

Law Enforcement-Based Injury Severity Rating for Injured Pedestrians

Based on a Linked 2017 North Carolina Crash and Hospital Encounter Dataset (n=810)
 All percentages have been rounded to the nearest integer value, so percentage totals may not sum to 100%.

On motor vehicle crash reports, law enforcement officers rate the level of injury for the persons involved using a five scale rating system, abbreviated ‘KABCO’:

- K: Killed
- A: Serious injury
- B: Minor injury
- C: Possible injury
- O: No injury



How accurate is KABCO? Linked crash and health data provide metrics for evaluating KABCO as an injury severity rating system.

KABCO and Maximum Abbreviated Injury Scale (MAIS)

The **Maximum Abbreviated Injury Scale (MAIS)** is a recognized injury severity ranking system, developed by the Association for the Advancement of Automotive Medicine (AAAM), which maps injury severity to ICD-10-CM injury diagnosis codes. The following tables compare the two injury severity scales. (n=664*)

Injury Severity Rating Based on Law Enforcement Assessment

KABCO	N	%
K - Fatal injury	18	3%
A - Serious injury	77	12%
B - Minor injury	300	45%
C - Possible injury	248	37%
O - No injury	21	3%

Injury Severity Rating Based on ICD-10-CM injury diagnosis codes

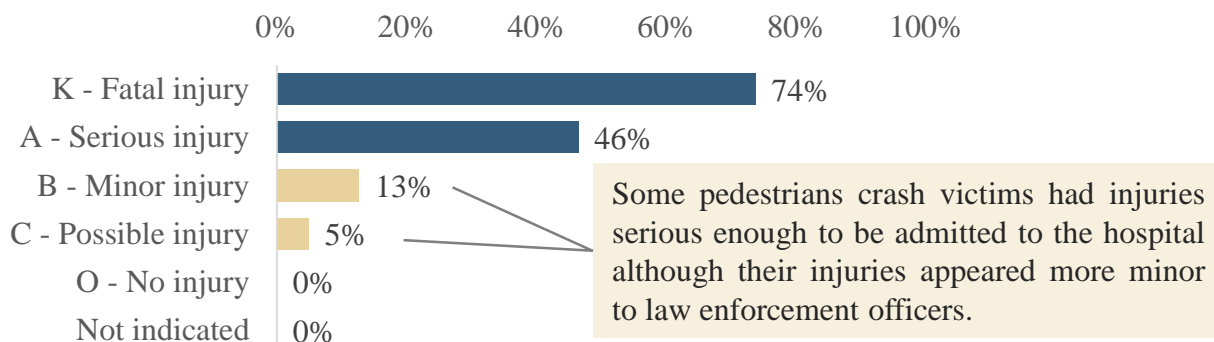
MAIS	N	%
6 - Not survivable	0	0%
5 - Critical	12	2%
4 - Severe	4	1%
3 - Serious	64	10%
2 - Moderate	174	26%
1 - Minor	362	55%
0 - No injury	48	7%

KABCO follows similar distributions as MAIS for fatal and serious injury (14% KABCO vs 12% MAIS) and minor to moderate injury (83% KABCO vs 81% MAIS).

*146 pedestrians were excluded due to missing KABCO designations (n=8), missing classifiable injury diagnosis codes (n=135), or missing both (n=3).

KABCO and Hospital Admittance

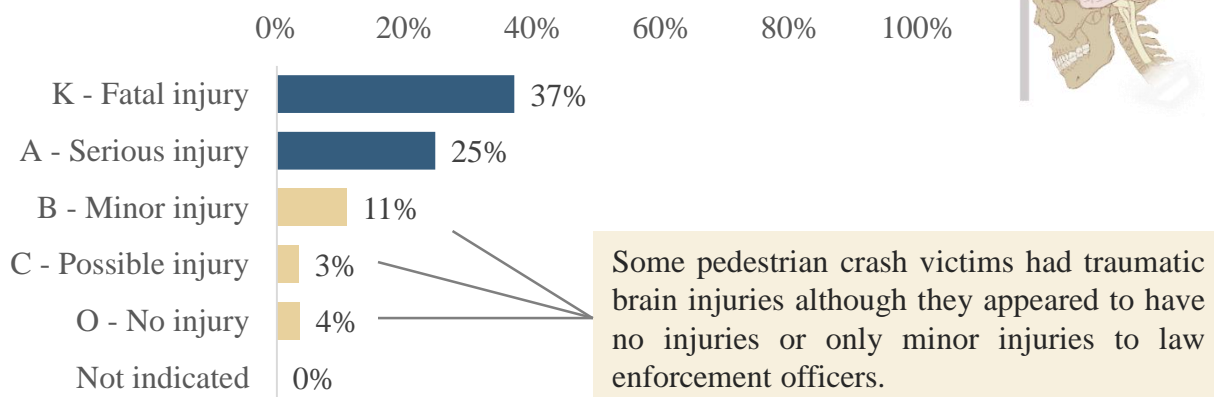
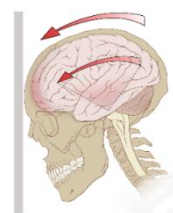
Proportion of Pedestrians who were Admitted or Died in the Hospital by KABCO Designation (n=616*)



*370 hospital encounter records were excluded from analysis due to disposition codes which could not be mapped.

KABCO and Traumatic Brain Injury (TBI)

Proportion of Pedestrians with TBIs by KABCO (n=810)



KABCO appears to be **broadly effective** as an injury severity rating system, with similar distributions as other injury severity metrics. However, indications of **serious injury** are present for persons assessed by law enforcement officers to be **minimally injured**.

Project Information

Funding for this project, “Linking Crash Reports to Medical Data in North Carolina: A Strategic Implementation Plan” was provided by the NC Governors Highway Safety Program. For more information, please see additional reports at the following link. <http://cchi.web.unc.edu/transportation-health-data/>