UNIVERSITY of MARYLAND
SCHOOL OF MEDICINE
SHOCK, TRAUMA AND ANESTHESIOLOGY
RESEARCH CENTER
National Study Center for Trauma & Emergency Medical Services

Maryland's Pedestrian/Bicyclist Fatality Review: Process and Preliminary Findings

Metropolitan Washington Council of Governments
Transportation Planning Board - Safety Subcommittee
December 10, 2019

NSC: Kim Auman (*Project Manager*), Erica Zimmerman (*Project Coordinator*)
MHSO: Jeff Dunckel (*Pedestrian-Bicycle Safety Program Manager*)

The Reason We Are Here Today

- MISSION – The MVA's MHSO is dedicated to saving lives and preventing injuries by reducing motor vehicle crashes through the administration of a comprehensive network of traffic safety programs.

- VISION – Anything other than zero deaths is unacceptable

Vision Zero:

Who believes we can ever achieve zero pedestrian - bicycle fatalities?

Challenges Faced

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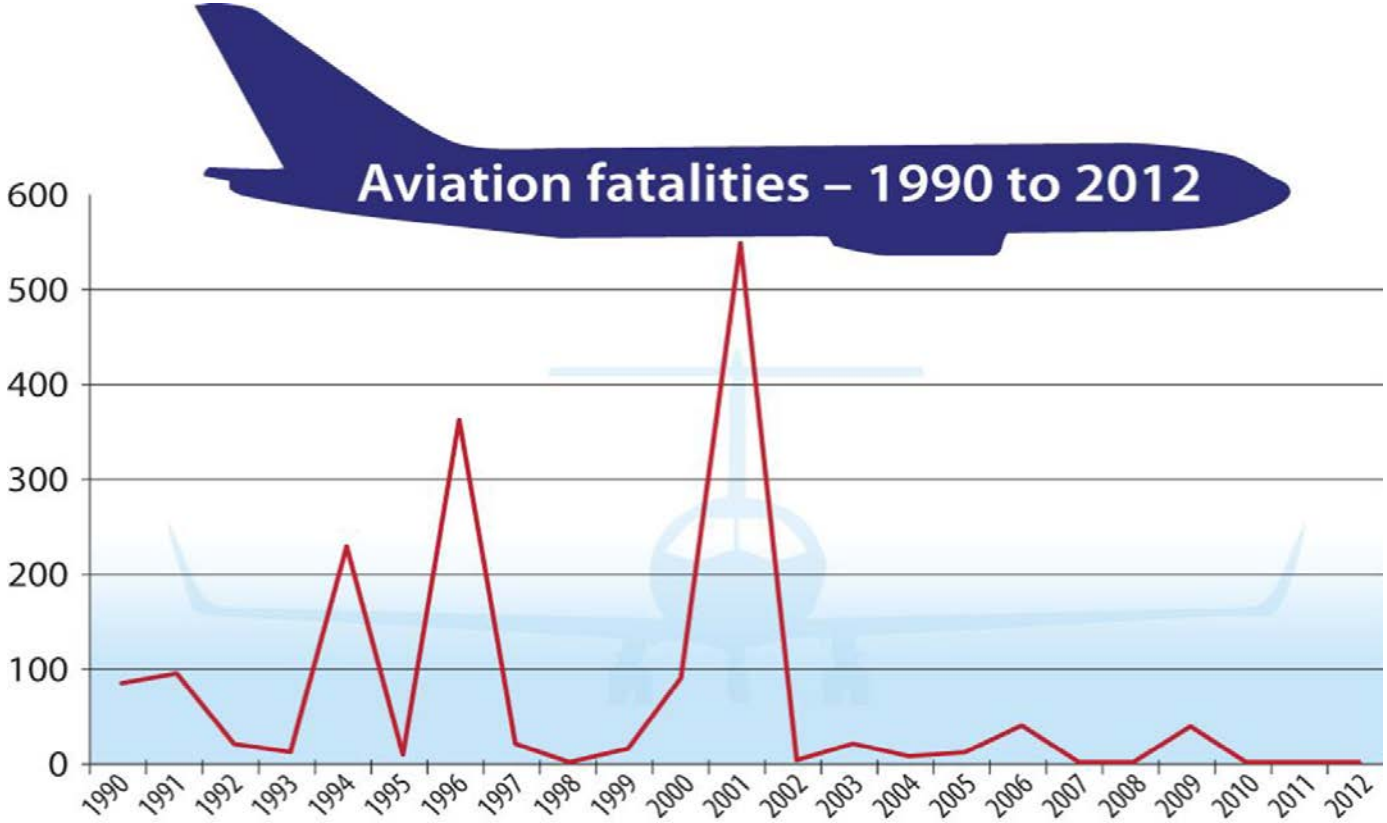
History of Aviation Fatalites

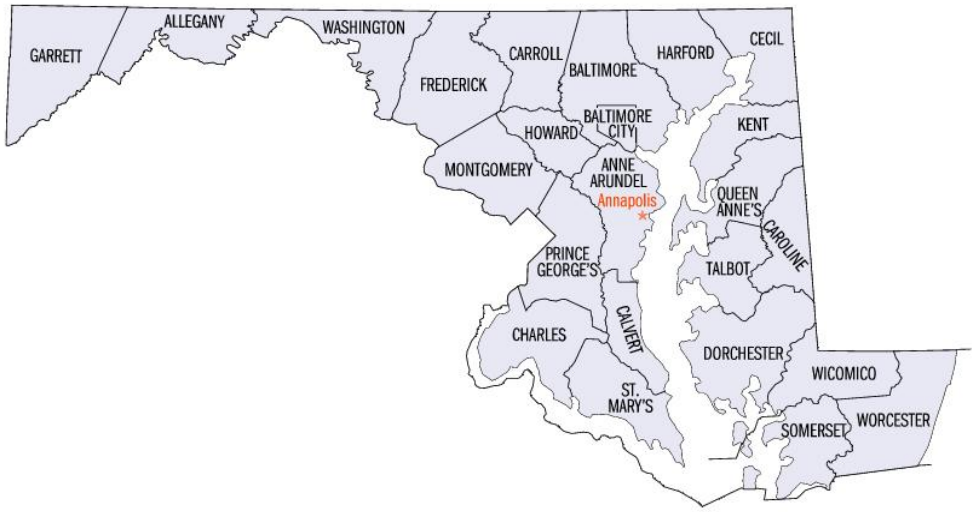


What's Our Little Black Box?

Crash Reconstruction Reports

Project Overview

- Review Maryland's 2016 Pedestrian/Bicyclists fatalities (n=127)
- *Goal:* To identify contributing factors and countermeasures
- Monthly meetings held to discuss cases in specific counties
- Analyze ACRS data to determine how many identified contributing factors in fatal crashes are also identified in non-fatal pedestrian crashes



Multidisciplinary Review Team

Epidemiologist/Researchers

Crash Reconstructionists

Engineers

Community Health Representatives

Planners

Physicians

Police Officers

Emergency Medical Services

Program Managers

OCME Representatives

Sources of Information

- *Detailed Crash Investigation Report (DCIR) – little black box for pedestrian/bicyclist fatal crashes **
- *ACRS reports **
- *OCME data – toxicology results*
- *Video surveillance – when available*
- *NTDB reviews – when available*
- *Google maps **
- *Media Reports **

* Sent to Review Team 1 week prior to meeting

Case 2016-127

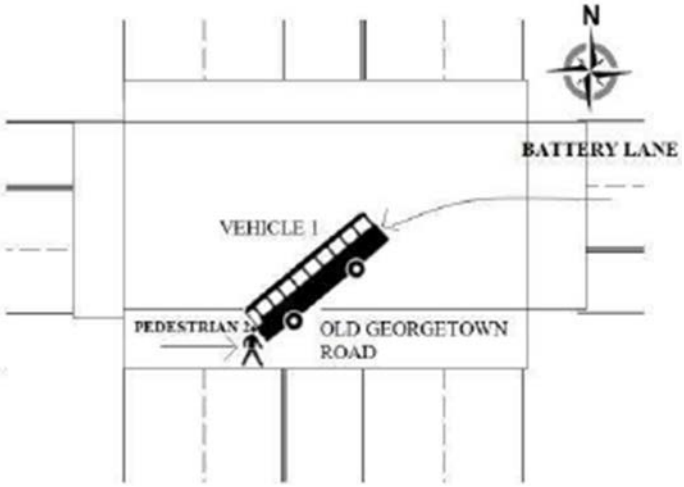
Summary

Pedestrian

- Age - Gender
- Clothing
- Date/Time of death

Driver

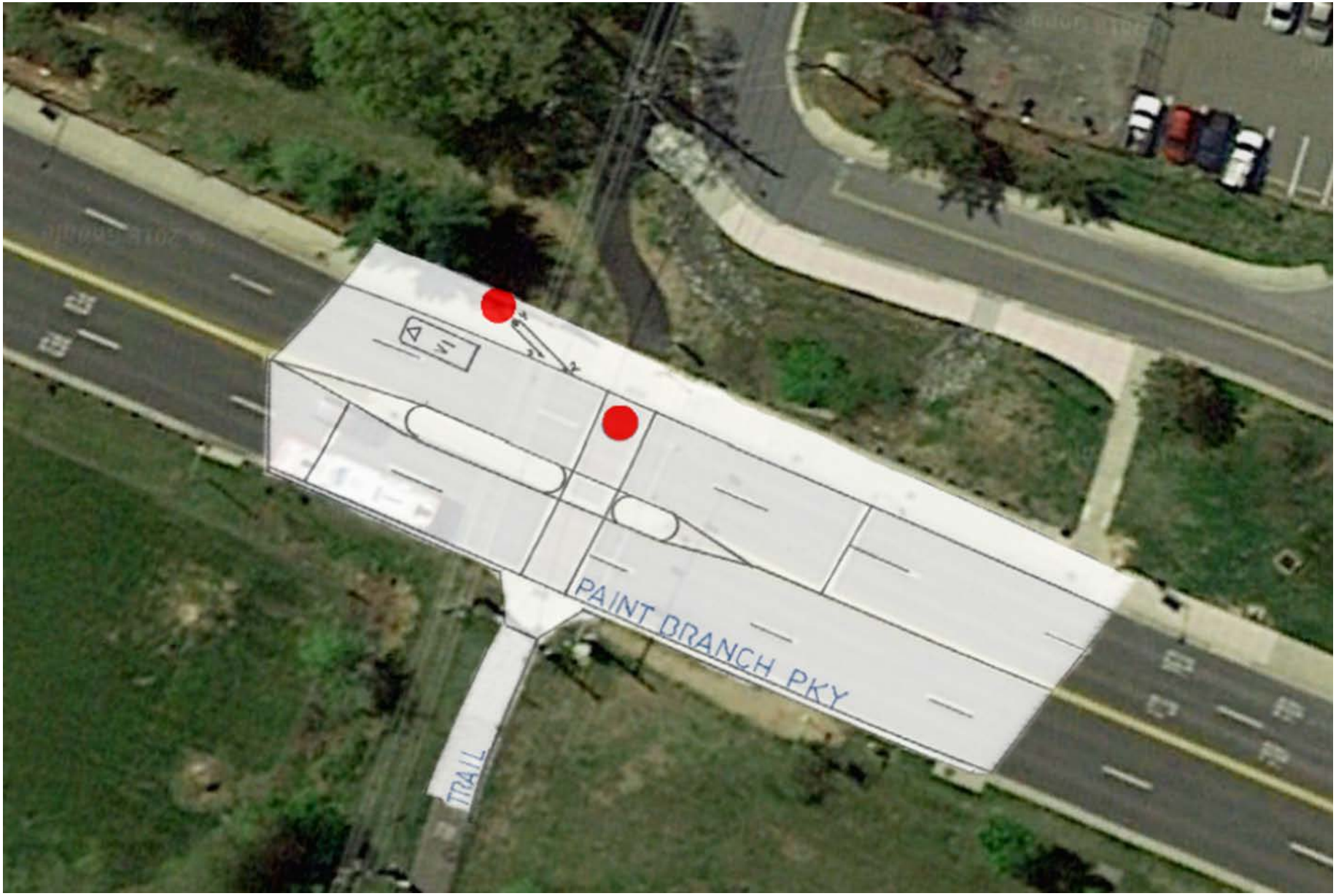
- Age - Gender
- Travel Speed
- Impairment



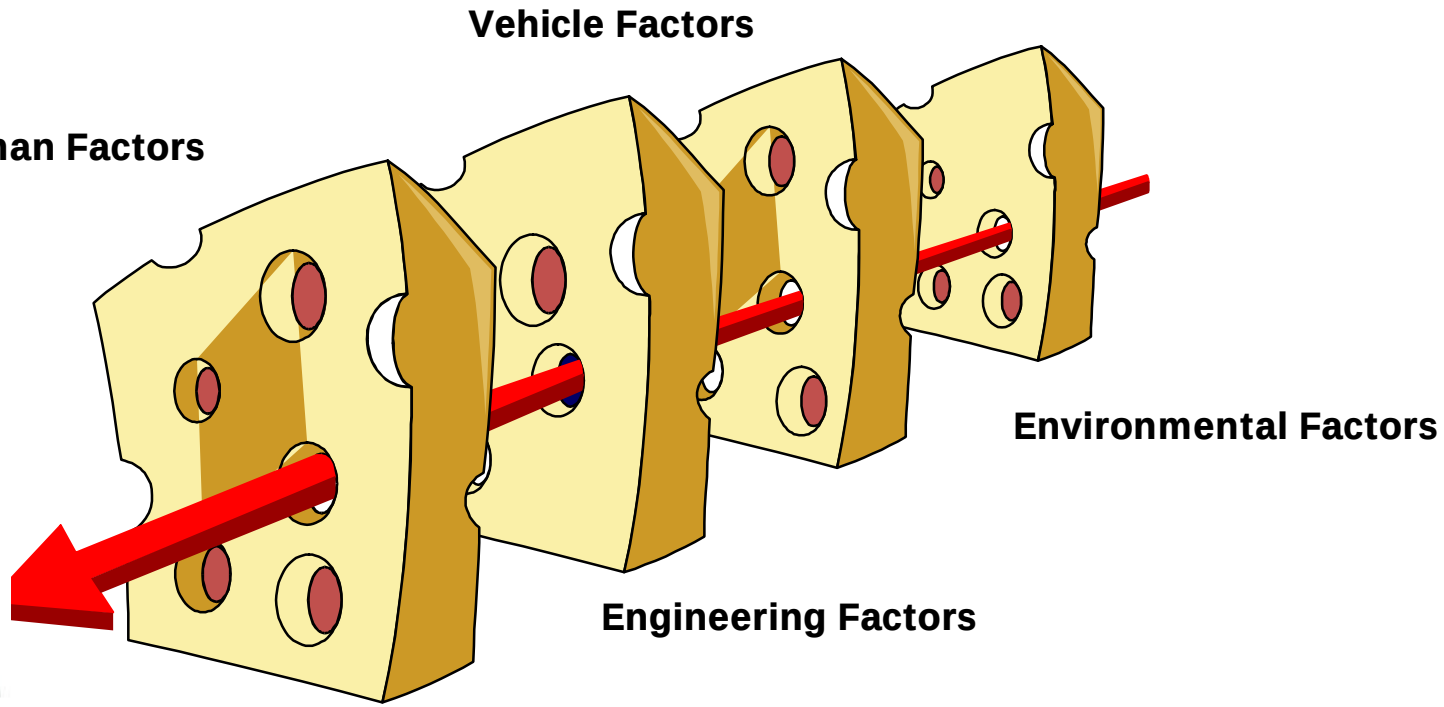
Crash Description

- Date/Time of crash
- Weather
- Posted Speed
- Year, Make, Model
- Street Lighting

Scene Photos



“Swiss cheese” model of causation



Contributing Factors

Human:

Driver– Speeding, Distracted, Not Yielding, Impairment…

Pedestrian– Not Using Crossing, Dark Clothing, Impairment…

Environment: Weather …

Engineering: Lack of Crossing Opportunities, Lighting, Speed limit …

Vehicle: Visual Obstructions, Headlights…

Contributing Factor Classification

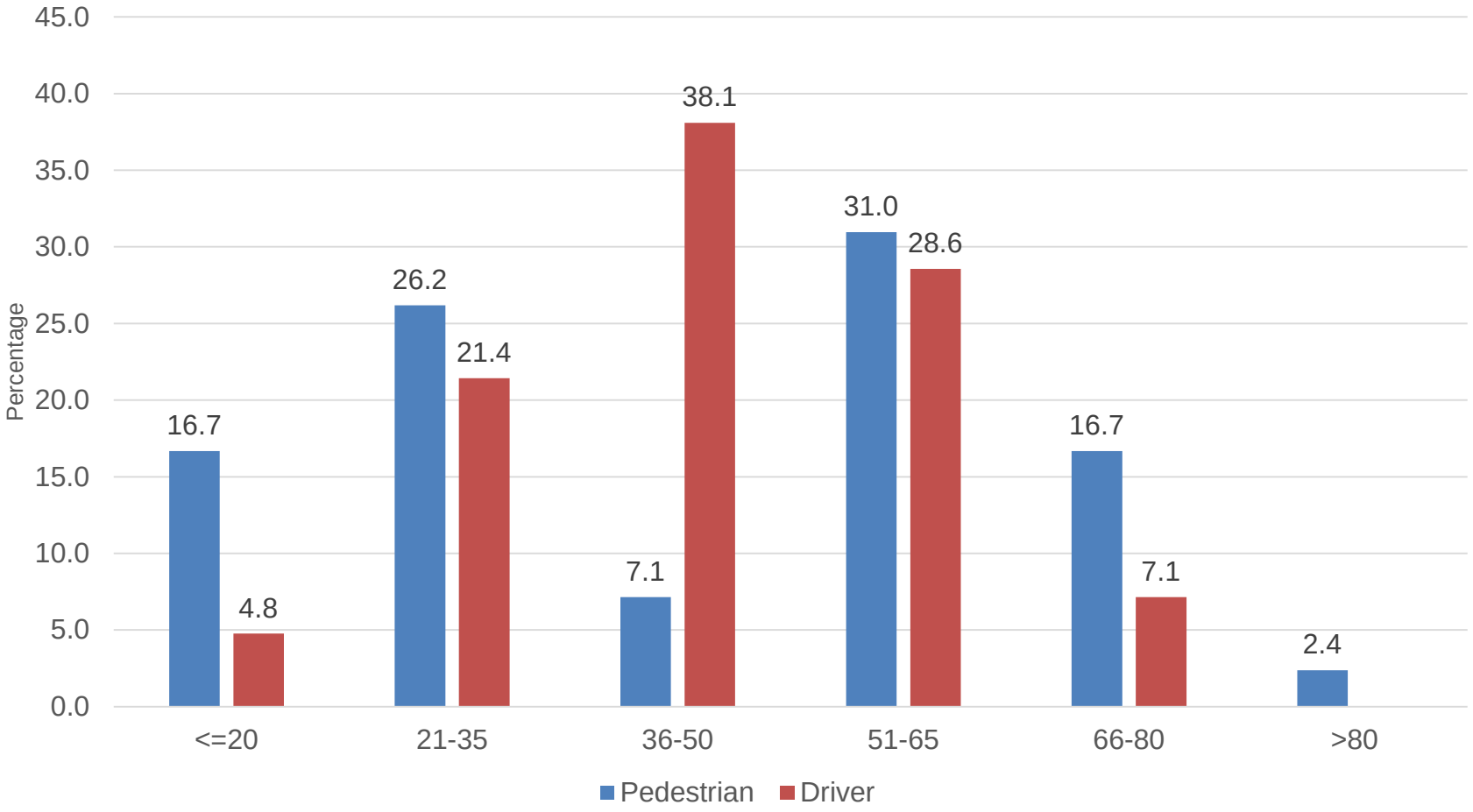
Certain – *Case review and evidence support high confidence the contributing factor was a primary contribution to the pedestrian impact and fatal outcome (established beyond doubt).*

Probable - *Case review and evidence support moderate confidence the contributing factor was a primary contribution to the pedestrian impact and fatal outcome (likely to happen).*

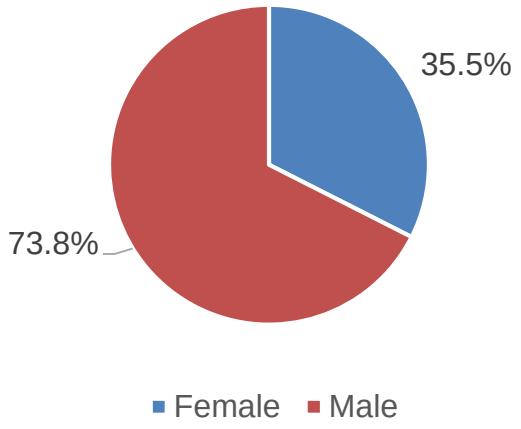
Possible - *Case review and evidence support minimal confidence the contributing factor was a primary contribution to the pedestrian impact and fatal outcome (may or may not have occurred).*

Preliminary Findings from 41 Case Reviews

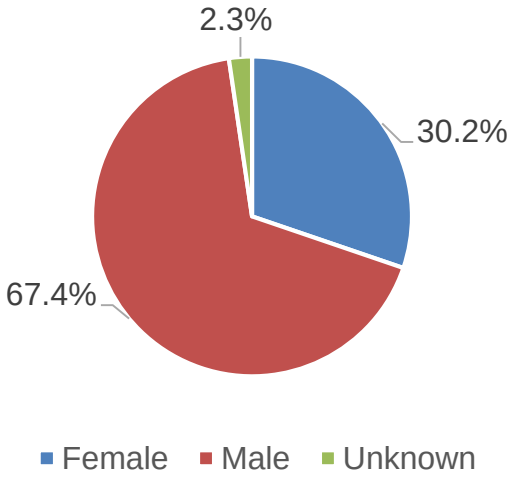
2016 Pedestrian Fatal Crashes: Distribution of Pedestrian and Driver Age



2016 Pedestrian Fatal Crashes: Pedestrian Sex

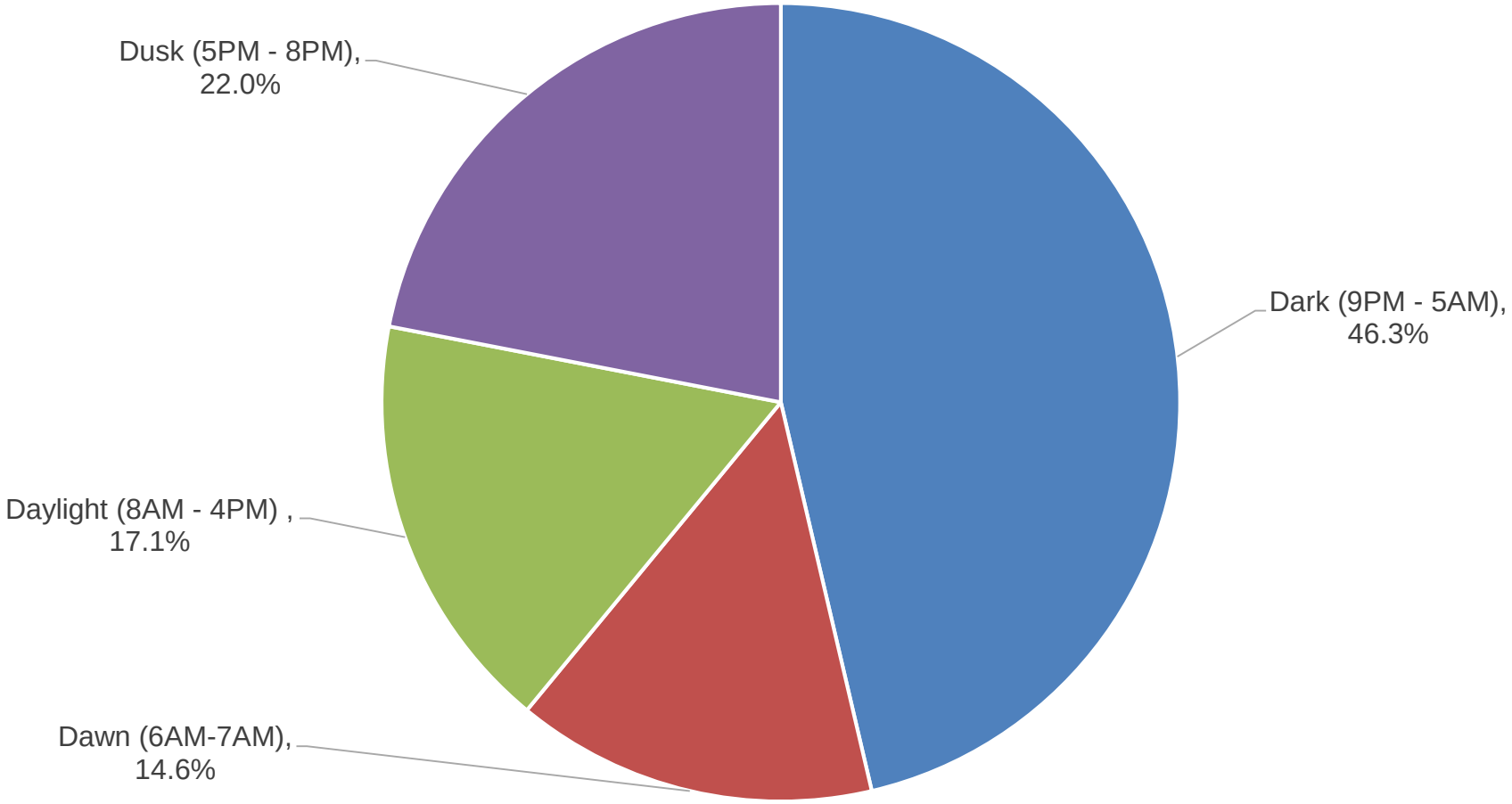


2016 Pedestrian Fatal Crashes: Driver Sex



In one case driver was never located.

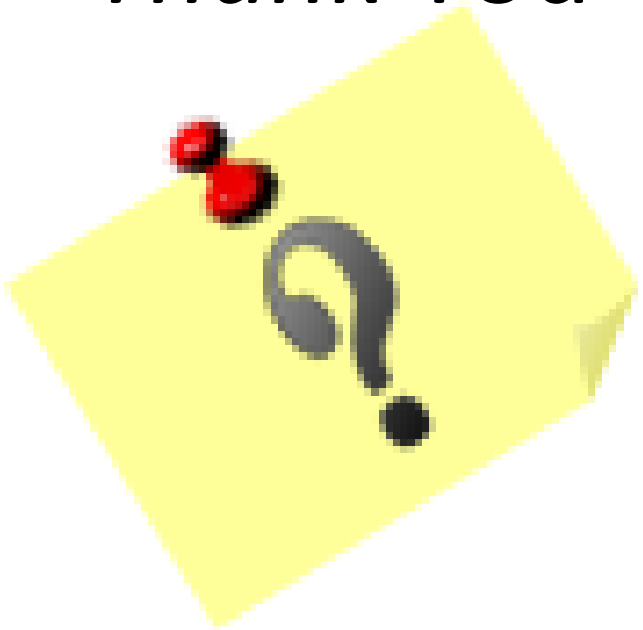
2016 Pedestrian Fatal Crashes: Time of Crash



Potential Countermeasures

Stay Tuned …

Thank You



Any Questions

Contacts:

- Kim Auman: (410) 328-8331
  kauman@som.umaryland.edu

- Erica Zimmerman: (410) 328-7231
  ezimmerman@som.umaryland.edu

Acknowledgement: All pictures and graphics are from various sites on the Internet and 1 photo from case review files.