

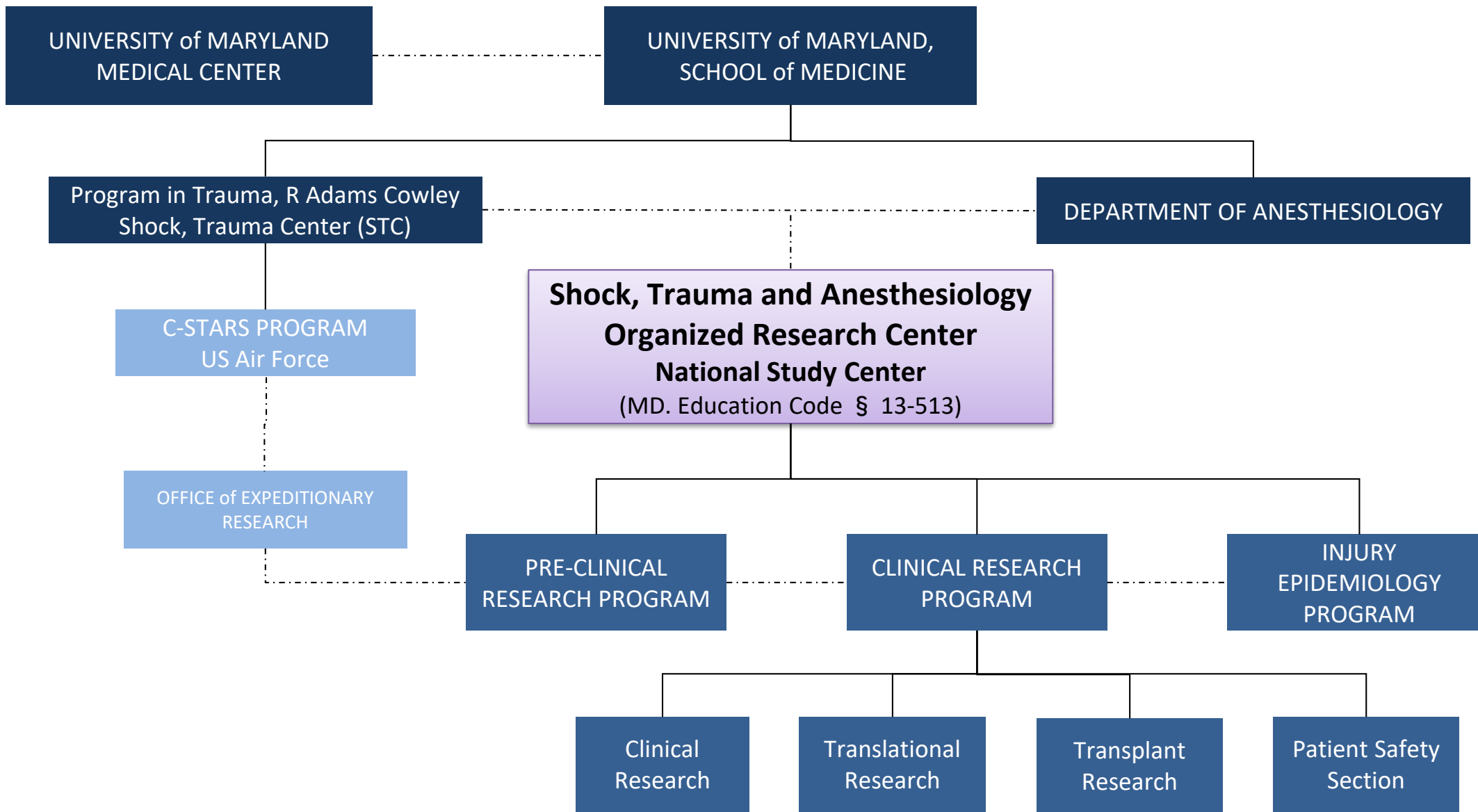


UNIVERSITY of MARYLAND  
SCHOOL OF MEDICINE  
SHOCK, TRAUMA AND ANESTHESIOLOGY  
RESEARCH CENTER  
National Study Center for Trauma & Emergency Medical Services

# CMV Safety at the National Study Center

Wednesday, November 13, 2024





# Census of Maryland Transportation Health Data

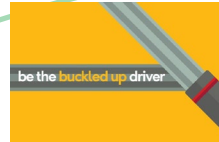


Charles McC. Mathias, Jr.  
**National Study Center**  
for Trauma and Emergency Medical Systems

 **UNIVERSITY of MARYLAND**  
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RESEARCH CENTER



**Citations /  
Adjudication**  
6 Months



**Seatbelt Use Survey**  
Annual



**Crash Reports**  
24 hours



**EMS Triage &  
Transport**  
30 Days



**All OP & IP Encounters**  
6 Months



**Medical Examiner**  
On Request



**All UMMS Patients  
(14 hospitals)**  
Realtime

## **IODES** Injury Outcomes Data Evaluation System



**Drug Recognition Expert  
Evaluations**  
Annual/ On Request



**License / Registration**  
Annual



**Location, Census, &  
Socioeconomic Data**  
Public Release

**Shock Trauma Center**  
Real-Time



**Infrastructure**  
Public Release



**Traffic Speeds,  
Volumes, & OD**  
On Request – Realtime



**MD Trauma Registry  
(9 adult / 2 pediatric)**  
90 Days

Contact: [NSC@som.umaryland.edu](mailto:NSC@som.umaryland.edu)

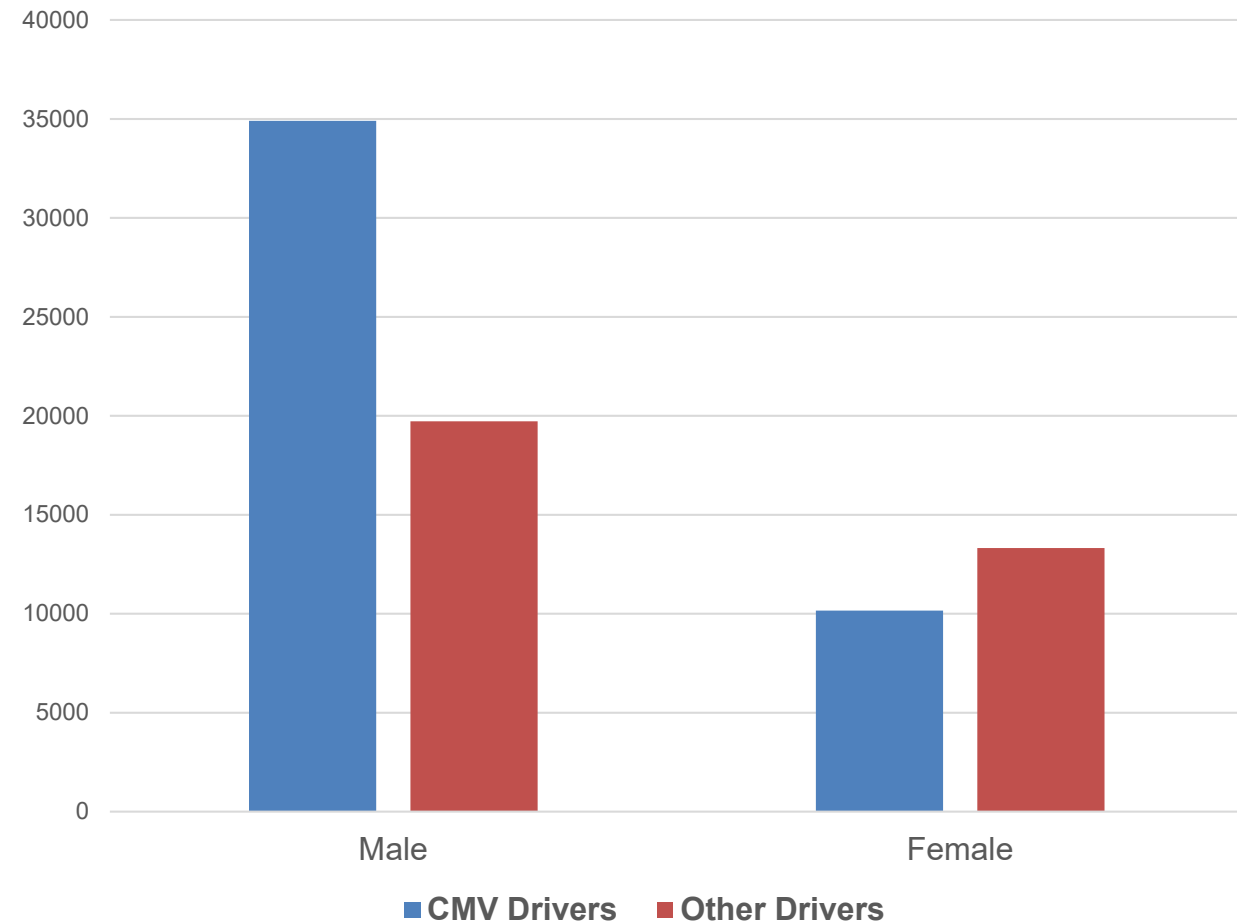
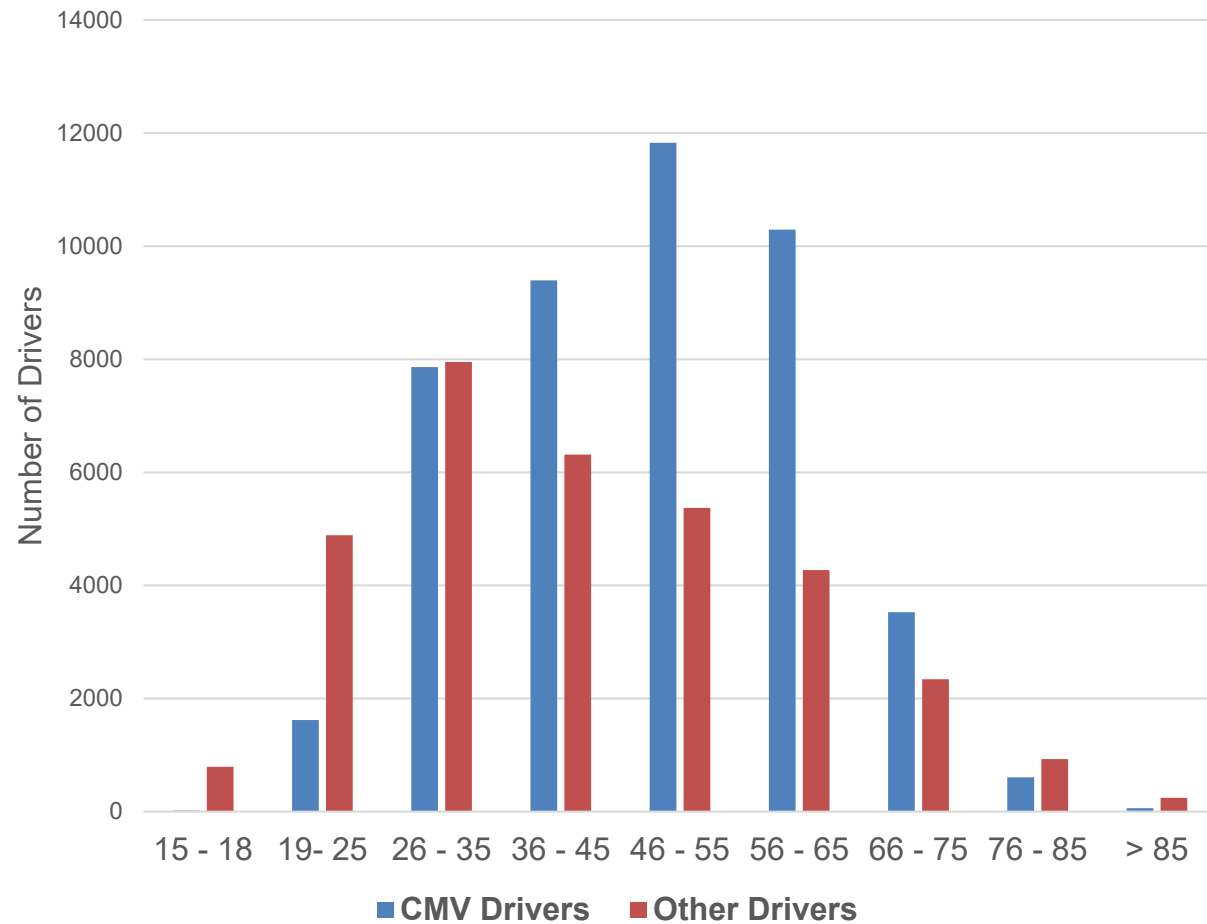
# Crash Data Analytics

Results from Linked Crash, EMS, and Hospital Data

# Crash Record Filtering Criteria

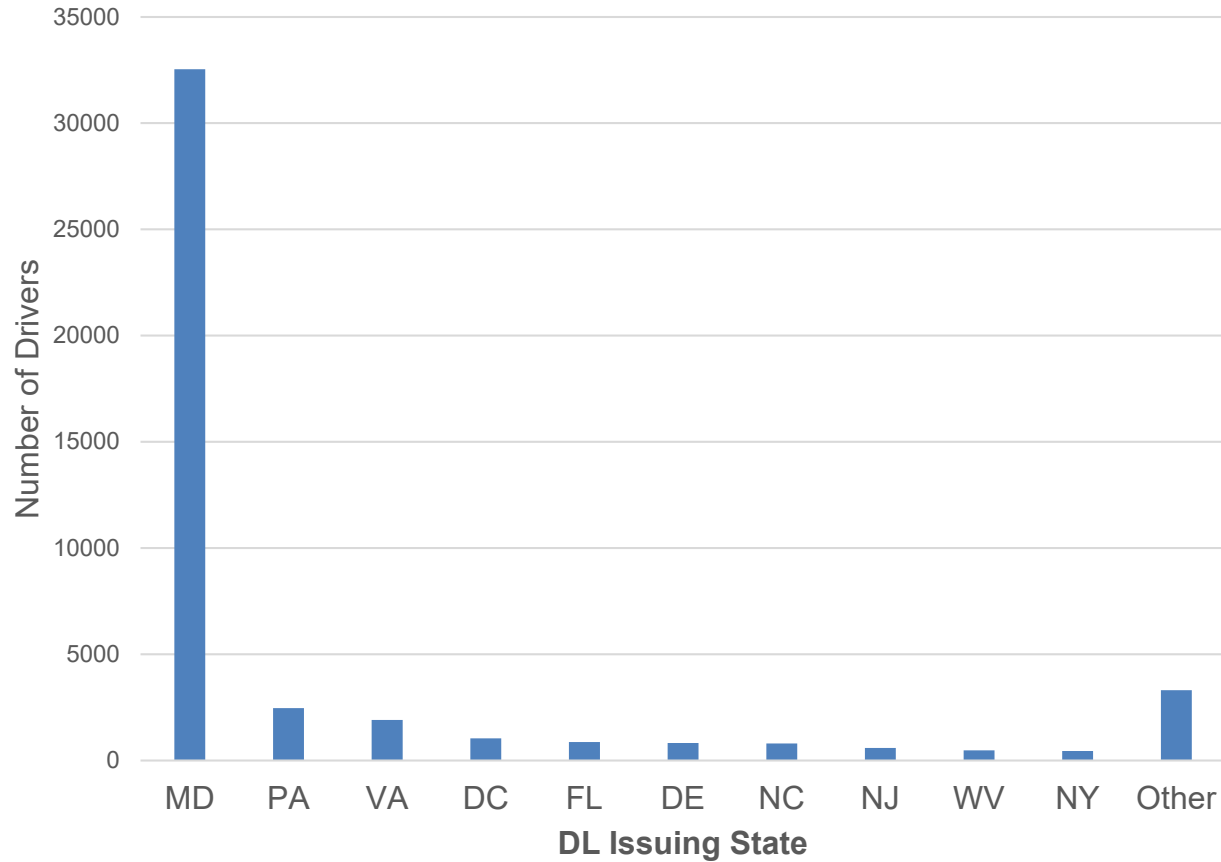
- Data from years 2019 – 2023
- Includes following vehicle codes
  - 06: Truck – Medium/Heavy 3 axles
  - 07: Truck – Tractor
  - 10: Bus – Transit
  - 11: Bus – Cross Country
  - 12: Bus – School
  - 25.88: Bus – Other
- 46,160 vehicles in 44,012 crash reports
- Linked to EMS and R Adams Cowley Shock Trauma Center Data
  - 1,454 EMS Reports; 116 STC Admissions

# Age and Sex of Drivers Involved in CMV Crashes

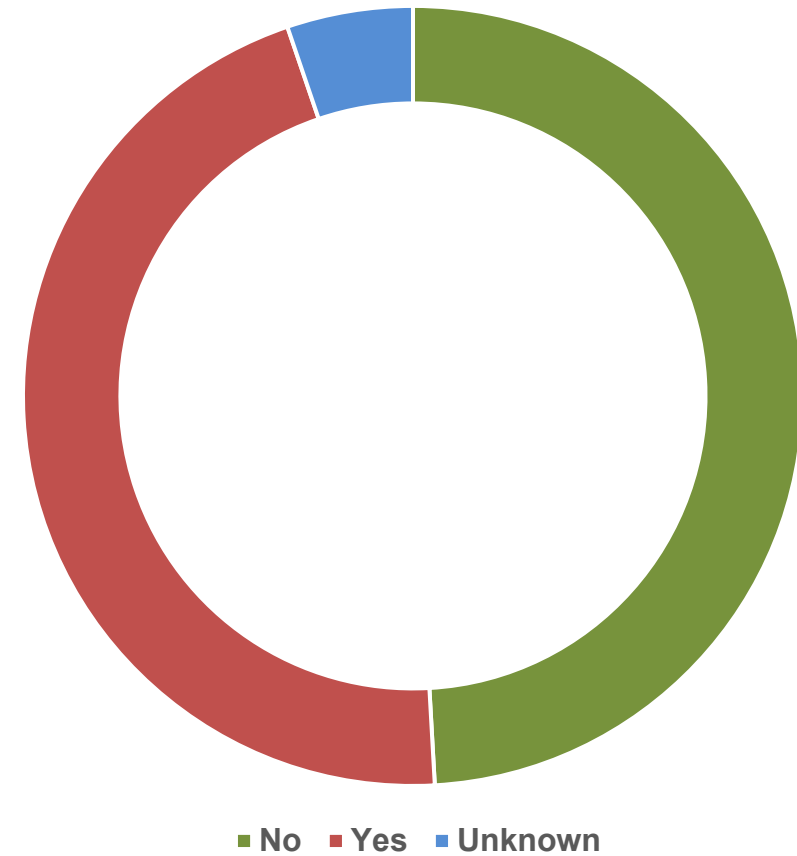


# CMV DL Issuing State and CMV Driver At Fault

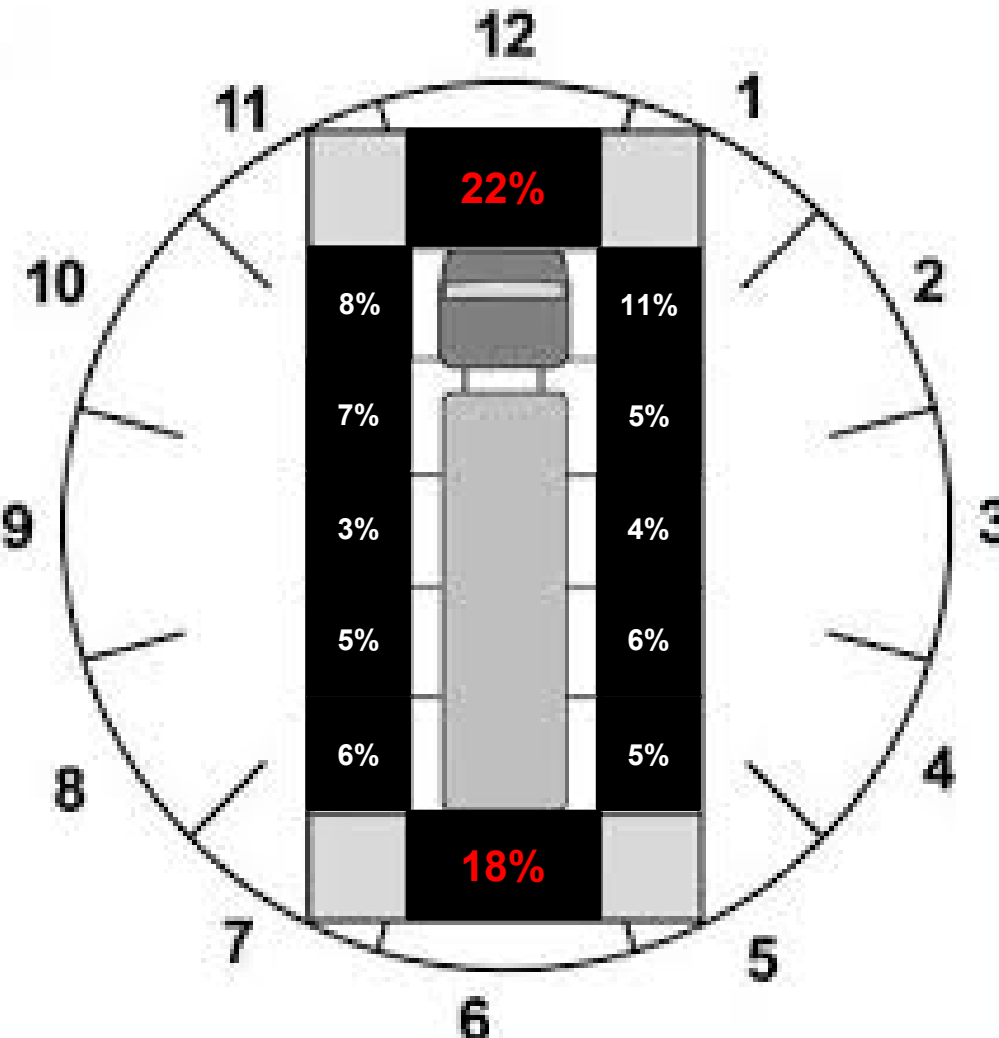
CMV Crash Drivers' License States



CMV Drivers At Fault in Crashes



# CMV First Impact, Injury Severity, Tox Screen

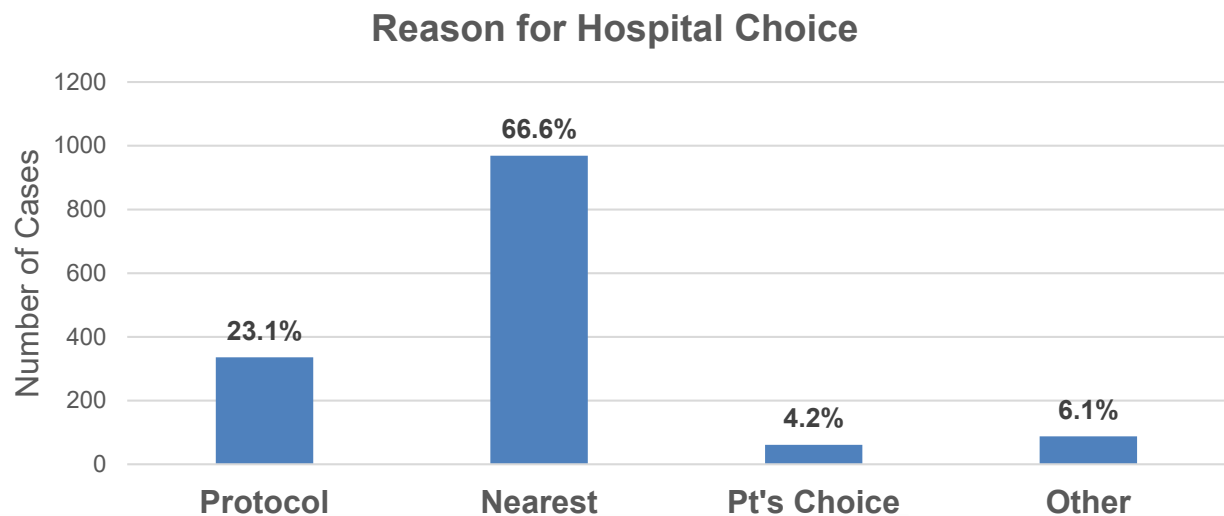
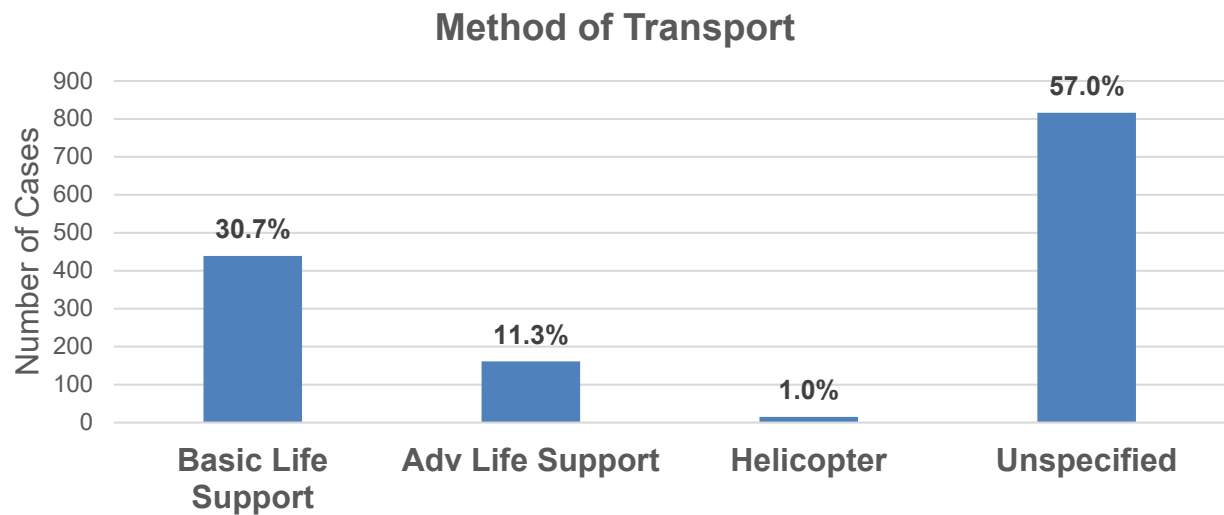
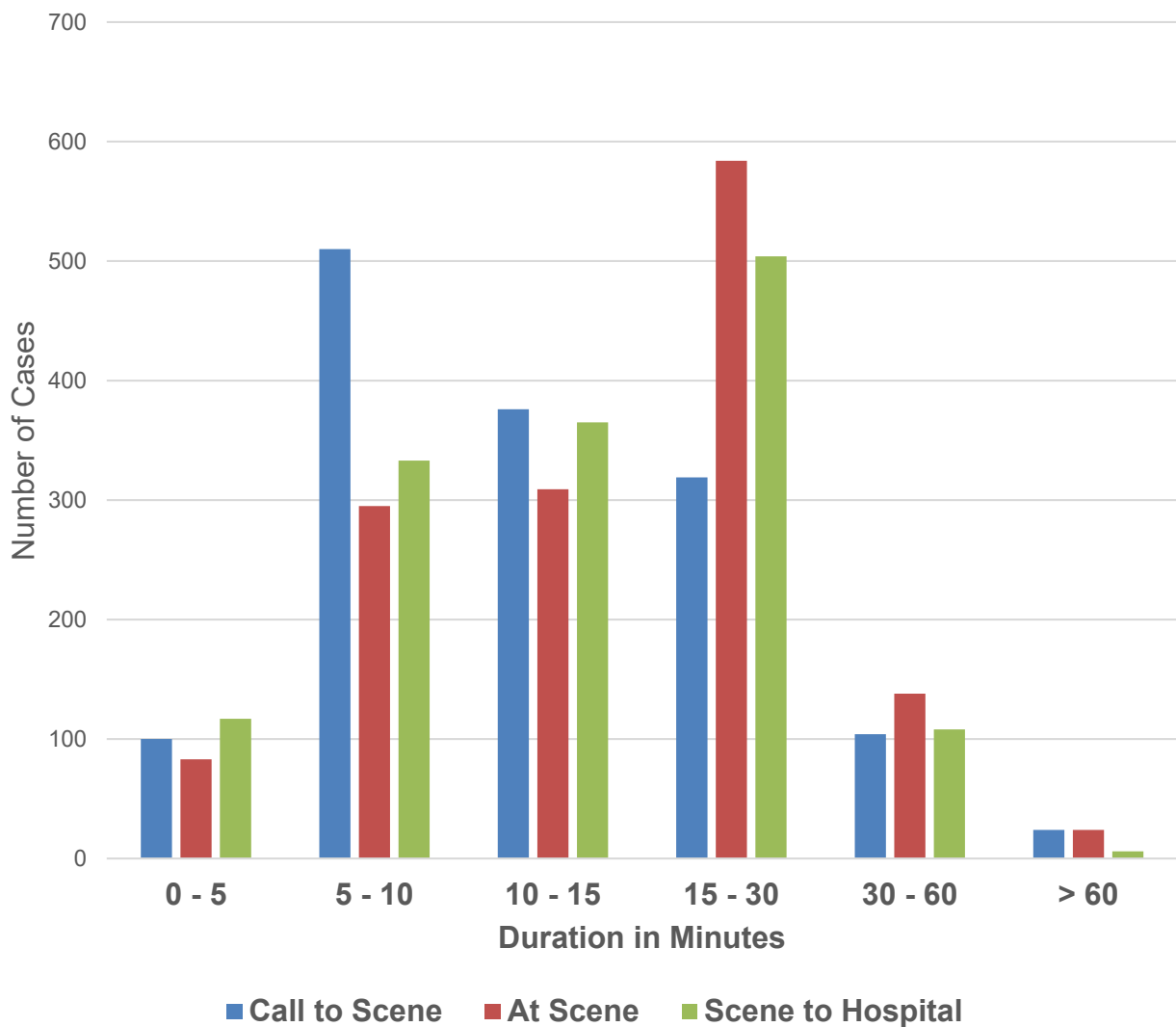


		ISS				Total
		Minor	Moderate	Serious	Severe	
<b>K A B C O</b>	None	9	6	1	2	18
	Possible	14	5	1	0	20
	Moderate	23	6	1	0	30
	Serious	20	11	13	4	48
Total		66	28	16	6	116

- Admits to R Adams Cowley Shock Trauma Center only
- 6% drivers with positive BAC
- 10% drivers with detectable marijuana metabolites
- 28% drivers with detectable metabolites of drugs or alcohol



# Linked EMS Data Analysis

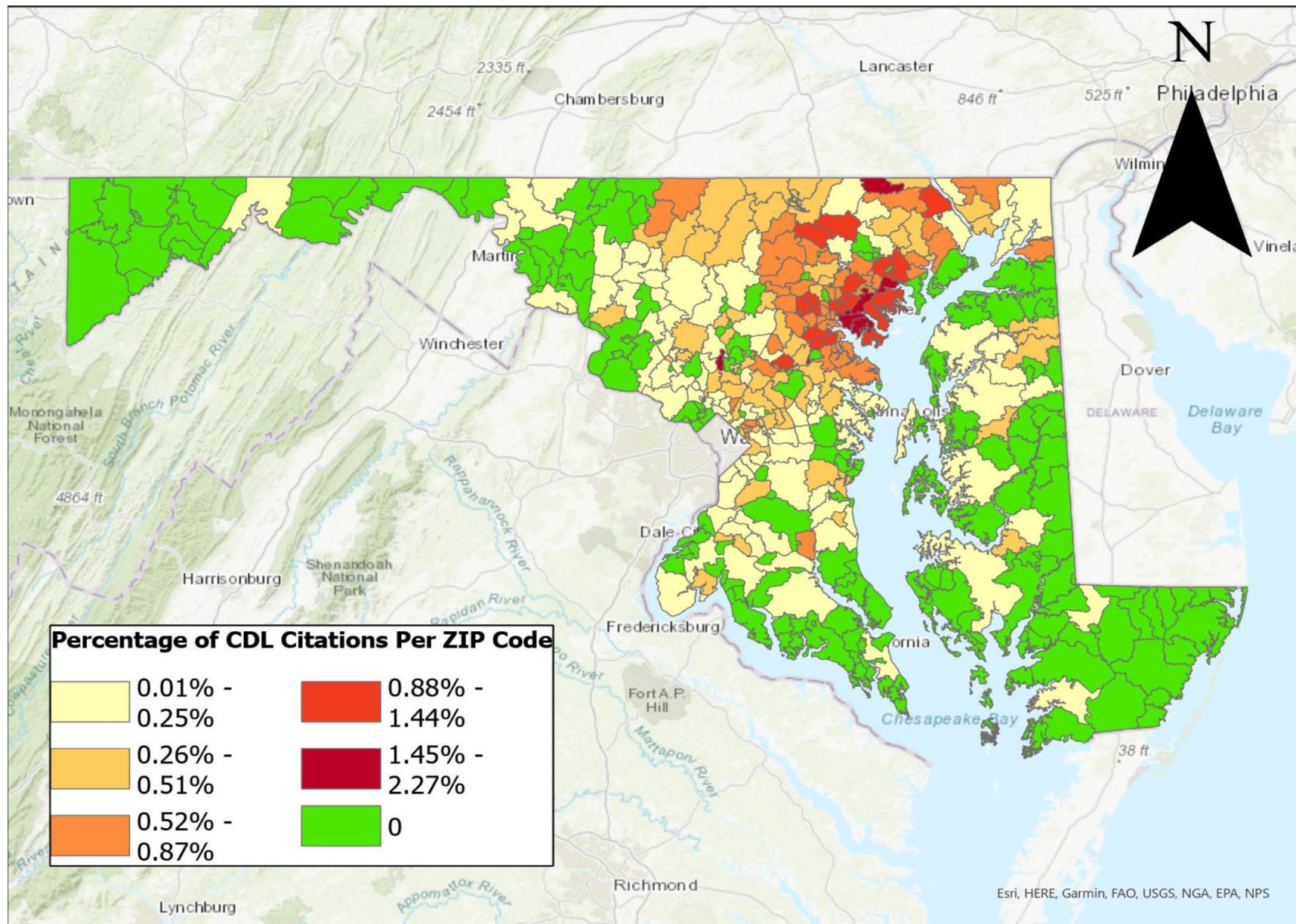


# Citation Data Analysis

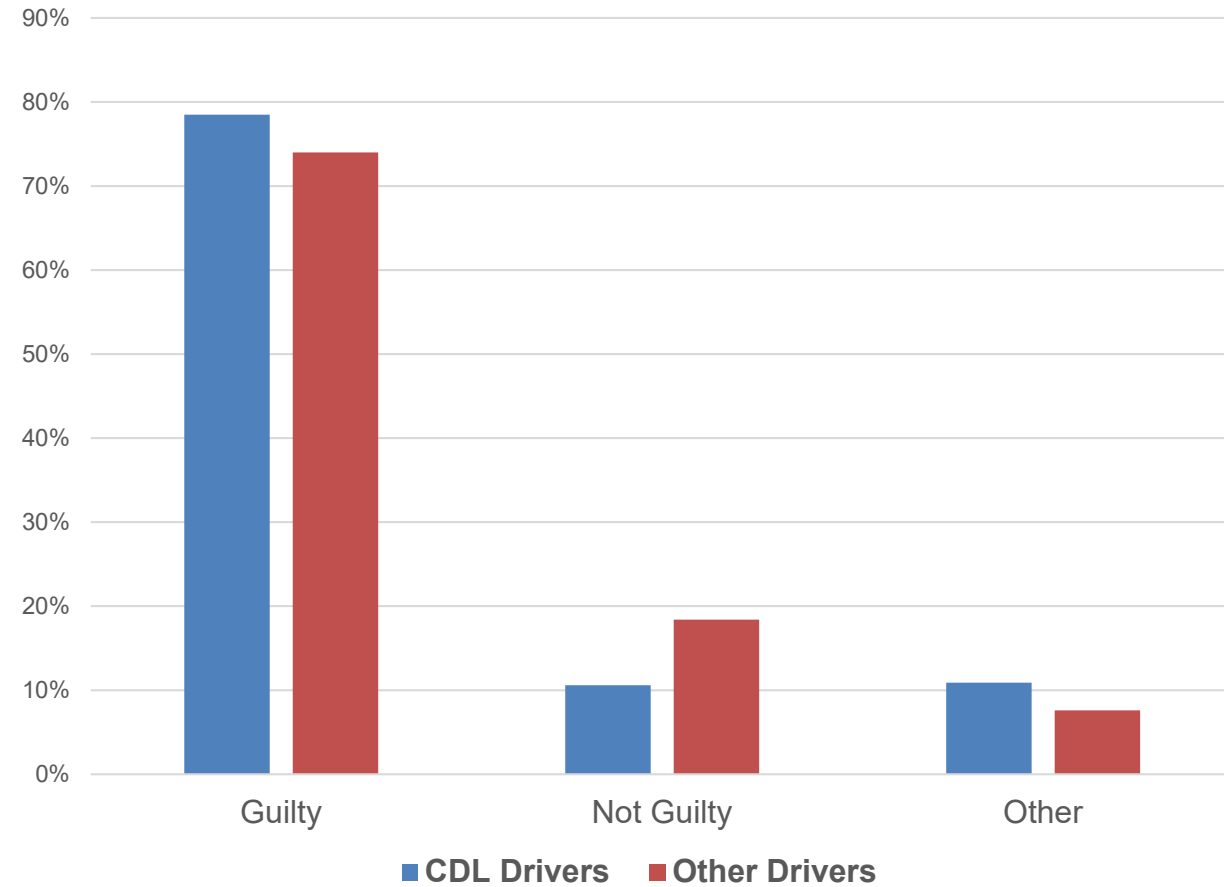
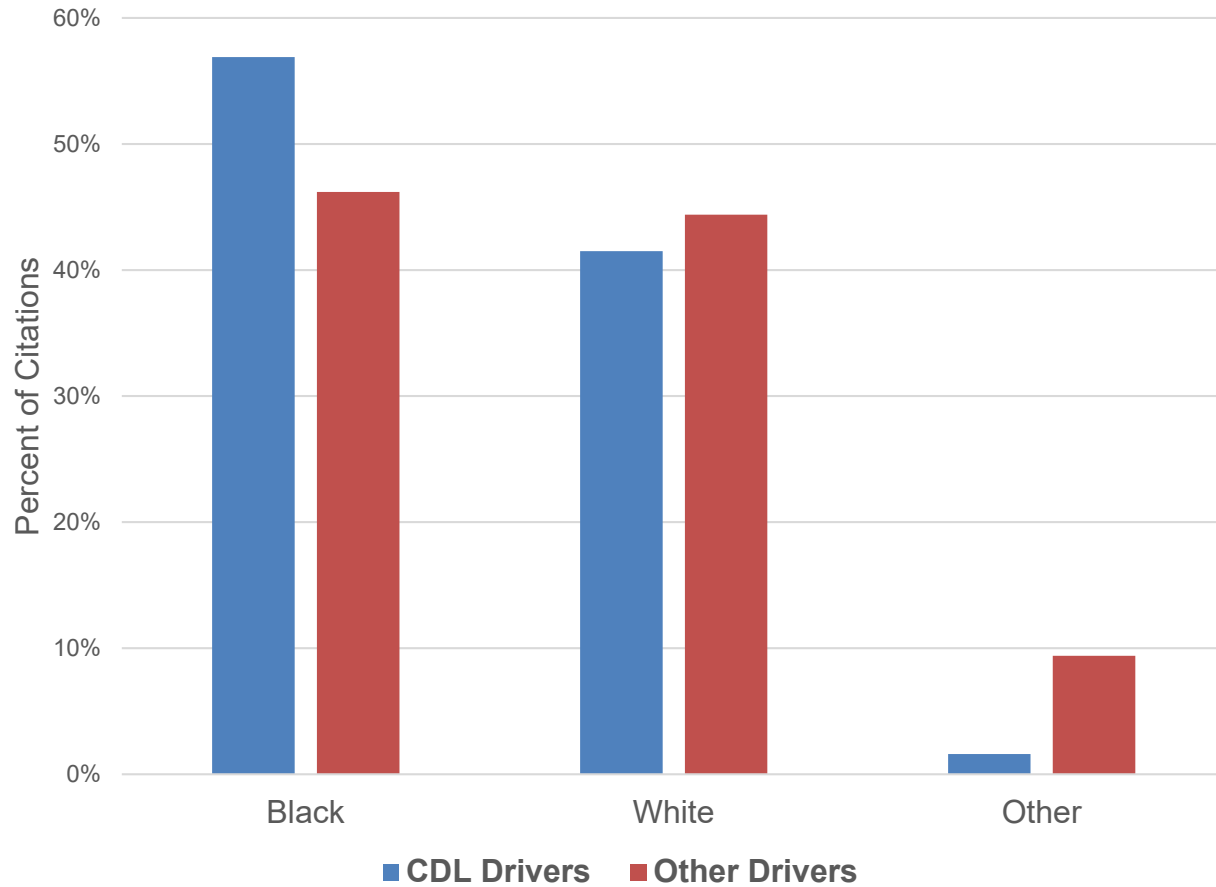
# Citation Record Filtering Criteria

- Citations issued by MD Police between 2019 – 2023
- CDL holders got 0.4% (4,878) of all citations issued in MD
- 2.5% of CDL drivers receiving citations were Females
  - Compared to 31% of non-CDL drivers
- CDL drivers receiving citations were on average 41.6 Years Old
  - Compared to average age of 36 for non-CDL drivers
- 13% of citations given to CDL drivers were for Moving Violations
  - Compared to 63% for non-CDL drivers
- 69% of CDL drivers getting citations had MD issued license
  - Compared to 75% of non-CDL drivers

# Rate of Citations Issued to CDL Drivers by Zip Code



# CDL Stops by Race and Conviction Rate



# Violation Types in Citations Issued to CDL

- 52% (1,566) of citations issued for violation MD CMV Regulation
  - 27% (424) for improper display of certificates, incl. medical examination
  - 13% (205) for non-compliance with local laws and ordinances
  - 12% (189) for lack of emergency equipment when carrying hazmats
- Top 3 Transport Article citations out of 48% (1,470) citations are
  - 29% (420) exceeding weight limit or improper use of equipment
  - 12% (174) for invalid vehicle registration or missing plates
  - 7% (98) for seatbelt misuse

# Thank You

**Kartik Kaushik, PhD.**

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