

Rider Blood Alcohol in Thailand Motorcycle Crashes

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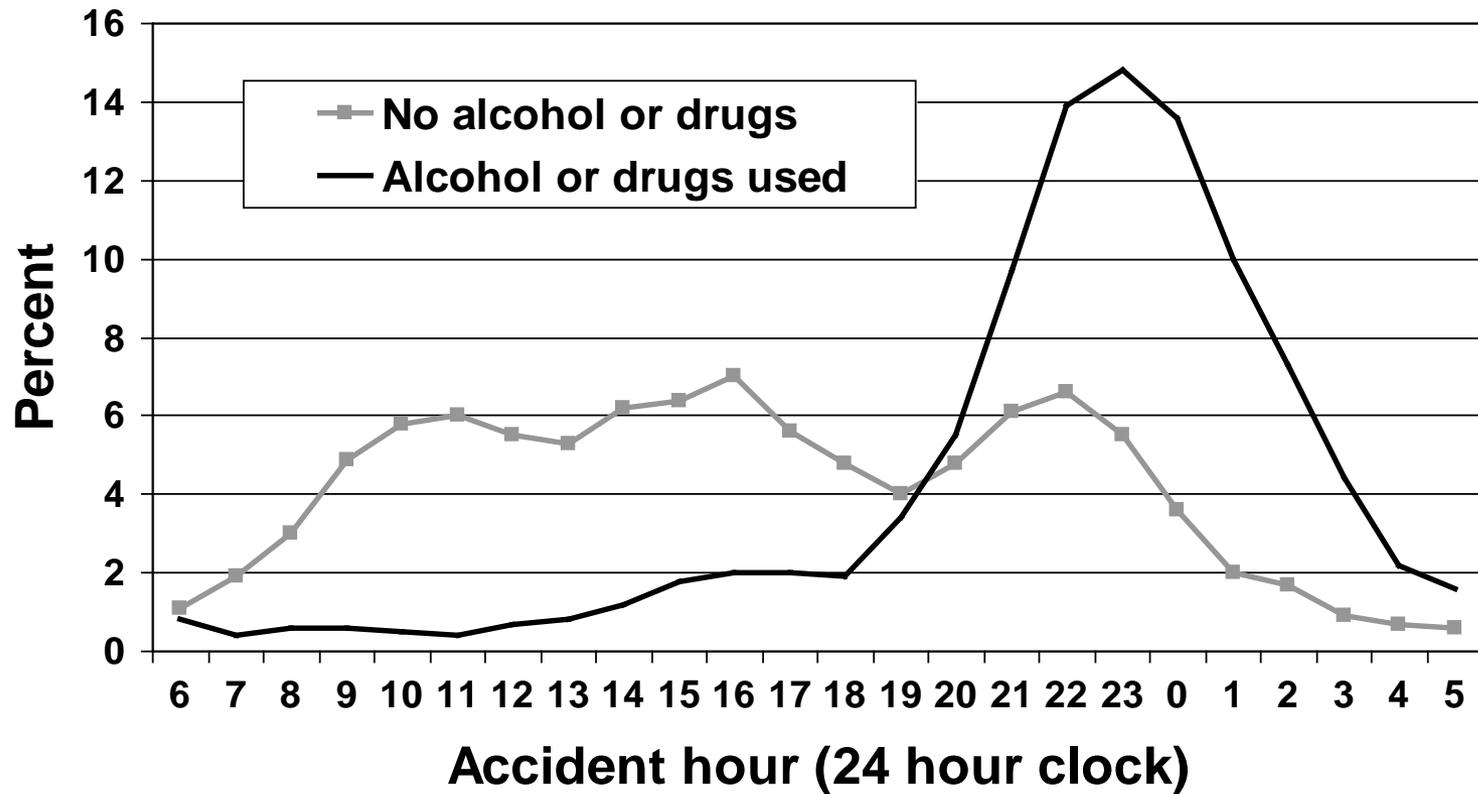
Nakhon-Pathom, 73000 Thailand

Two subpopulations:

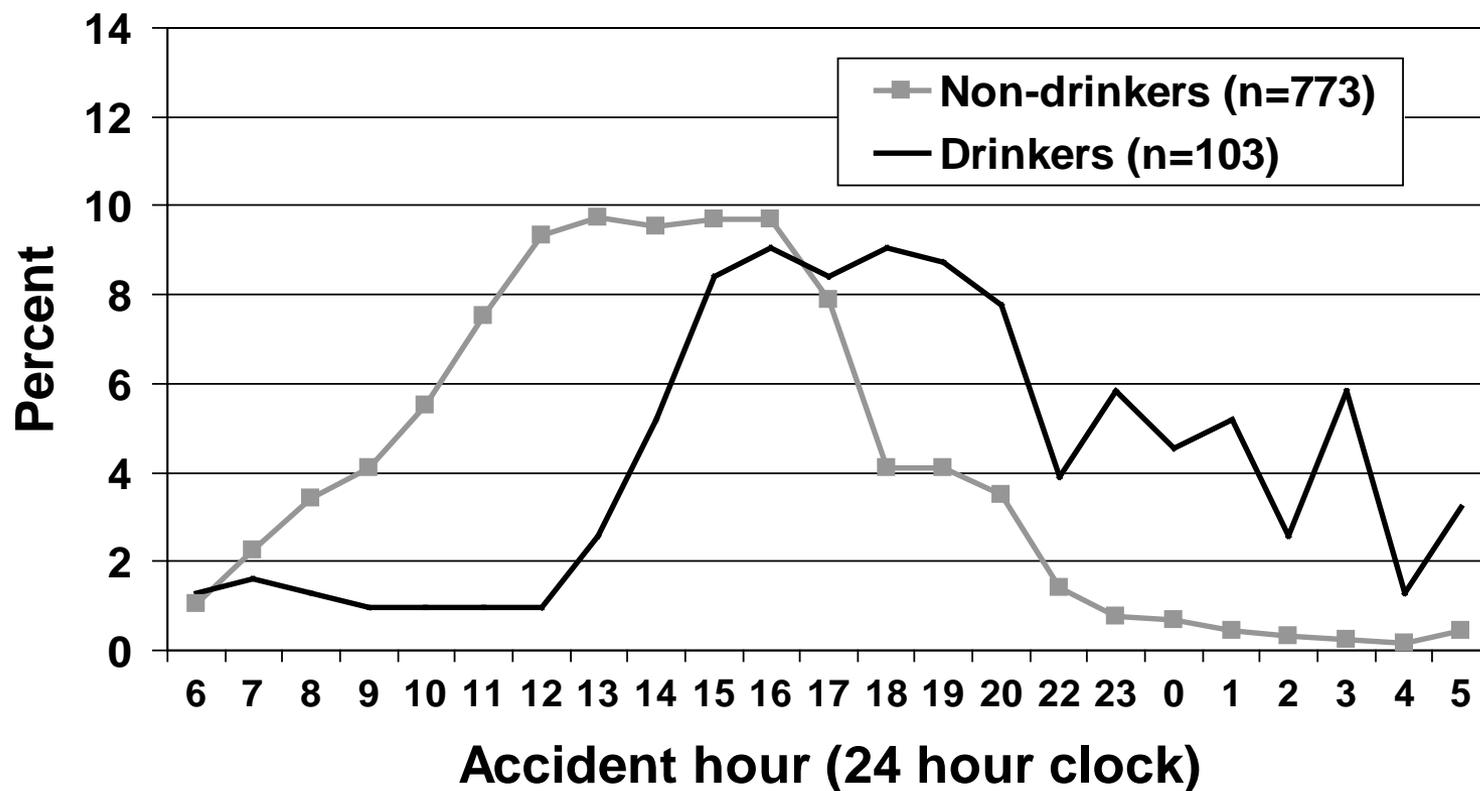
Alcohol-involved vs. non-alcohol crashes

- Non-alcohol crashes in Thailand were very different from non-alcohol crashes in Los Angeles.
- But alcohol-involved crashes were very similar in both study areas.

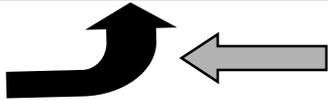
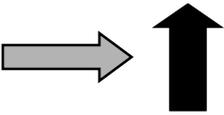
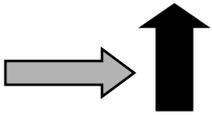
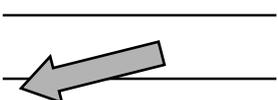
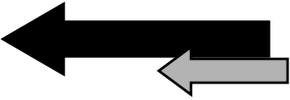
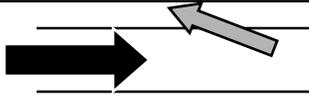
Accident time for drinkers and non-drinkers in Thailand, 3-hour rolling average



Accident time for drinkers and non-drinkers in Hurt study, 3-hour rolling average



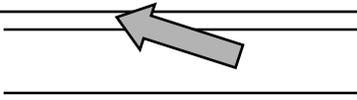
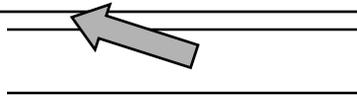
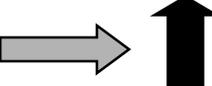
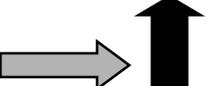
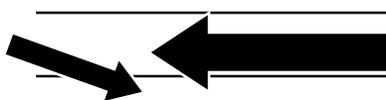
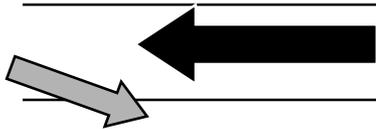
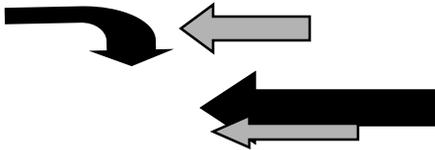
Most common accident configurations among non-drinkers

Rank	Los Angeles (n = 773)		Thailand (n = 683)	
	Configuration	Percent	Configuration	Percent
1		23.0		11.1
2		14.0		9.2
3		9.2		8.3
4		8.7		8.3
5		8.2		7.5

 OV

 Motorcycle

Most common accident configurations among drinking riders

Rank	Los Angeles (n = 102)		Thailand (n = 393)	
	Configuration	Percent	Configuration	Percent
1		38.8		21.4
2		13.6		15.0
3		10.7		7.9
4		4.9		6.4
5		3.9		5.1 (tie)

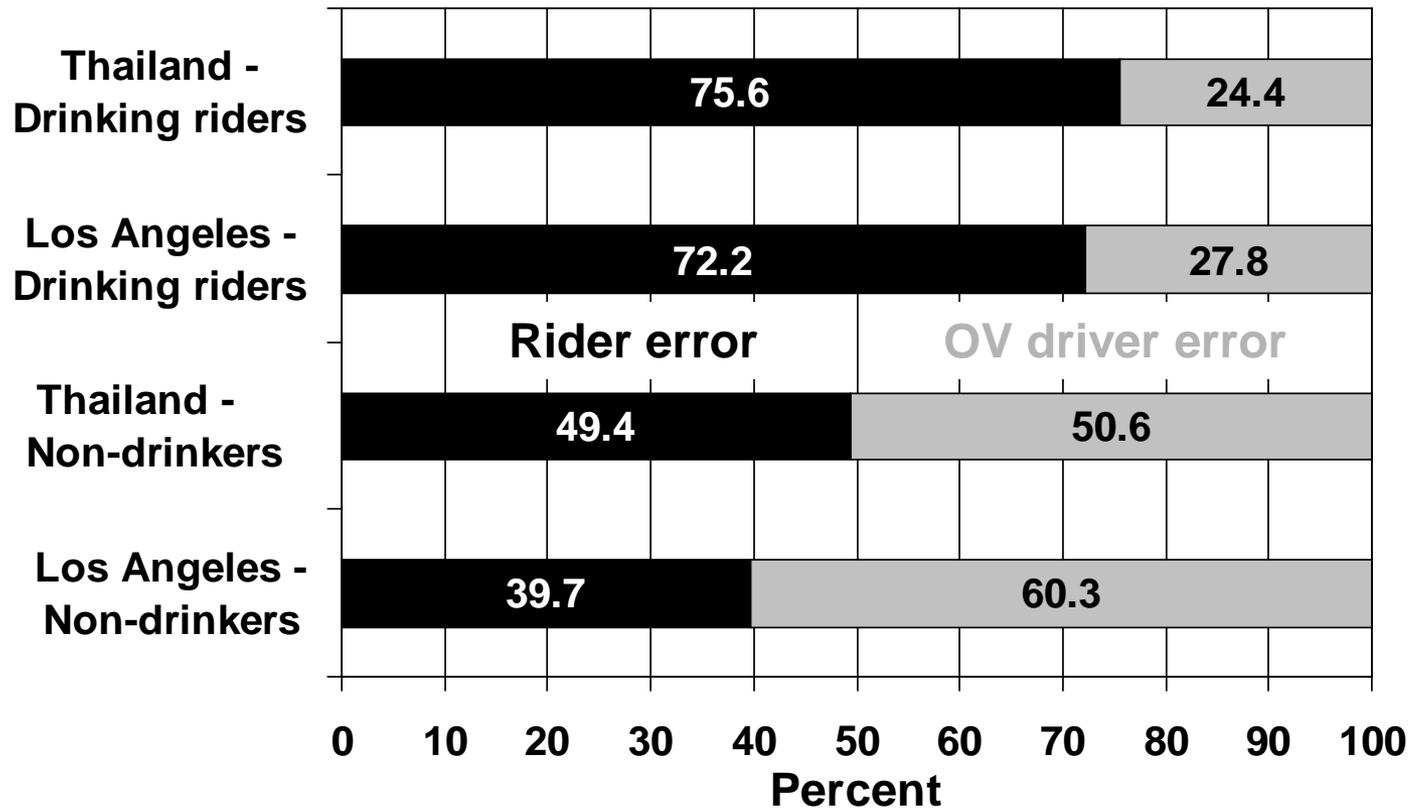
Loss of control mode, drinkers vs. non-drinkers in Thailand & Hurt study

Loss of control mode	No alcohol		Alcohol involved	
	Los Angeles (n=773)	Thailand (n=683)	Los Angeles (n=103)	Thailand (n=393)
Capsize	4.7 %	3.4 %	4.9 %	4.8 %
Slide-out	22.8 %	6.0 %	20.4 %	8.4 %
High-side	1.9 %	0.6 %	3.9 %	1.0 %
Ran off road	6.3 %	2.2 %	23.3 %	15.8 %
Other	1.8 %	0.7 %	4.9 %	1.8 %
No Loss	62.5 %	87.0 %	42.7 %	68.2 %

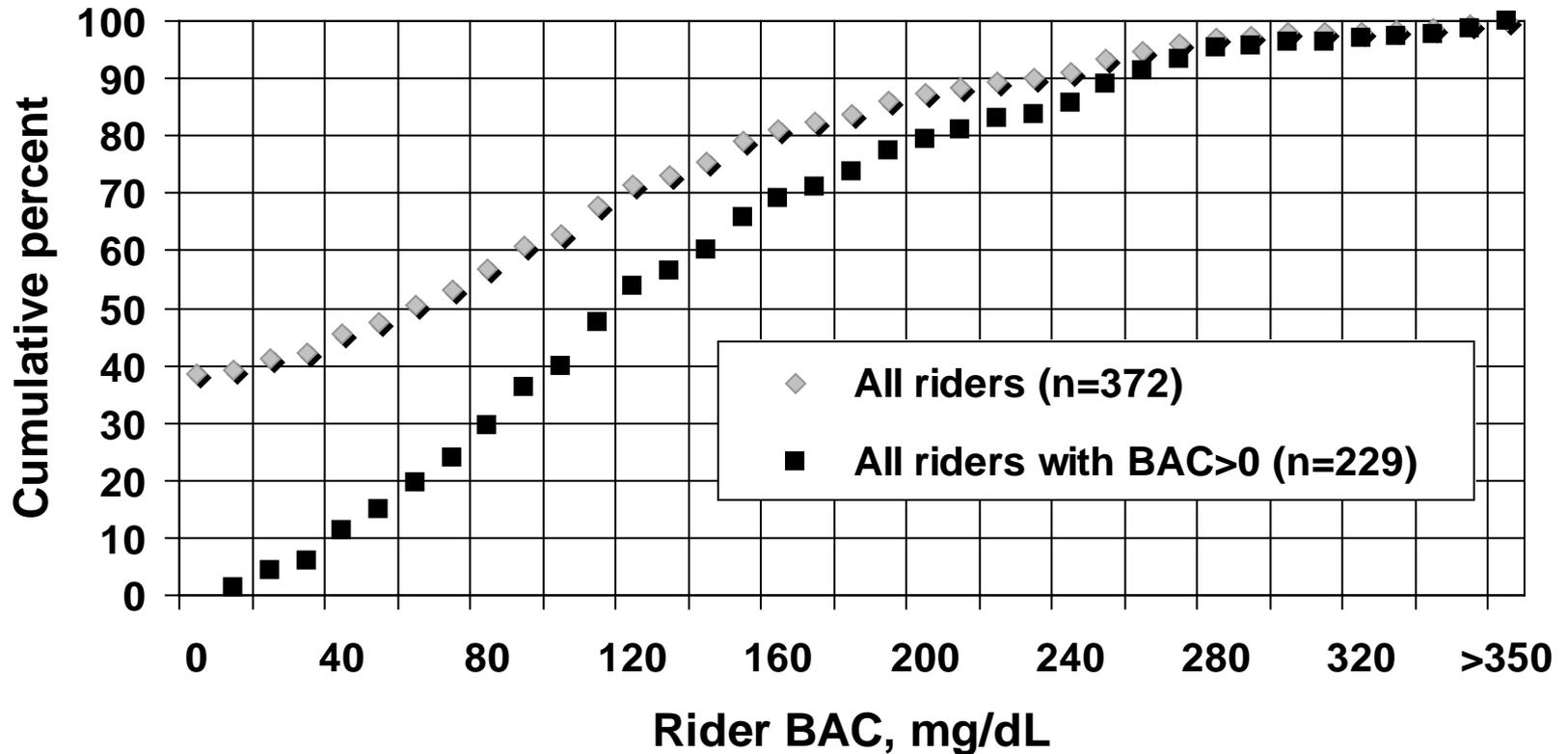
Major traffic violations

Major traffic violations	No alcohol		Alcohol involved	
	Los Angeles	Thailand	Los Angeles	Thailand
Running red light	12 %	25 %	22 %	51 %
Riding in opposing lane	3.6 %	6.7 %	9.3 %	12 %

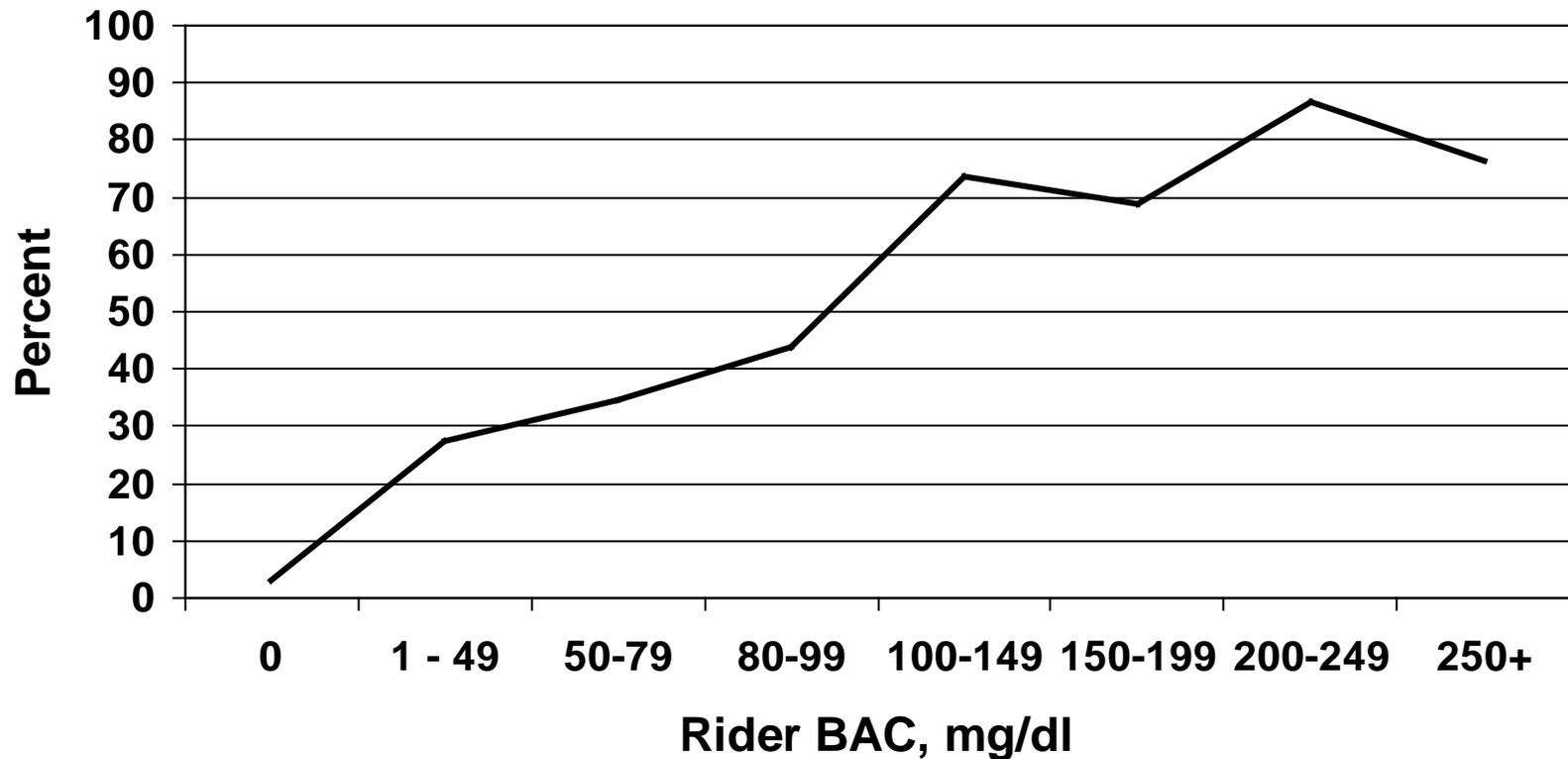
Rider or OV driver error in multiple vehicle crashes



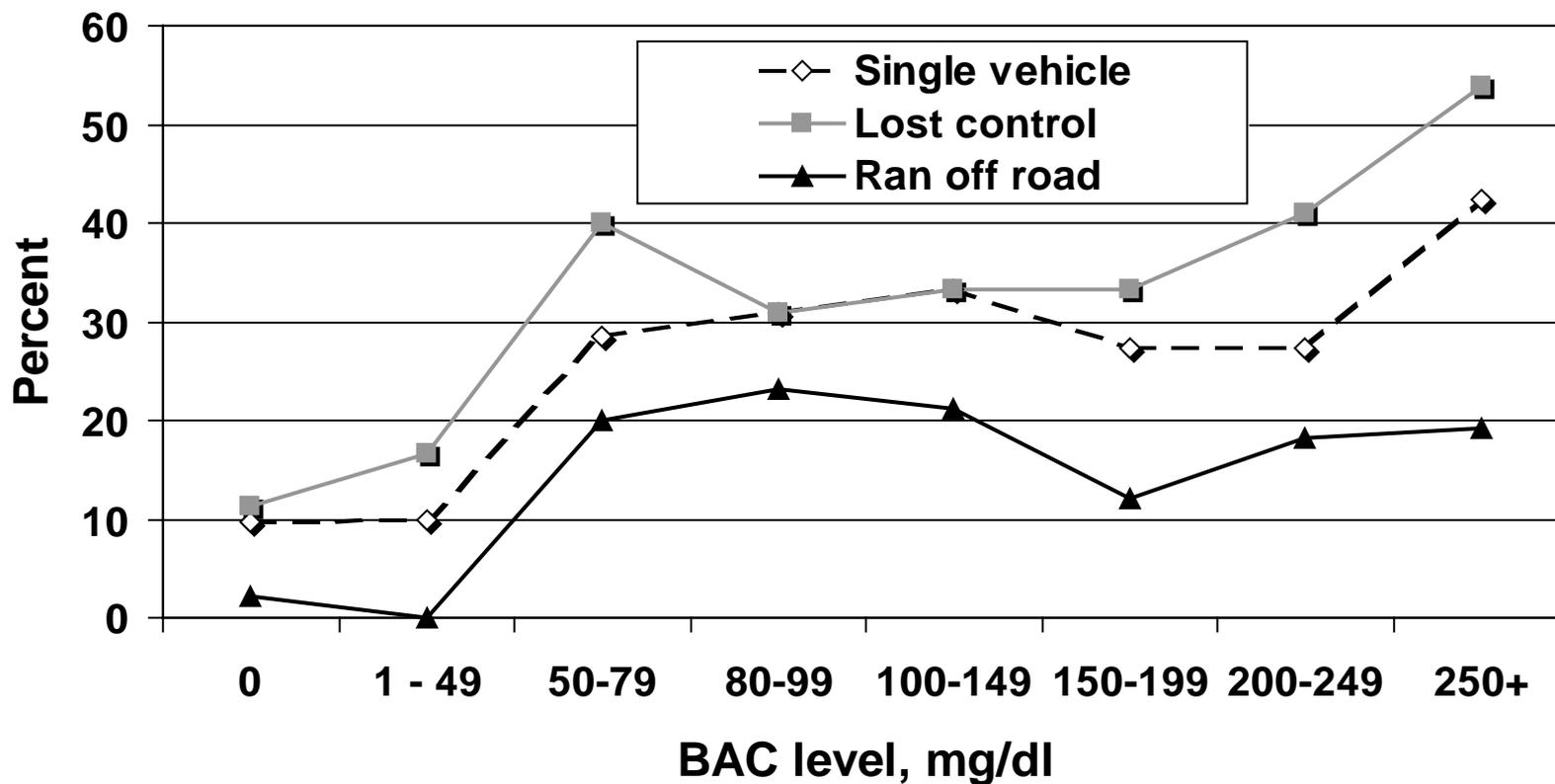
Cumulative percent distribution of rider Blood Alcohol Content (BAC)



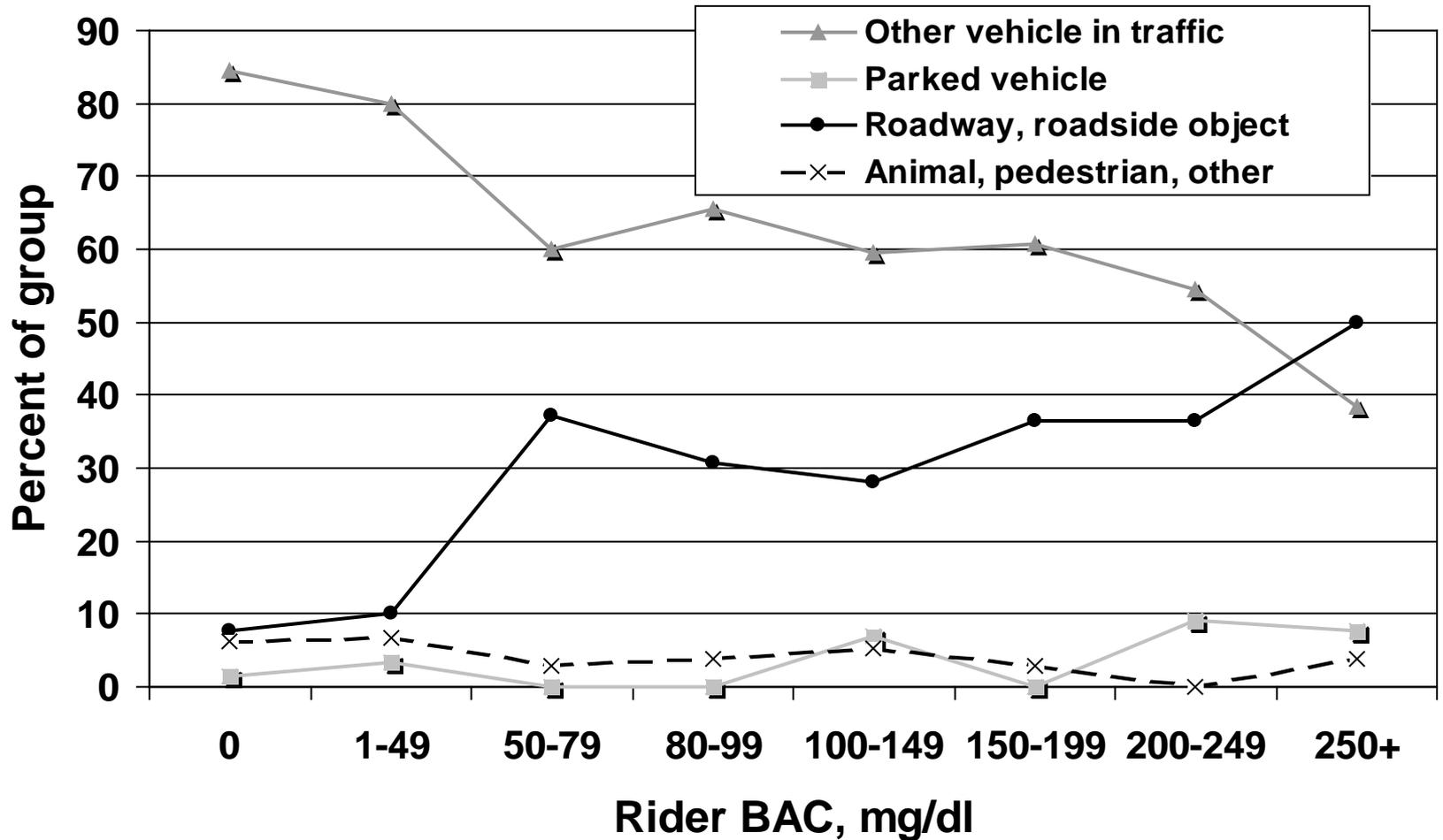
Rider inattention as a function of rider BAC



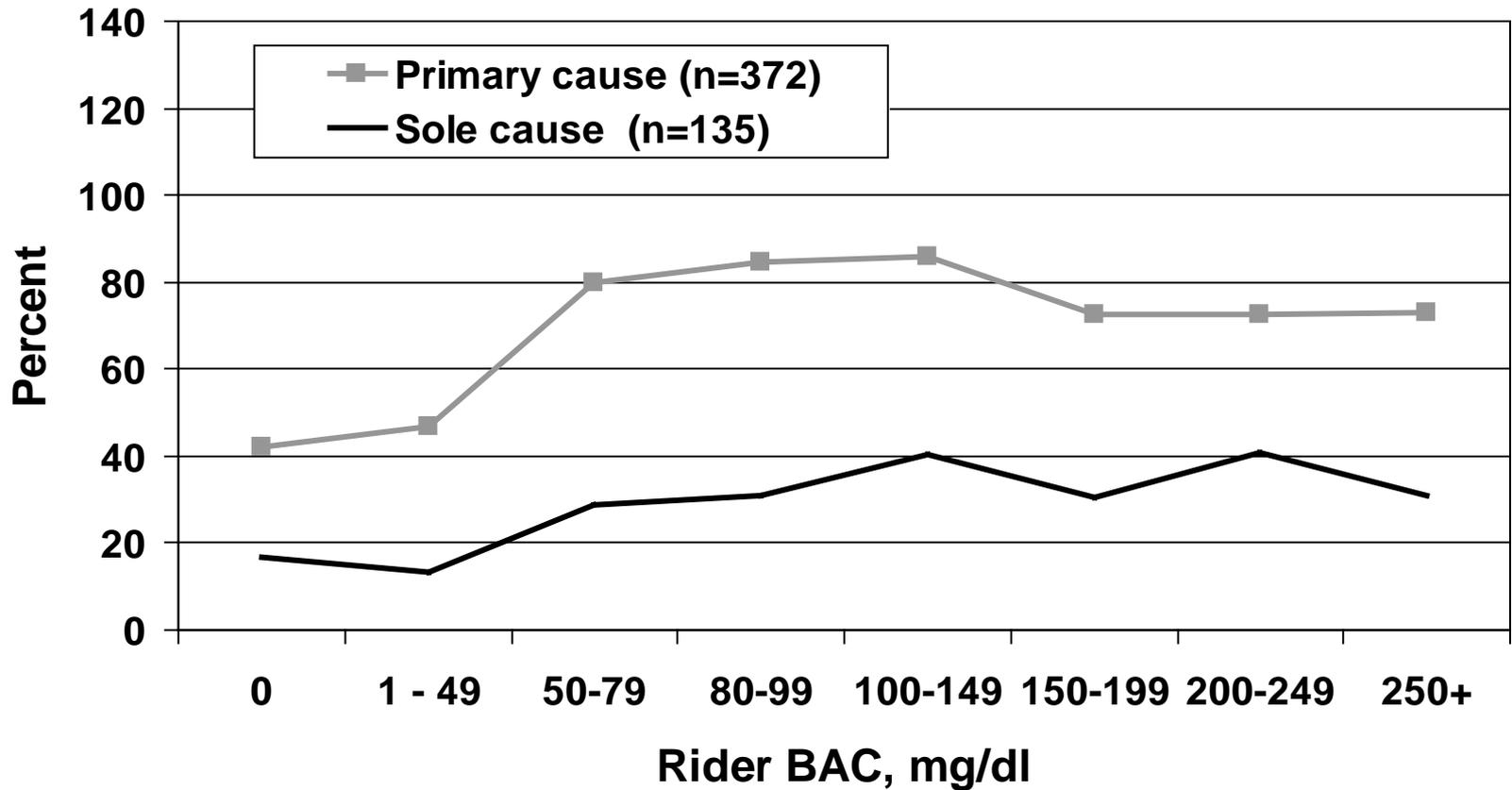
Single vehicle, ran-off-road and loss-of-control crashes, by BAC level



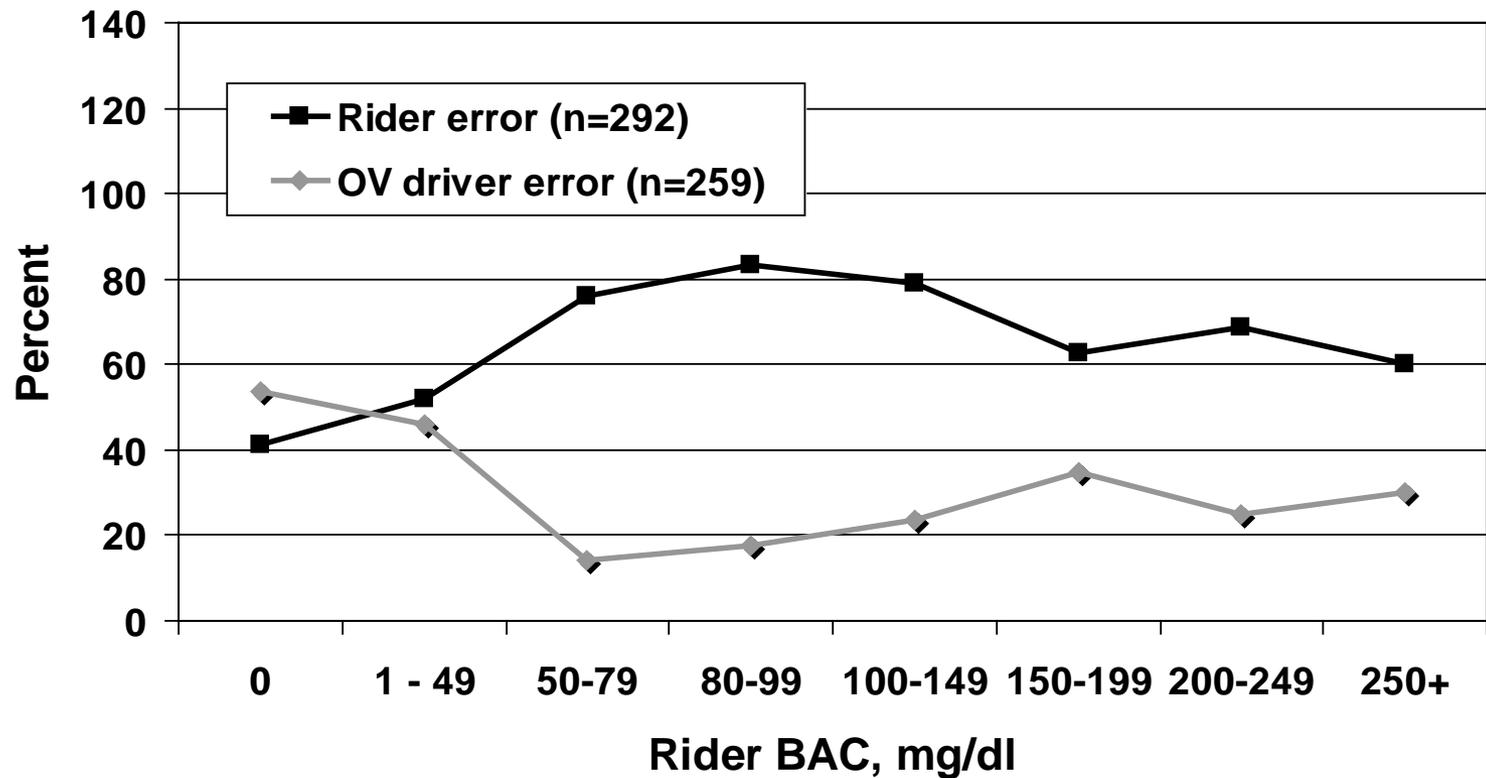
Object struck by motorcycle as a function of rider BAC



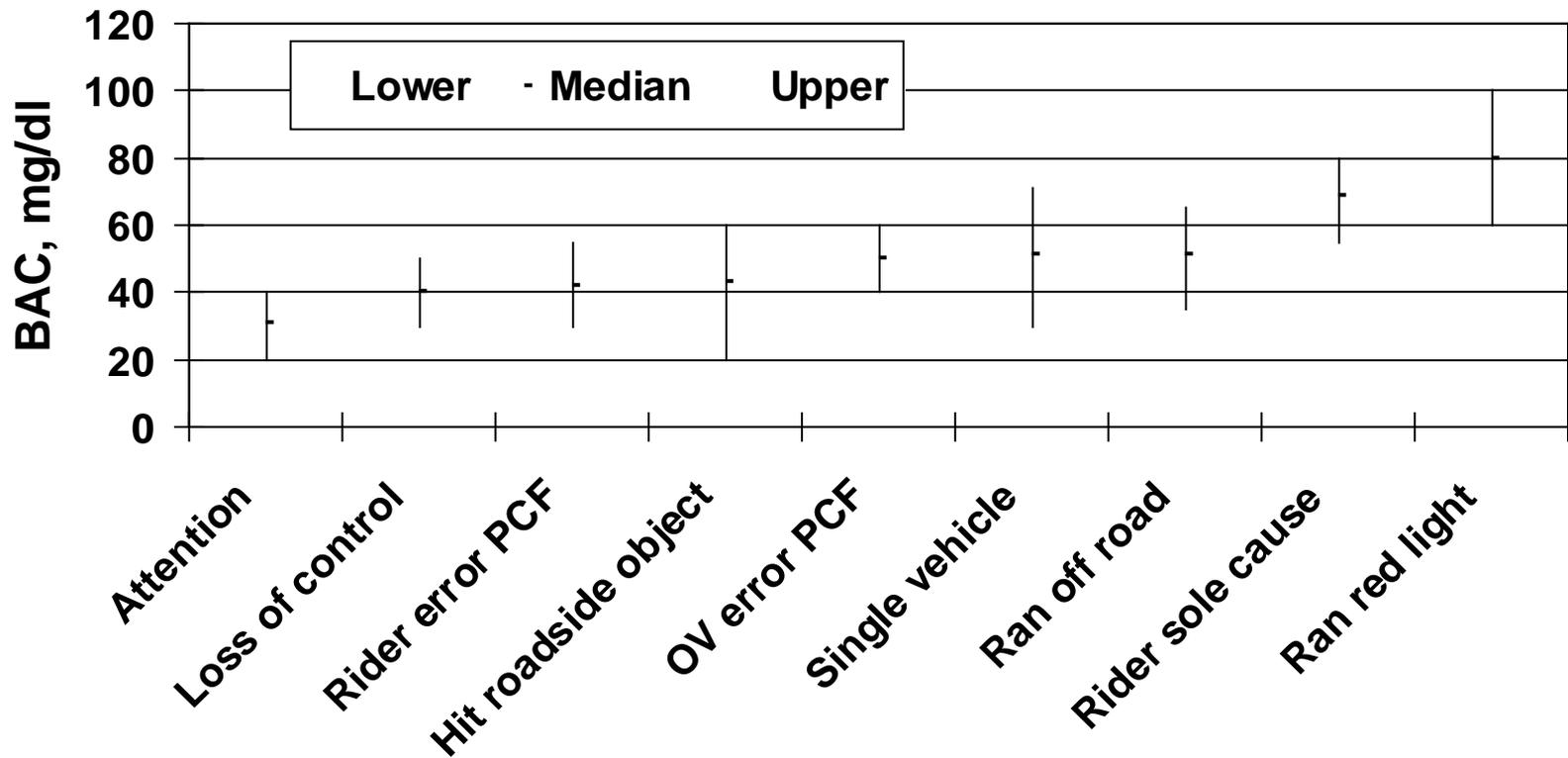
Rider error as primary or sole cause factor by BAC, all crashes



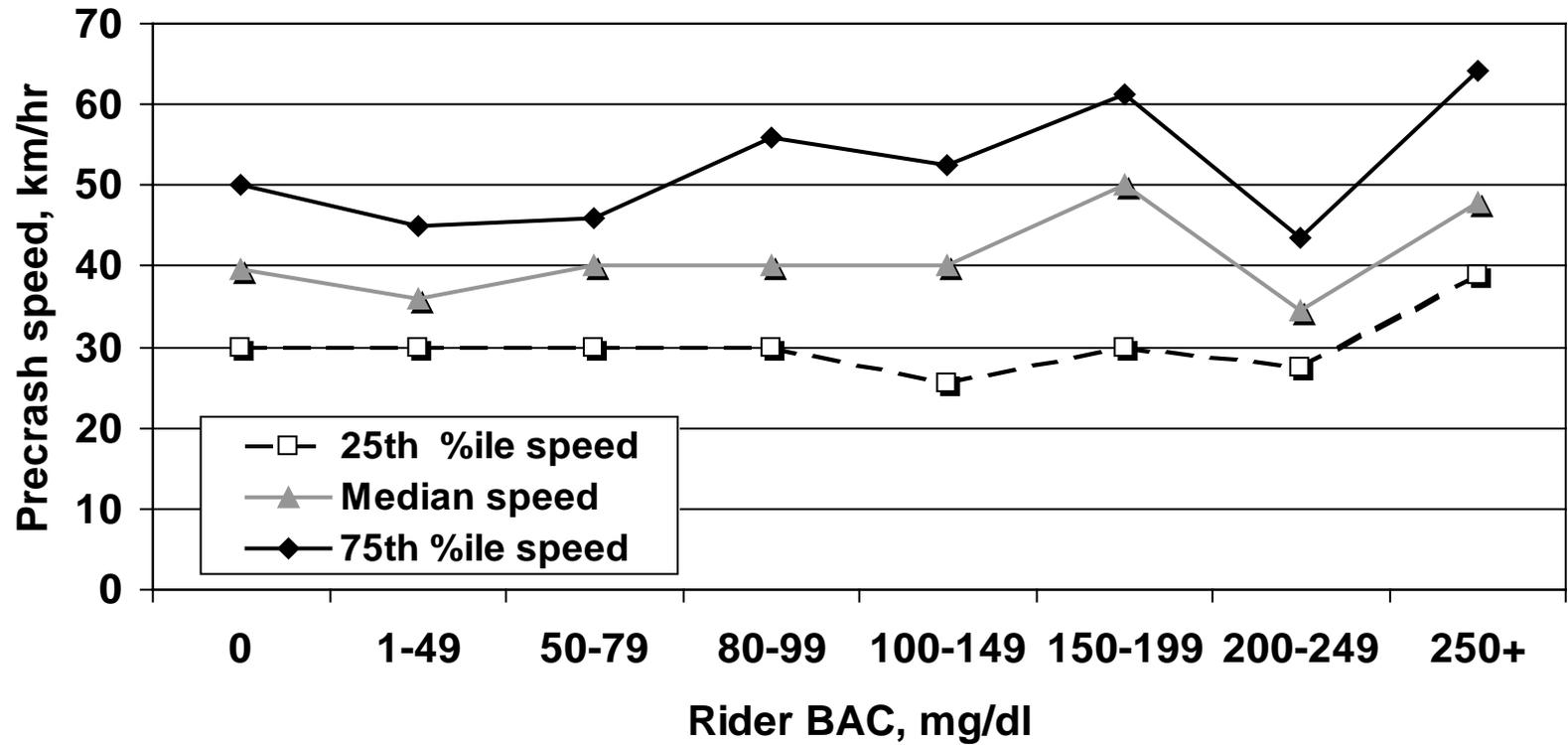
Primary cause factor by BAC in multiple vehicle crashes



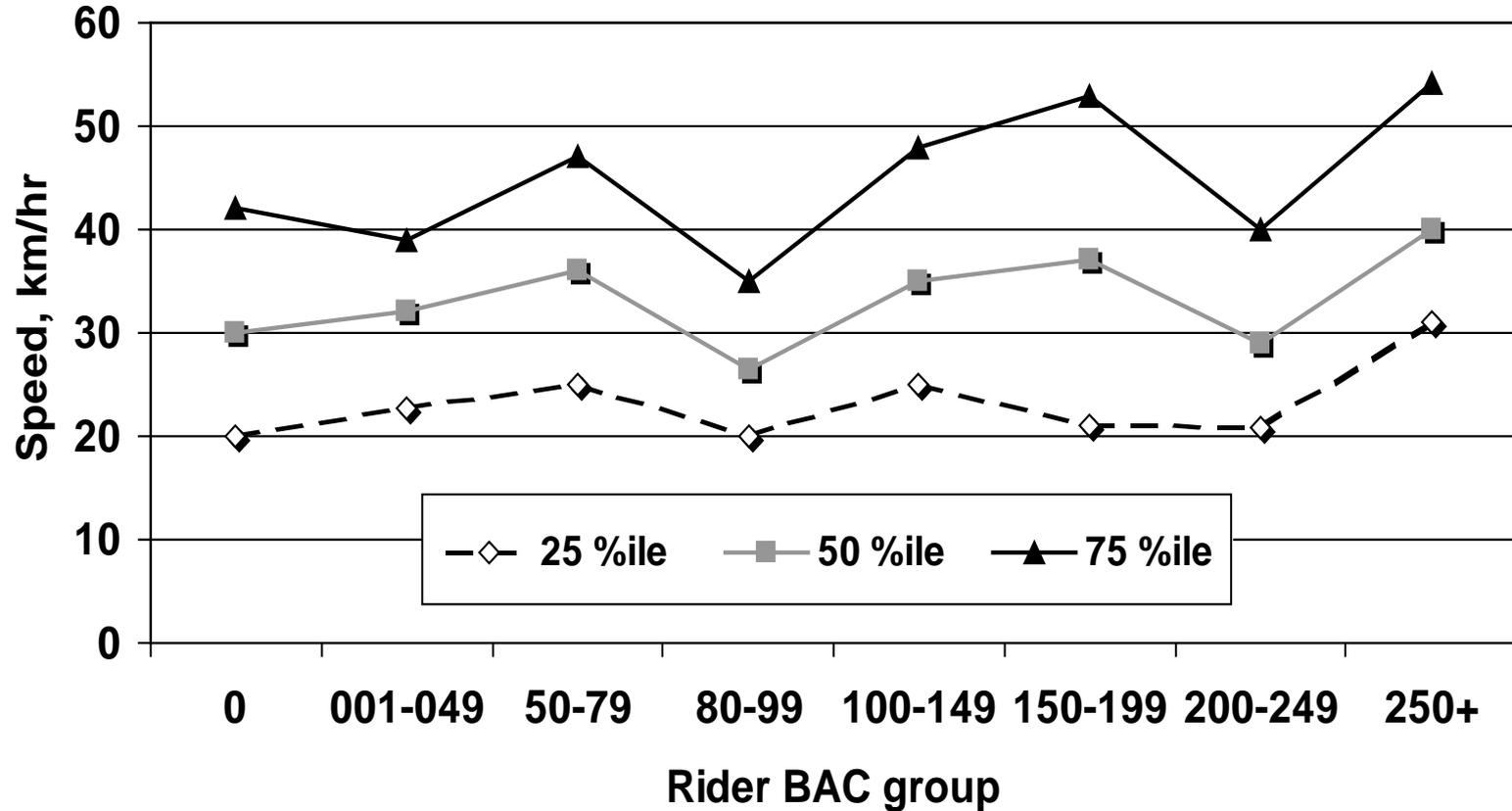
Minimum BAC level that differs significantly from non-drinkers



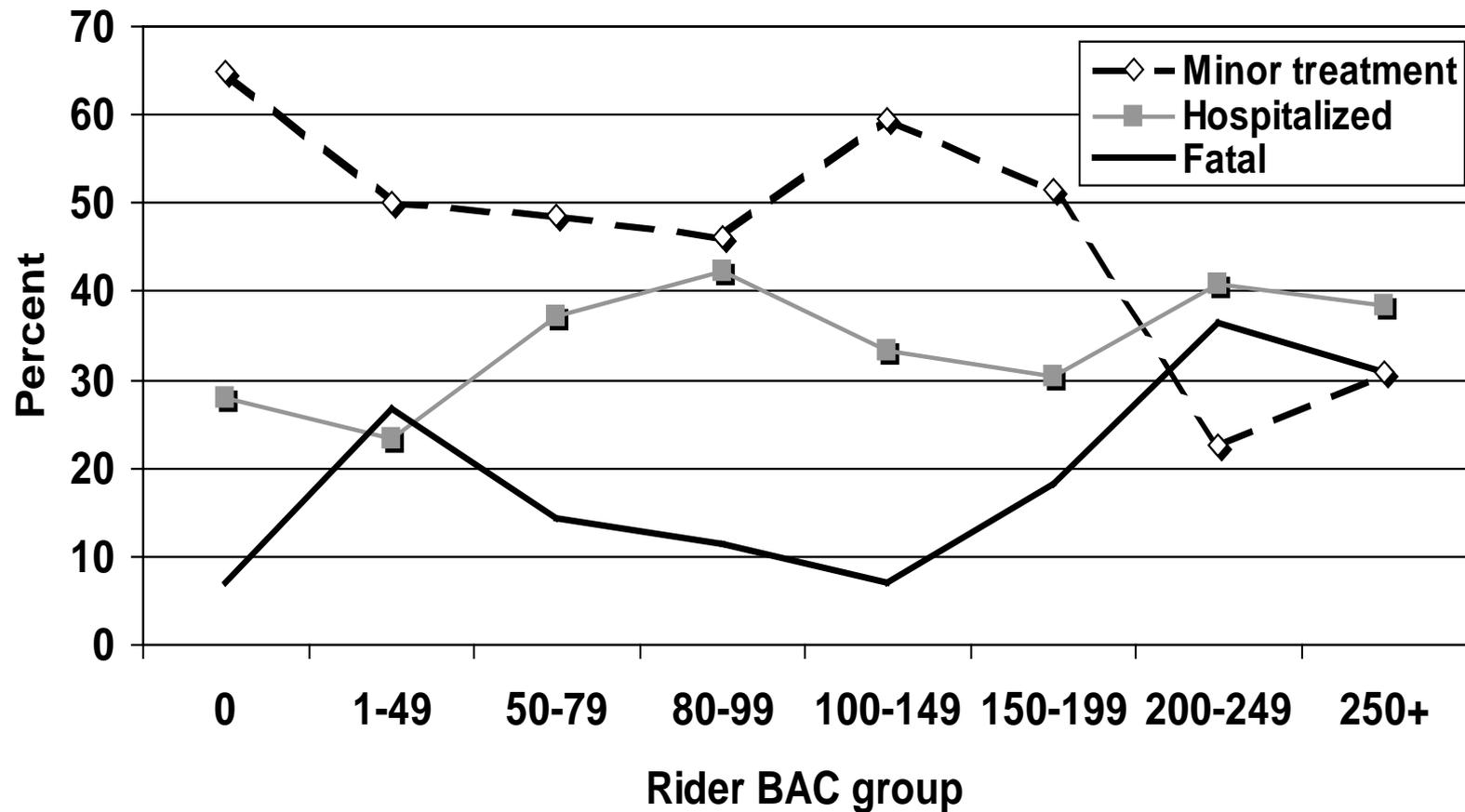
Motorcycle precrash speed by rider BAC, 25th, 50th & 75th percentile



Motorcycle crash speed by BAC group, 25th, 50th and 75th percentiles



Medical treatment by BAC level



As BAC increases:

1. Rider inattention goes up regularly
2. Loss of control crashes go up regularly
3. Single-vehicle & run-off-road crashes increase greatly, but hold steady at BAC > .05%
4. Rider error as primary or sole cause doubles above BAC > .05%
5. Speeds remain steady
6. Minor crashes decrease, and serious and fatal crashes increase