

Repeat Offenders in North Carolina

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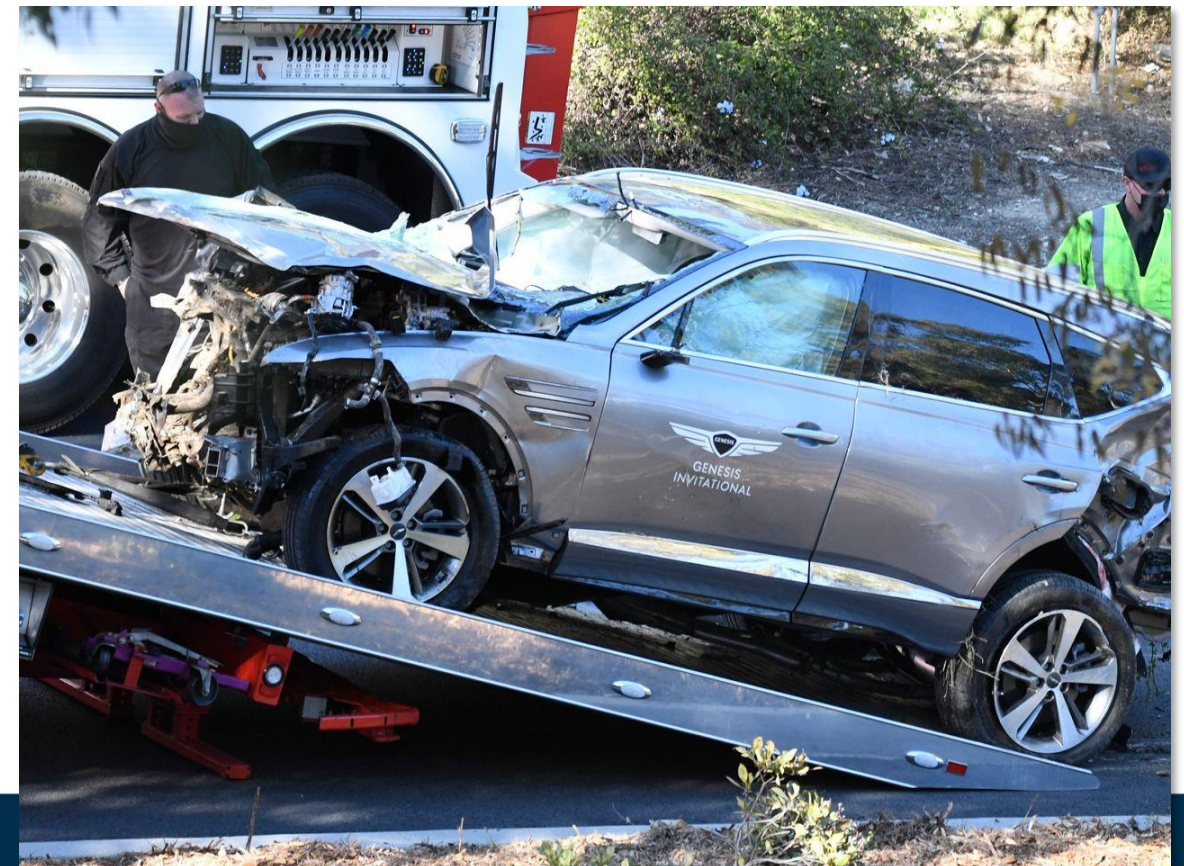
The team

- Yudan Wang (NC A&T)
- Rob Foss (UNC HSRC)
- Mark Ezzell (GHSP)
- Kevin Lacy (NCDOT)

Background

Repeat offenders:

- Regularly disregard traffic laws
- Anecdotally, overrepresented in crashes/fatalities
- Tiger Woods
- Charlotte Observer series
- Hard to study



The “repeat offenders” study

Linked three datasets:

- 1) NC Crash File
- 2) NC License History File
- 3) NC Administrative Office of the Courts (AOC) File

- Linked using driver’s license number and other variables
- Years 2006-2016



Research questions

- Who are repeat offenders in NC?
- How much do they contribute to crashes?
- Are certain repeat offenders more dangerous than others?

Who is a repeat offender?*

We considered:

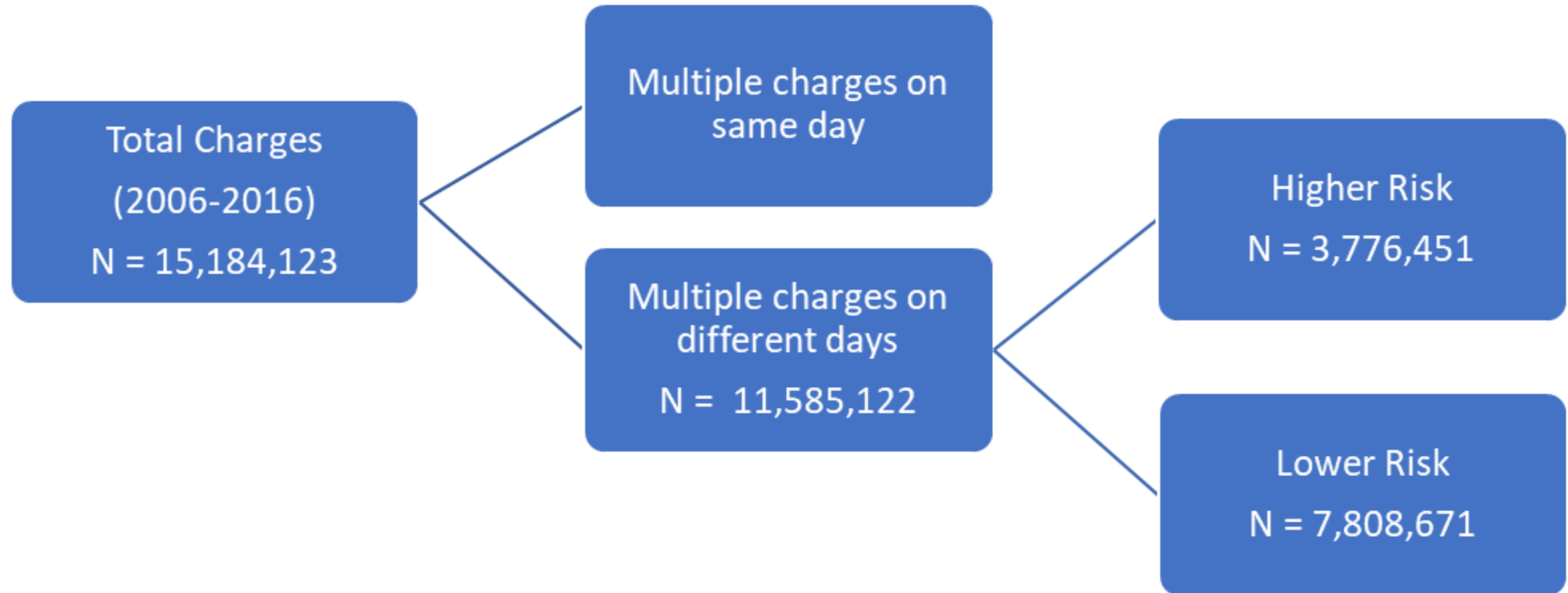
- How many citations
- Time between citations (e.g., 3 months vs. 3 years)
- Type of citations (e.g., DWI vs. reckless vs. expired registration)
 - 519 unique traffic citation codes!

*Disclaimers/fine print

- Most “offenses” are never detected
- Citations ≠ convictions

Category	Examples	% of citations
Potentially Higher Risk Categories	Code Descriptor	
Speeding	5450 SPEEDING	18%
Alcohol	5405 DRIVING WHILE IMPAIRED	8%
Reckless driving	5464 RECKLESS DRVG-WANTON DISREGARD	2%
Driver seatbelt	4470 FAIL TO WEAR SEAT BELT-DRIVER	2%
Signal violation	4454 FAIL STOP STOPSIGN/FLSH RED LT	1%
Lane violation	4506 UNSAFE LANE CHANGE	1%
Irresponsible crash-involved driving	5581 FEL HIT/RUN FAIL STOP PER INJ	1%
Passenger seatbelt	4472 FAIL TO SECURE PASSEN UNDER 16	1%
Moving violation involving crash	4460 FAILURE TO REDUCE SPEED	1%
Fail to yield	4434 FAIL TO YIELD LEFT TURN	0.1%
Lower Risk Categories		
Rule violation	5461 EXPIRED REGISTRATION CARD/TAG	42%
Driving while license revoked (DWLR)	4716 DWLR NOT IMPAIRED REV	13%
Unlicensed driving	5469 EXPIRED OPERATORS LICENSE	10%
Equipment violation	5486 IMPROPER MUFFLER	1%
Aid and abet	5471 AID AND ABET IMPAIRED DRIVING	0.2%

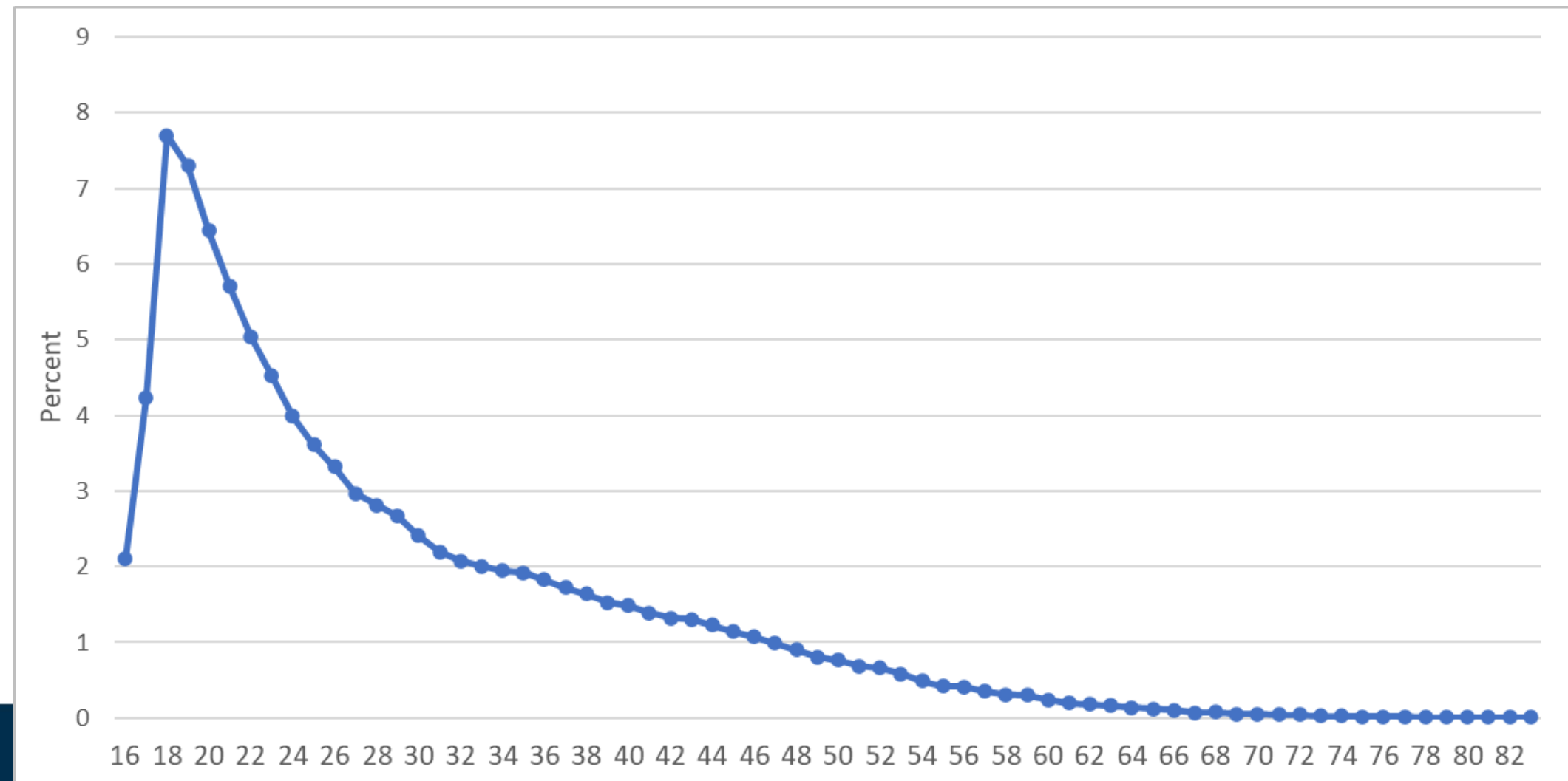
Who are repeat offenders?



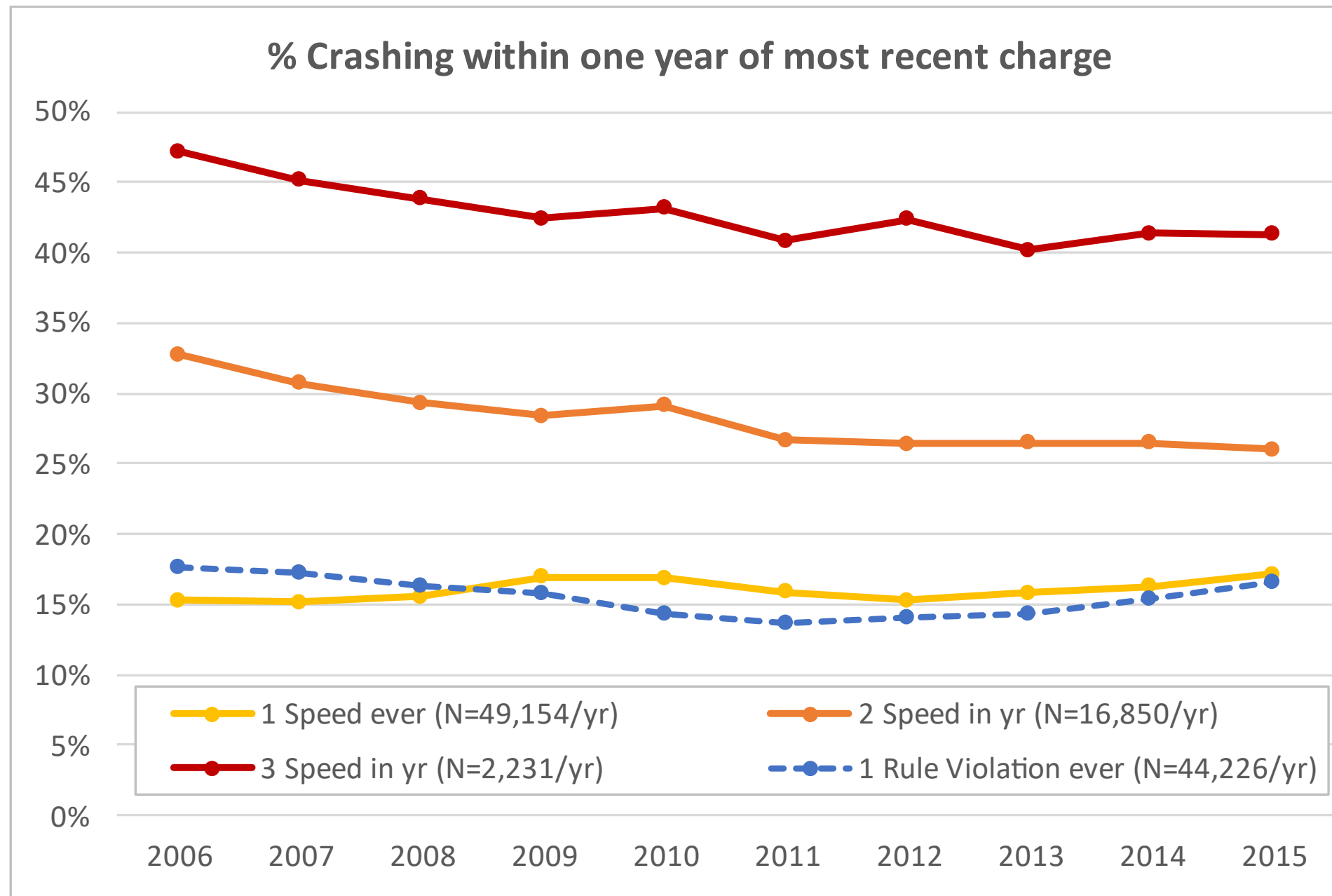
Who are repeat offenders?

Repeat offenders:

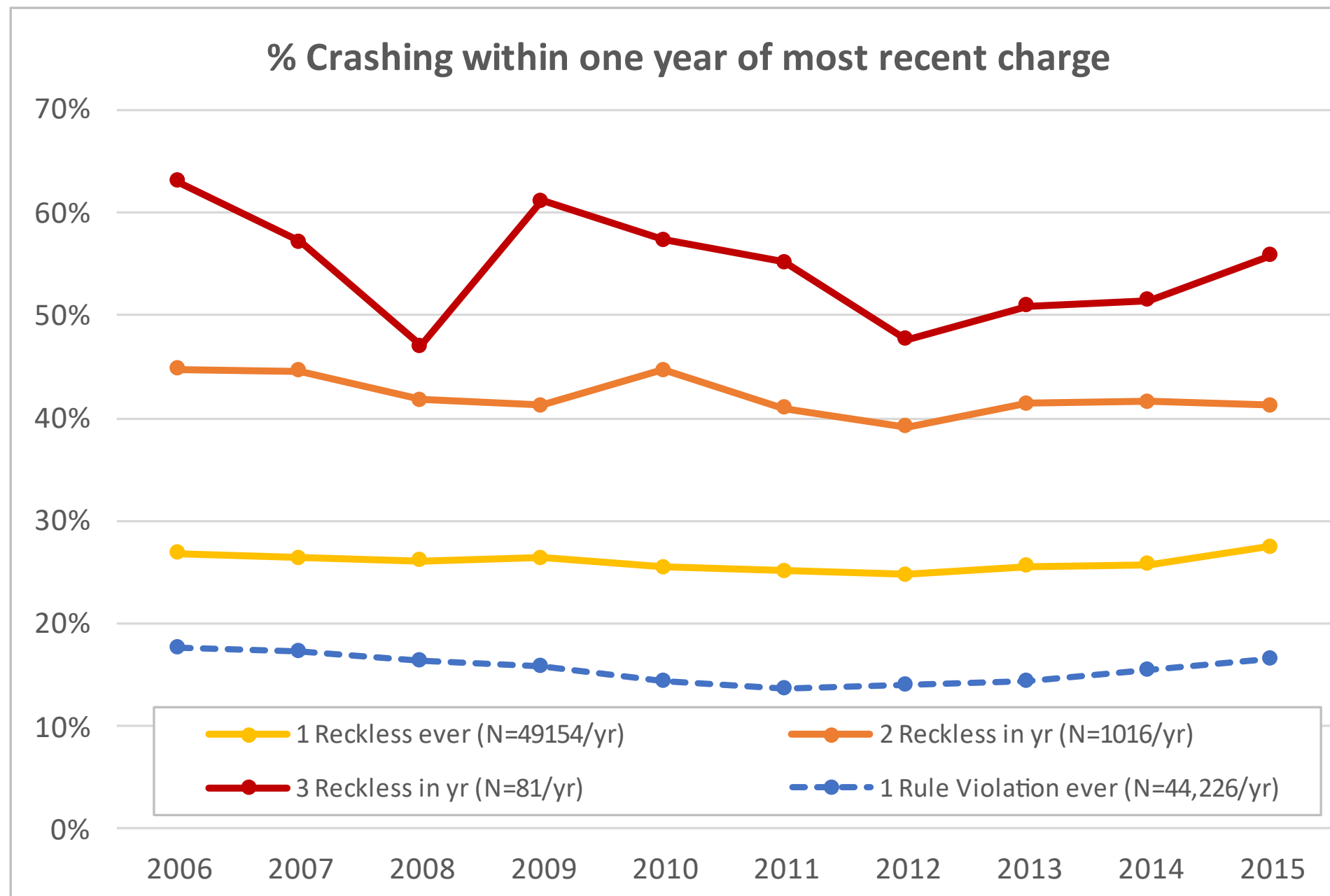
- 2+ higher risk violations *within one year*
- N = 272,472
- 68% male
- Avg age = 29



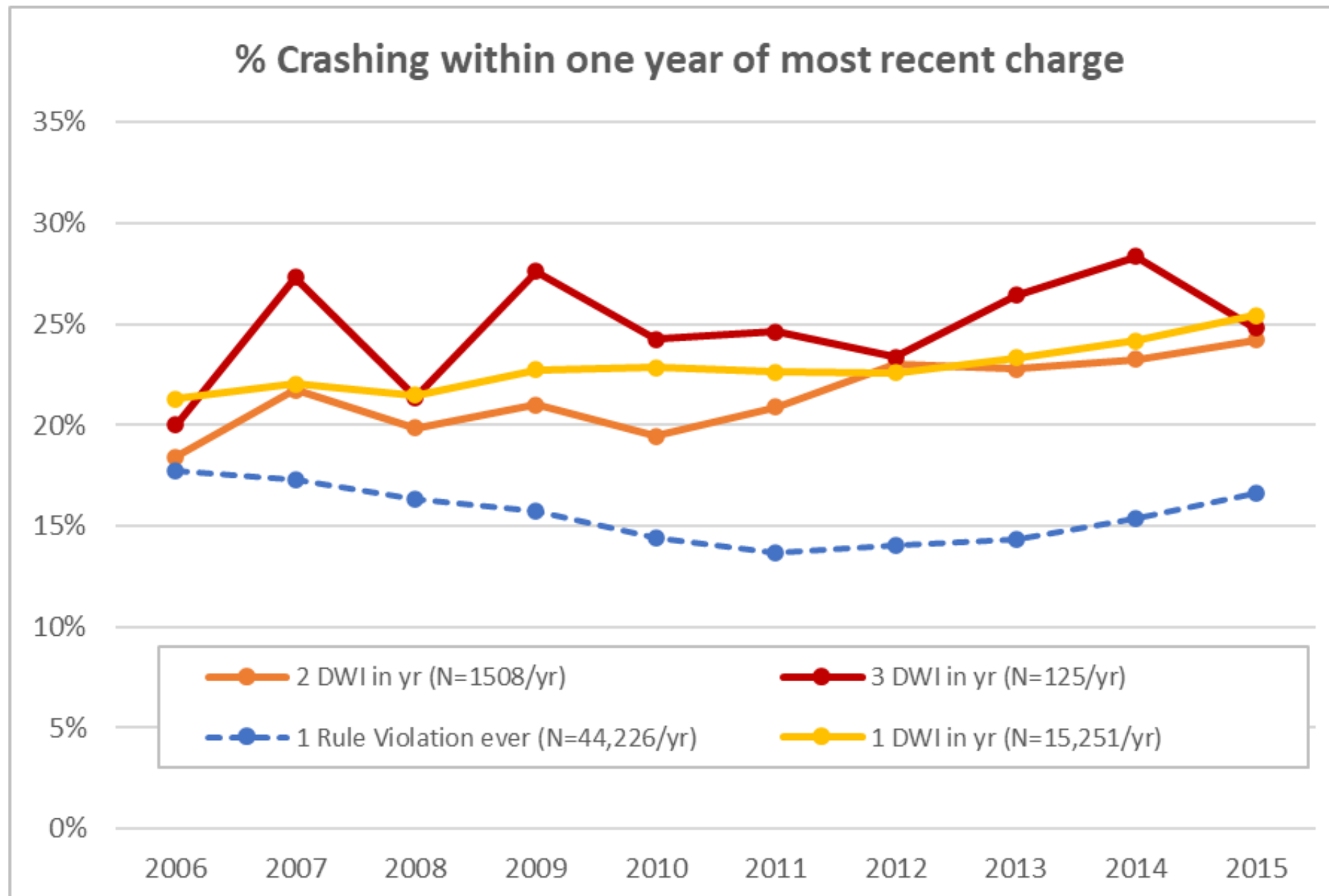
Repeat speeders and crashes



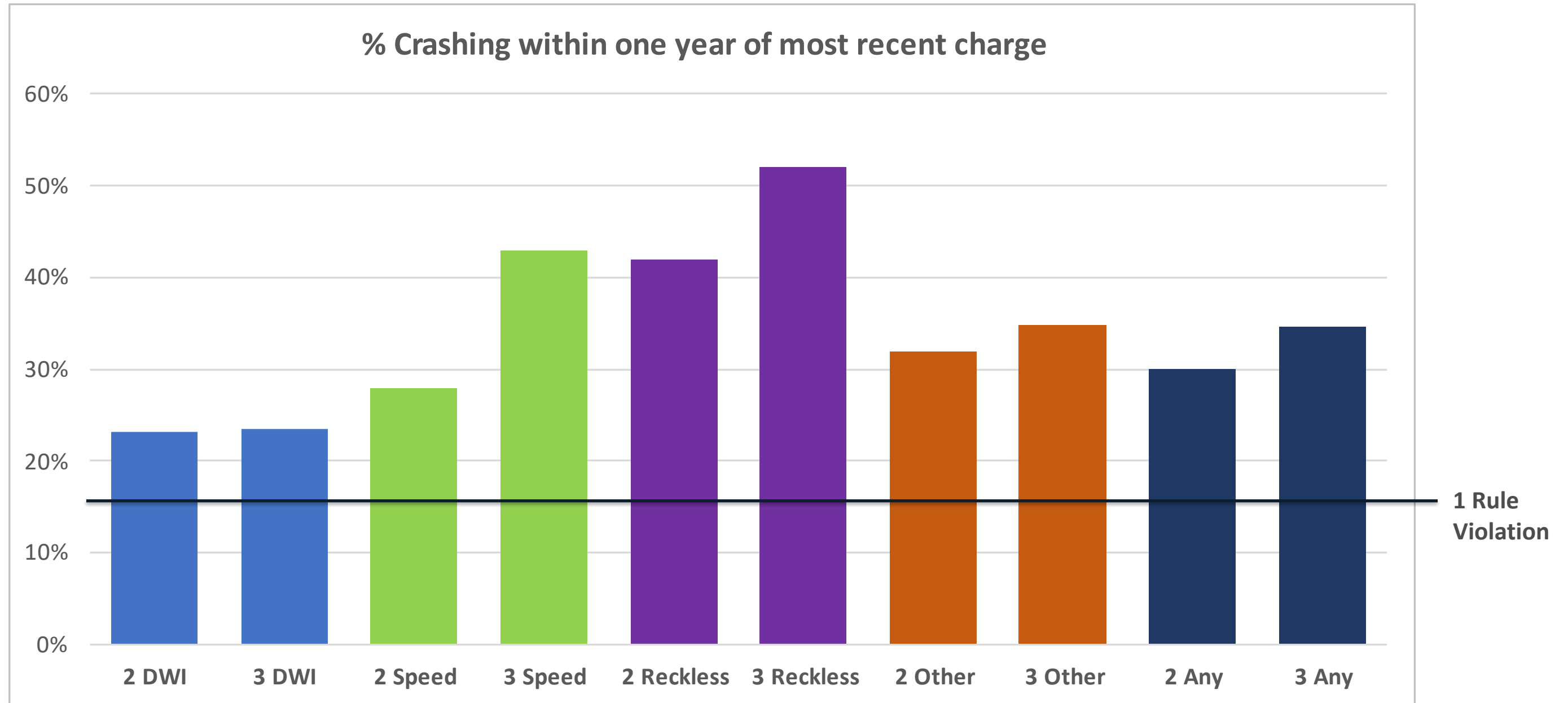
Repeat reckless drivers and crashes



Repeat DWI (code 5450) and crashes



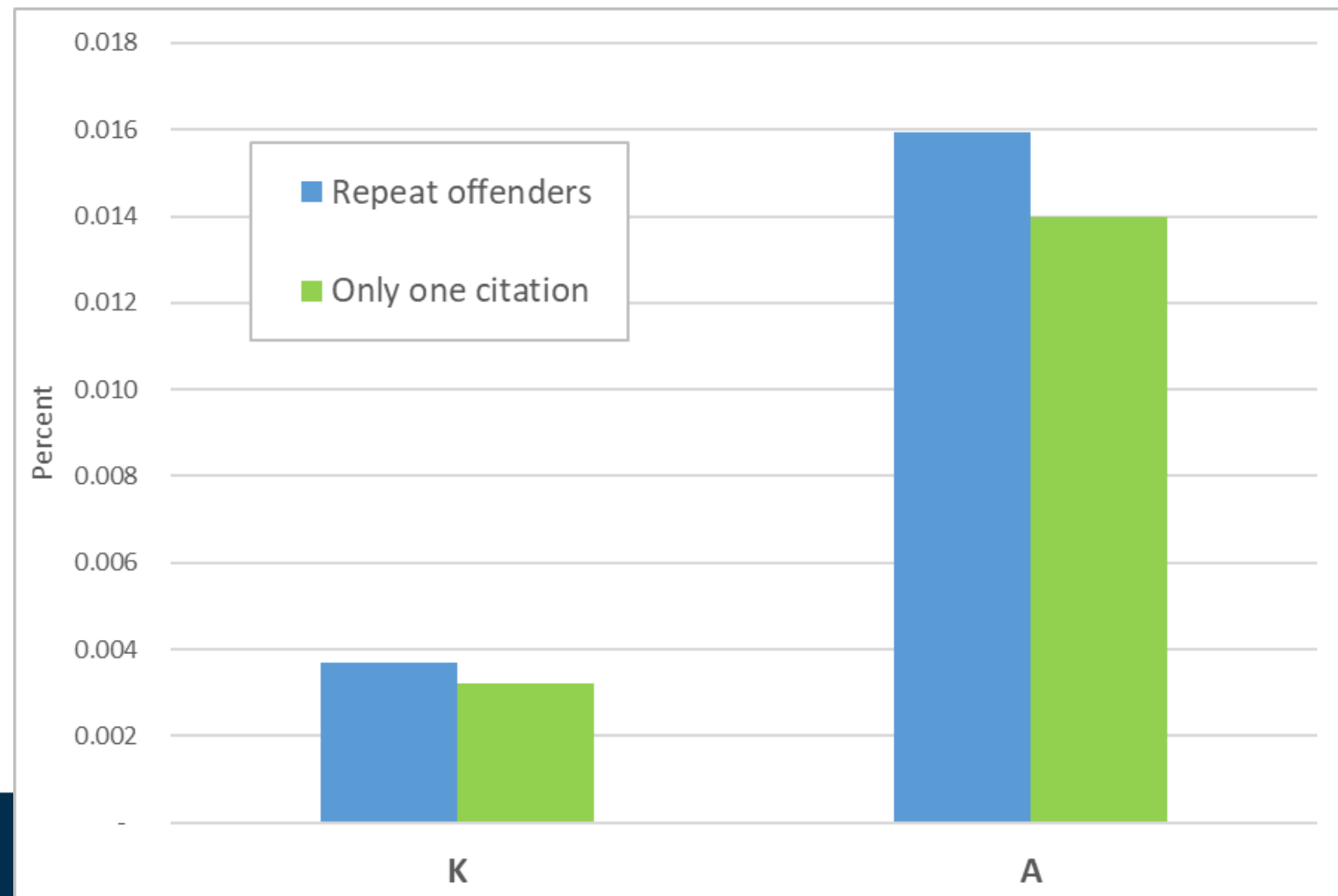
Combined offenses and crashes



Serious injury/fatal crashes

Repeat offenders (2006-2016):

- Involved in 1,316 fatal crashes (3.9% of fatal crashes)
- Involved in 5,667 A-injury crashes (5.1% of A-injury crashes)



Recommendations – first the bad news

- No silver bullet
- Extremely complex problem/system
- “Prevention paradox”
 - removing all ROs would only reduce a small % of the problem



Recommendations – Impaired Driving

Maximize deterrence

- High visibility enforcement
- Increase the *perception* of getting caught/punished



Recommendations – Impaired Driving

Ignition interlocks *for all DWI offenders*

- Greatly reduces recidivism
- Currently just for high BAC and ROs



Recommendations – Impaired Driving

Administrative rather than ***criminal*** penalties

- British Columbia model



Recommendations – Impaired Driving

DWI/Drug courts

- **Specialize in repeat offenders**
- **Monitor offenders closely**



Recommendations – Speeding/Reckless Driving

Maximize deterrence

- High visibility enforcement
- Increase the *perception* of getting caught/punished



Recommendations – Speeding/Reckless Driving

Automated Enforcement

- Clear evidence of effectiveness
- Reduces speeds/crashes
- Should be *administrative*
- Speed feedback signs



Recommendations – Speeding/Reckless Driving

Focus on high-risk locations

- e.g., two-lane rural roads, school zones



Recommendations – Speeding/Reckless Driving

System review

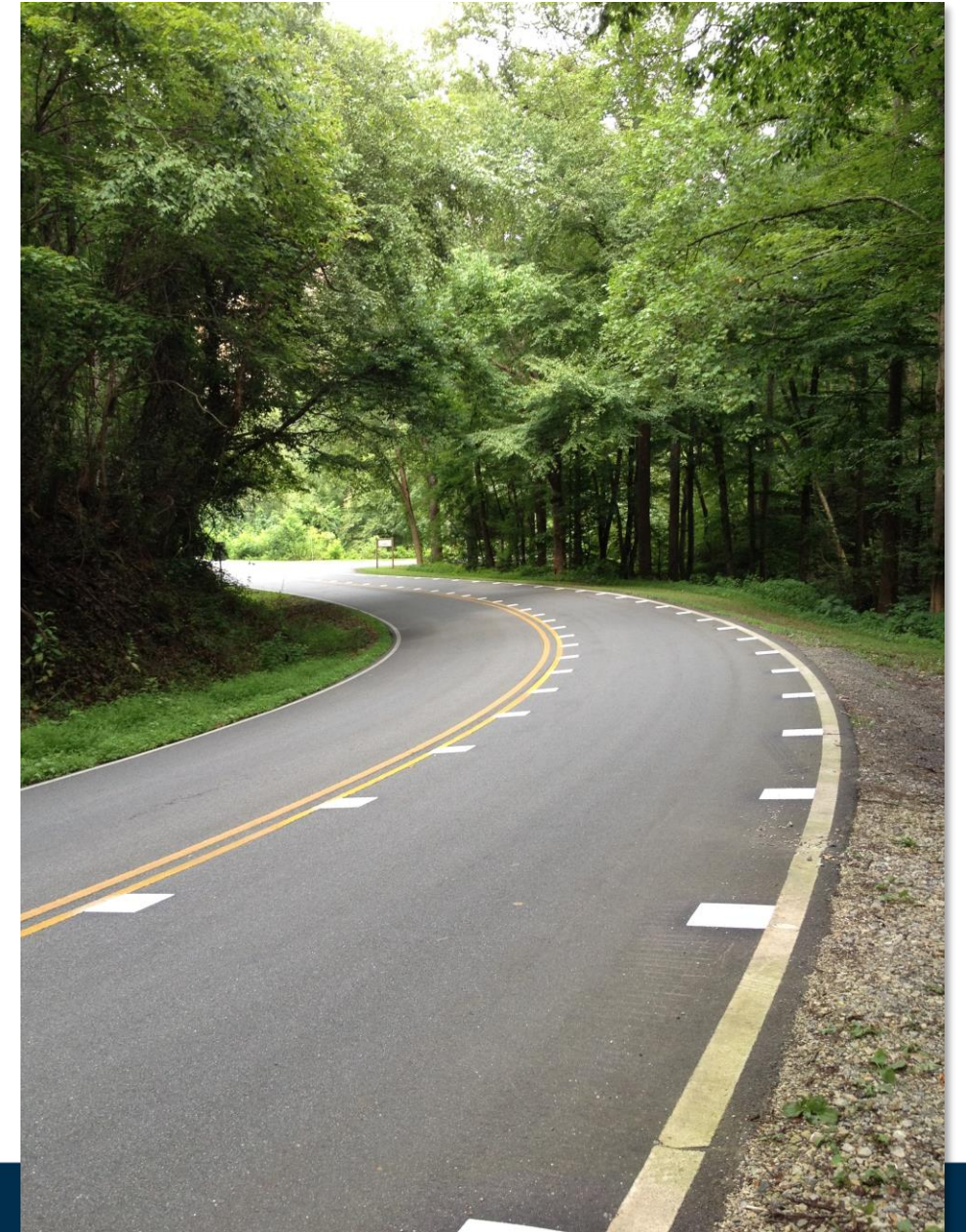
- System can't deal with so many offenders
- Attorneys/judges have extensive discretion
- Charlotte Observer: < 5% of “extreme” speeders (20+) are convicted as originally charged



Recommendations – Speeding/Reckless Driving

Engineering

- Many tools available to reduce speeds
 - Reduce lane width
 - Speed humps
 - Speed tables
 - Road diets
 - Rumble strips
 - Traffic circles
 - Optical speed bars
- Downside: Takes time/expensive



THE STATISTICAL ASSOCIATION
BETWEEN PAST AND FUTURE
ACCIDENTS AND VIOLATIONS

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B. J. Campbell

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Highway Safety Research Center
Chapel Hill, North Carolina

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