagement and education to promote a culture prioritizing traffic safety, including multilingual marketing campaigns and direct outreach in the most widely spoken non-English languages.
  - The City manages several key programs, such as the Safe Streets for Older Adults and People with Disabilities Program and SFDPH grants,[13] which help analyze neighborhood safety conditions; provide educational outreach and community engagement, including assistance with translation and culturally appropriate communications; and engage with city decision-makers about proven streetscape solutions for safer streets.

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[11] Link to SFCTSA map of Equity Priority Neighborhood: https://www.sfcta.org/policies/equity-priority-communities

[12] Link to TransBASE: https://transbase.sfgov.org/transbase/

[13] Link to Walk San Francisco page on Safe Routes for Seniors and People with Disabilities: https://walksf.org/our-work/safe-routes-for-all/safe-streets-for-seniors-and-people-with-disabilities/

- Develops and institutionalizes an injury surveillance system to ensure that injury crash data is accurate, publicly available, and includes analysis of vulnerable populations (see below).

- Implements data-driven, culturally competent, multilingual education, engagement, and enforcement campaigns targeted in impacted areas.

- Ensures Vision Zero strategic actions identify and address potential unintended consequences on vulnerable populations, including the impact of fines and fees on low-income residents.

- Prioritizes and monitors improvements on the High-Injury Network, in Communities of Concern, and where there are concentrations of fatal and serious injury crashes to seniors and people with disabilities and other vulnerable populations to address historic differences in resource allocation.

Collaboration with Public Health

Interagency coordination is a key component of San Francisco's Vision Zero effort. The collaboration with SFDPH has been instrumental in elevating equity discussions, particularly around data collection and analysis to establish consistent crash fatality reporting and develop an accurate, publicly available injury surveillance system that includes an analysis of vulnerable populations.

Traffic Fatality Protocol

The process of creating a standardized case definition of a traffic fatality ensures consistency and improves fatal crash data collection, analysis, and evaluation across city agencies, including transportation, law enforcement, and public health.

Consistent Crash Fatality Reporting

To ensure consistency in the measurement and reporting of traffic fatalities across city agencies, San Francisco leverages a traffic fatality protocol[14] to create a standardized case definition of a Vision Zero traffic fatality.

Each month, the Office of the Medical Examiner (OME) sends a Motor Vehicle Monthly Death Report to a group of stakeholders, including SFDPH epidemiologists, law enforcement, and transportation officials. Together, they determine if the fatality meets their shared definition of a traffic fatality:

- Person(s) killed in or outside of a vehicle (bus, truck, car, motorcycle, moped, bicycle, standup powered device, light rail vehicle, etc.) involved in a crash or impact with a vehicle or road structure.

- Occurs within the public right of way in the City or County of San Francisco.
- Death takes place within 30 days of the public roadway incident as a result of the injury.

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[14] Link to traffic fatality protocol:
https://www.sfdph.org/dph/files/EHSdocs/PHES/VisionZero/Vision_Zero_Traffic_Fatality_Protocol.pdf

The cases are then classified on the resulting incident report as: pedestrian, driver, passenger inside a motor or transit vehicle, passenger outside a motor or transit vehicle, motorcyclist, cyclist, moped rider, or standup powered device rider. Each of these classifications has a clear definition.

Additionally, the traffic fatality protocol outlines which fatalities are excluded from the analysis and provides an explanation as to why those numbers are not included in the count. Once confirmed, the SFDPH publishes a final monthly fatality report[15] and an end of year report.[16]

A key benefit of this collaborative analytical approach is the integration of the OME and San Francisco Police Department (SFPD) data. Table 1 outlines the types of data collected from each report. This integration provides a more complete and clear picture of the crash—specifically, who is killed in the crash, if they are a vulnerable road user, where the crash took place, and the roadway conditions of the crash.

Table 1. Types of data collected from OME and SFPD reports.

Office of the Medical Examiner Data:	San Francisco Police Department Data:
- Name - Age - Gender - Race (verified through family, medical records, driver's license, etc. when possible) - Address type (e.g., no fixed address) - Location of the incident - Circumstances of fatality - Date and time of death - Investigating agency	- Person data (e.g., name, date of birth, sex, injury status, driver's license information, speeding or other traffic violations, restraint/helmet use, etc.) - Crash data (e.g., location, date, time, severity, light, weather, etc.) - Vehicle data (e.g., body type, make, model, year, license plate number, etc.) - Roadway data (e.g., lighting) - Circumstances of the crash if applicable (e.g., if there was a fatality, size of vehicle, hazardous materials, non-motorist involvement, etc.)

Closing Data Gaps

In San Francisco, the county owns and operates the only Level I Trauma Center in the city—the Zuckerberg San Francisco General Hospital (ZSFGH)—which allows access to a single source of medical data relating to severe and fatal crashes. The SFDPH Center for Data Science conducts additional analysis, including comparing police crash reports with the ZSFGH medical data for traffic crashes.

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[15] Link to traffic fatality scorecard: https://sfgov.org/scorecards/transportation/traffic-fatalities
[16] Link to 2021 San Francisco End of Year Report: https://www.sfcta.org/sites/default/files/2022-06/SFCTA_Board_VisionZeroTrafficFatalities2021EndofYearREPORT_2022-06-07.pdf

Examining both sets of data side by side provides a better understanding of injury trends. This analysis[17] supports San Francisco's collective effort to provide a more complete and more equitable summary of severe crashes and to better inform decision making on prioritizing investment. Preliminary results from this analysis reveal that severe injuries are underreported in police crash data due to a number of factors, including the following:

- Police are not trained to assess medical conditions, so severe injuries were higher in hospital data than those reflected in the police database.

- Certain types of crashes (e.g., those involving bicyclists) are less likely to be reported to the police.

- Crashes in areas with a greater density of people of color are less likely to be reported to the police.

Summary

To promote equity in the Vision Zero program, San Francisco has created a strong partnership between traditional transportation stakeholders, public health experts, and the community. The city is using public health methods to ensure accurate and transparent collection and analysis of roadway crash fatalities and injuries to create more complete data. This comprehensive, data-driven analysis allows the City to prioritize safety improvements on roadways on the High-Injury Network located in Equity Priority Neighborhoods, where these investments will make the most progress toward reaching the City's goal of zero deaths.

Lessons Learned

- Collaborate with the public health community to create more complete, accurate, and transparent fatal and severe injury data, particularly for vulnerable populations.

- Identify Equity Priority Neighborhoods and overlay that information with the High-Injury Network.

- Engage meaningfully with vulnerable populations and build relationships to support development of traffic safety champions in these communities.

- Prioritize safety investments and improvements on roadways on the High-Injury Network located in Equity Priority Neighborhoods.

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[17] Publication of results is currently pending.