Nighttime Enforcement

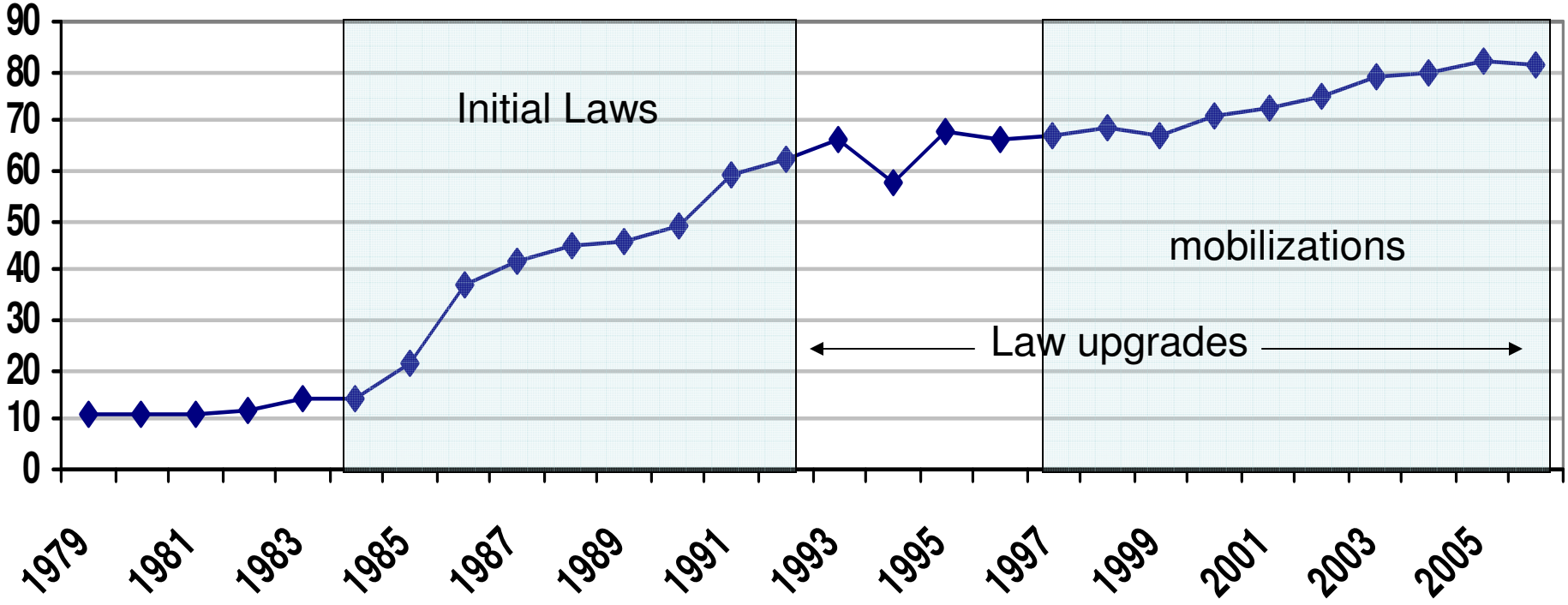
R5.Michigan Summit.Night Enforcement

We have made great progress in terms of increasing safety belt use!

…but progress is slowing

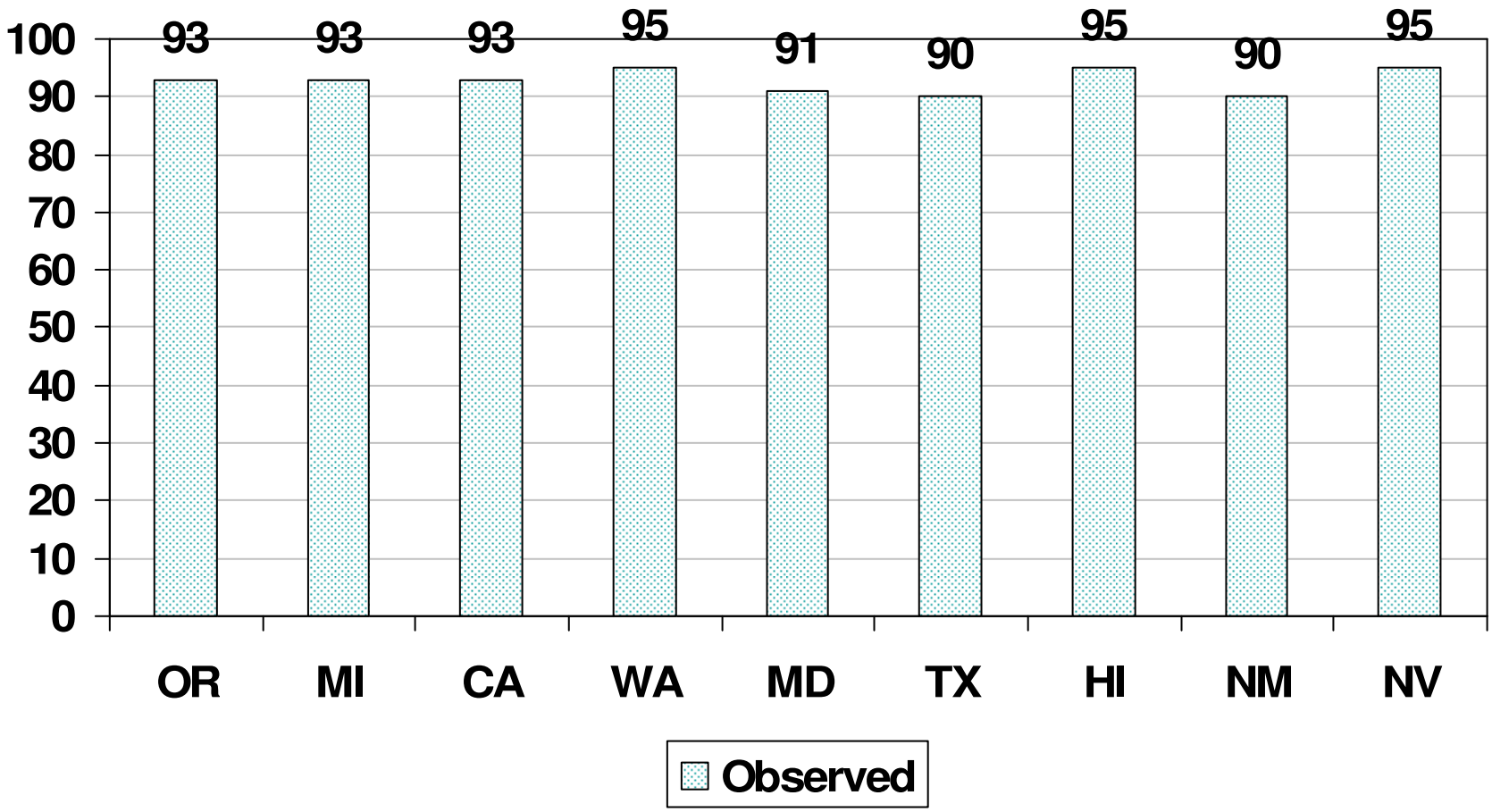
Observed Safety Belt Use Rates in the United States:

1979 – 2006

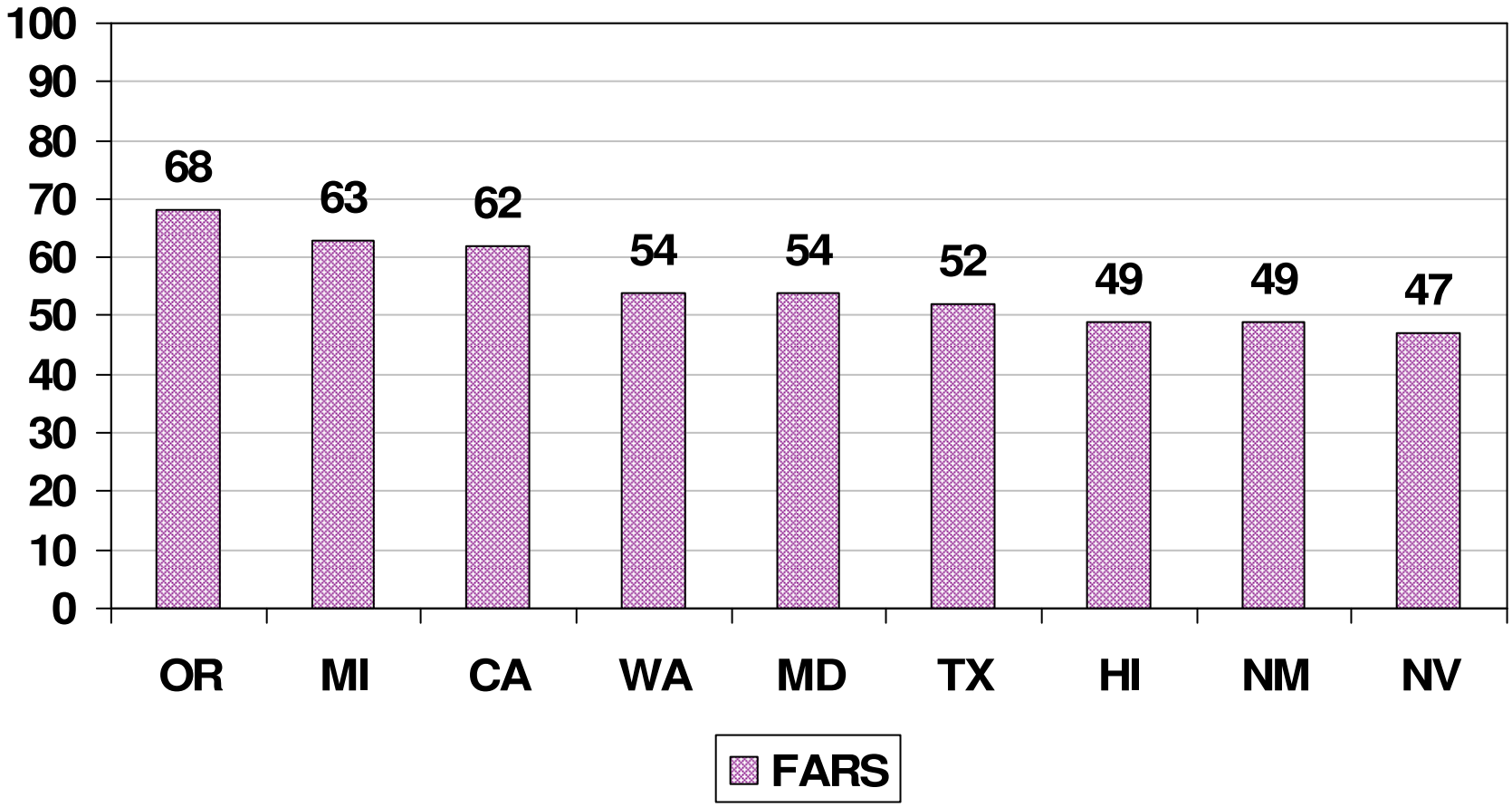


Is Their Any Potential for Change in States with 90%+ Usage?

Nine States with 90%+ Usage Observed Use

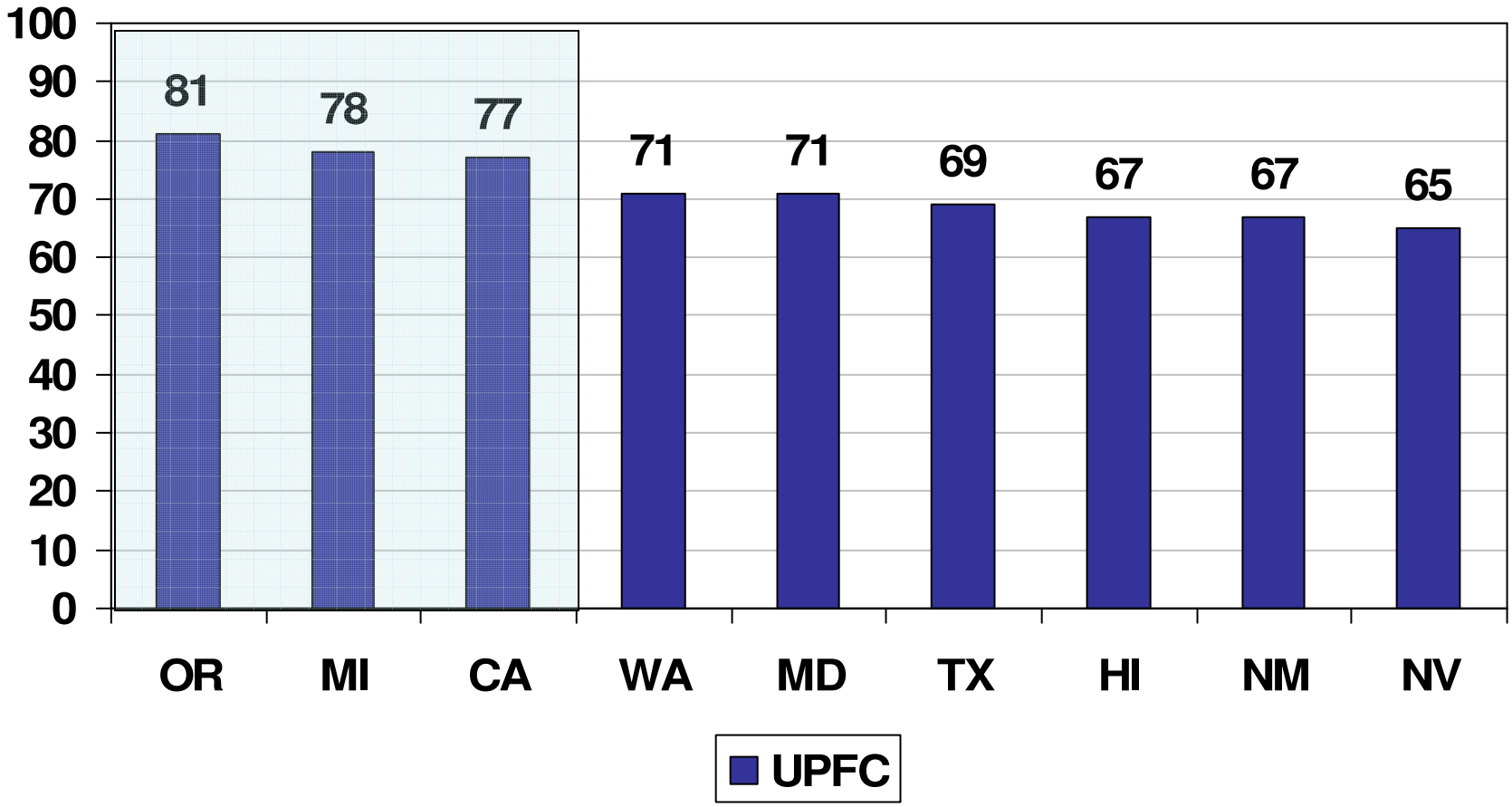


Nine States with 90%+ Usage
FARS Use



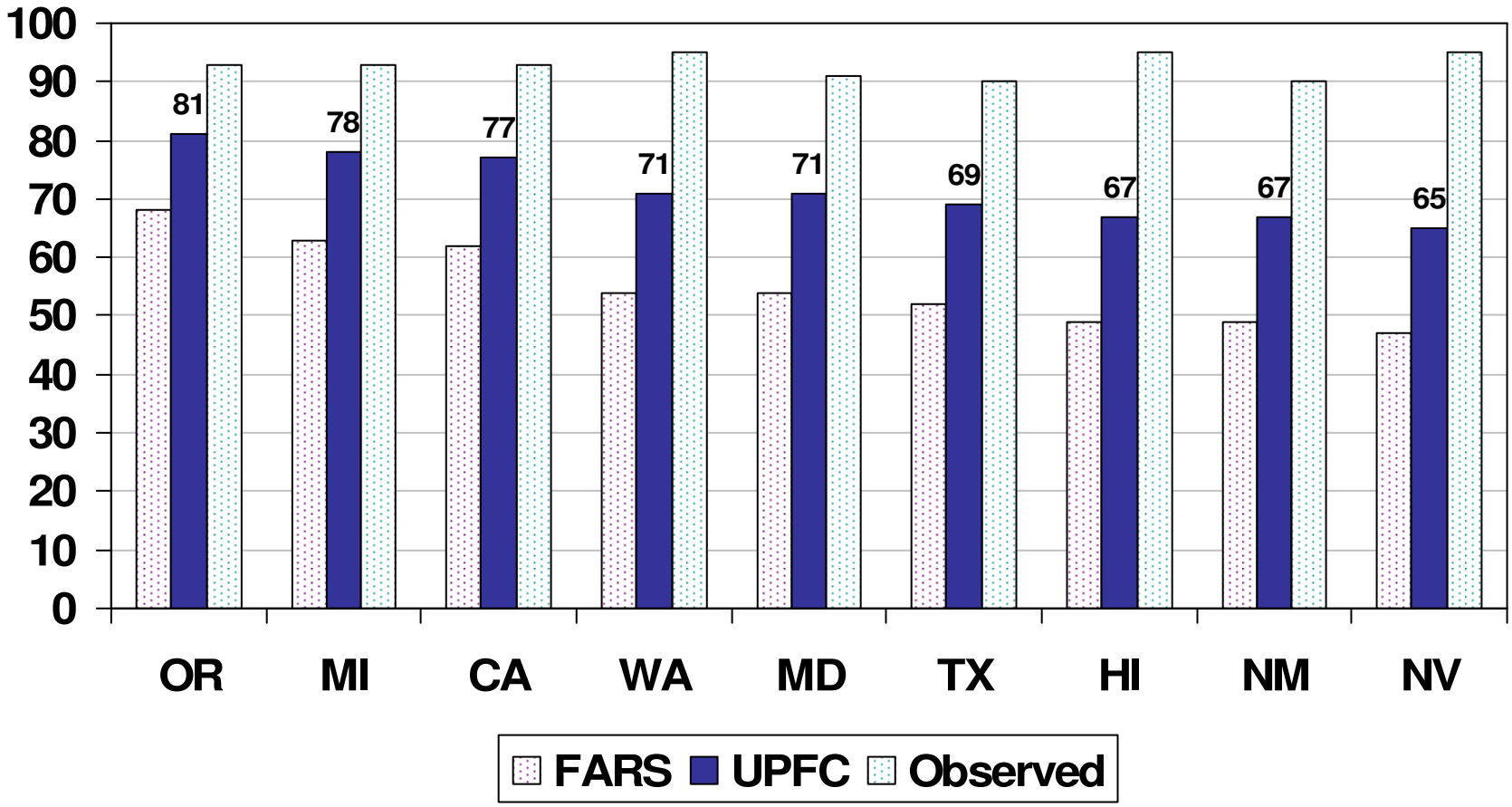
Nine States with 90%+ Usage

Use in Potentially Fatal Crashes

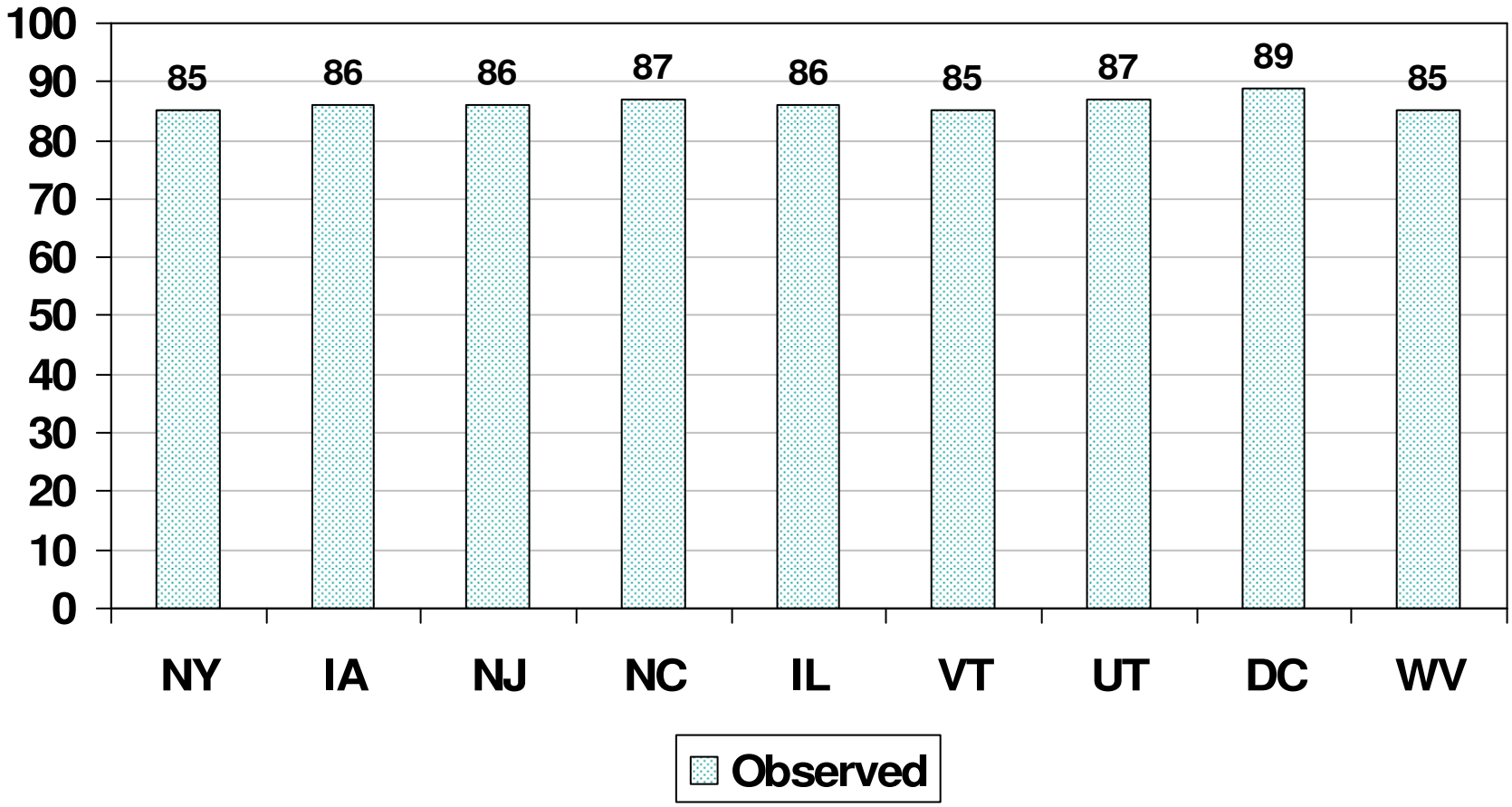


Nine States with 90%+ Usage

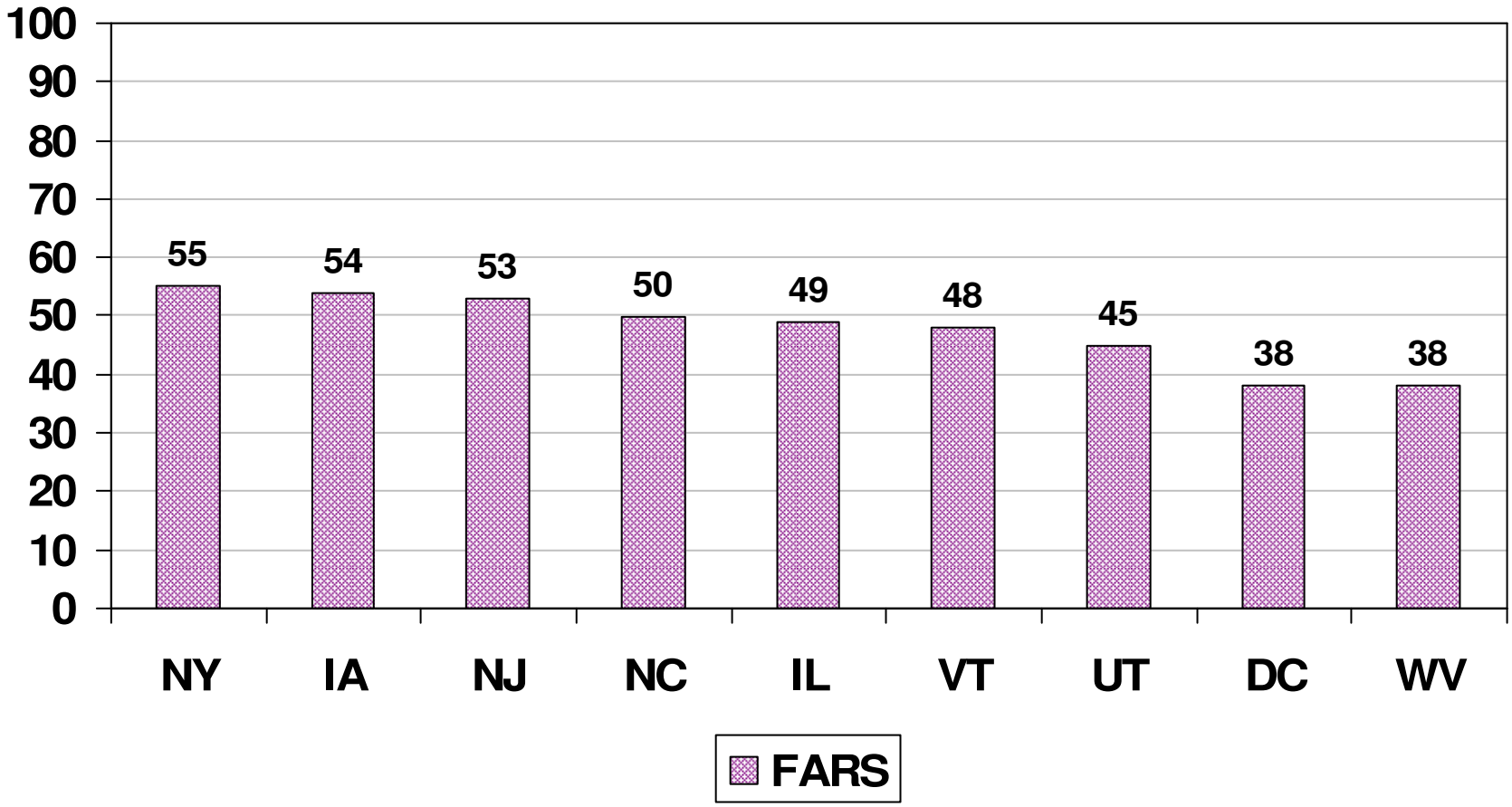
FARS Use; UPFC; Observed Use



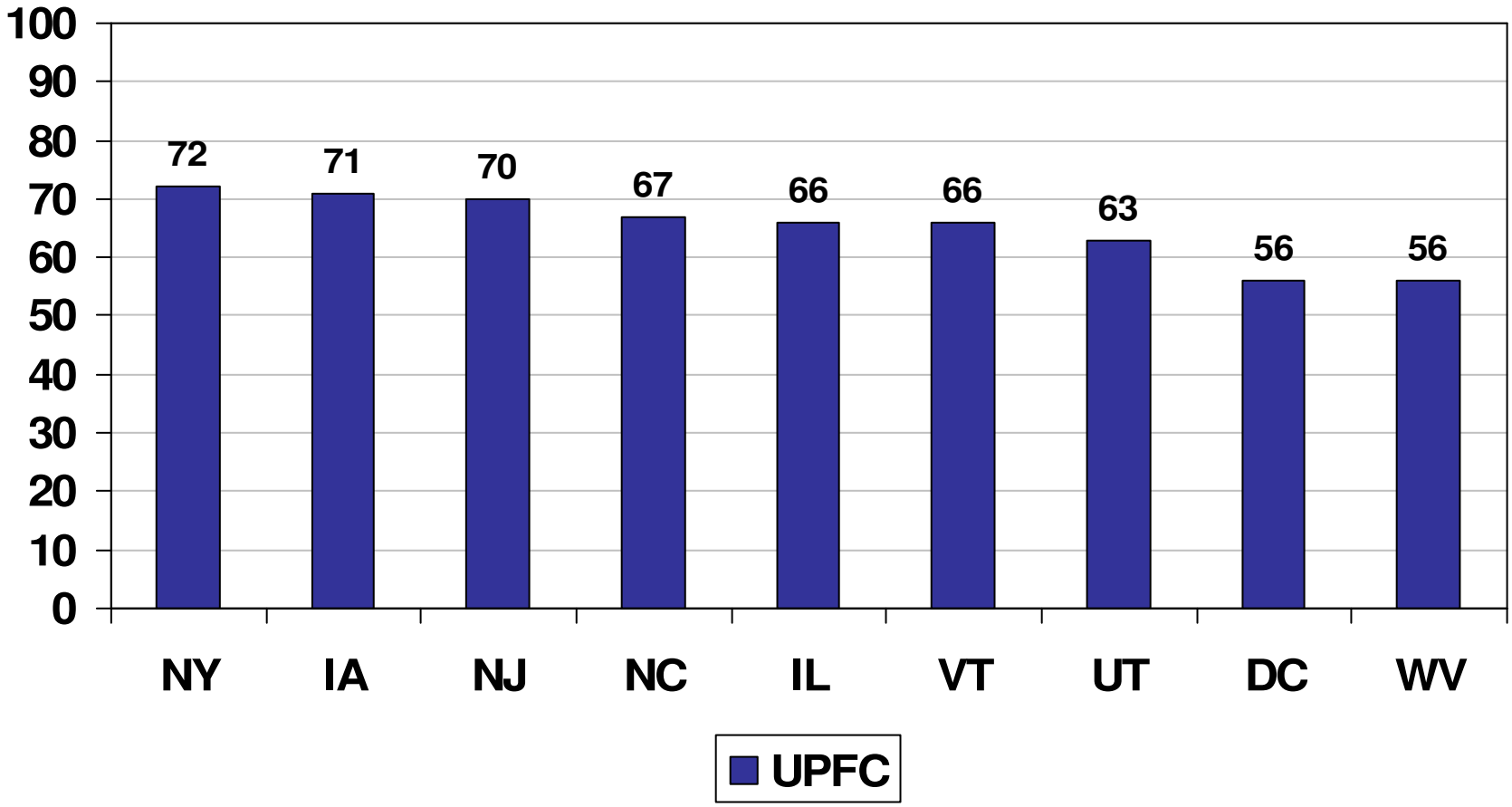
Nine States with 85-89% Use (Observed Use)



FARS Use among Nine States with 85-89% Observed Use

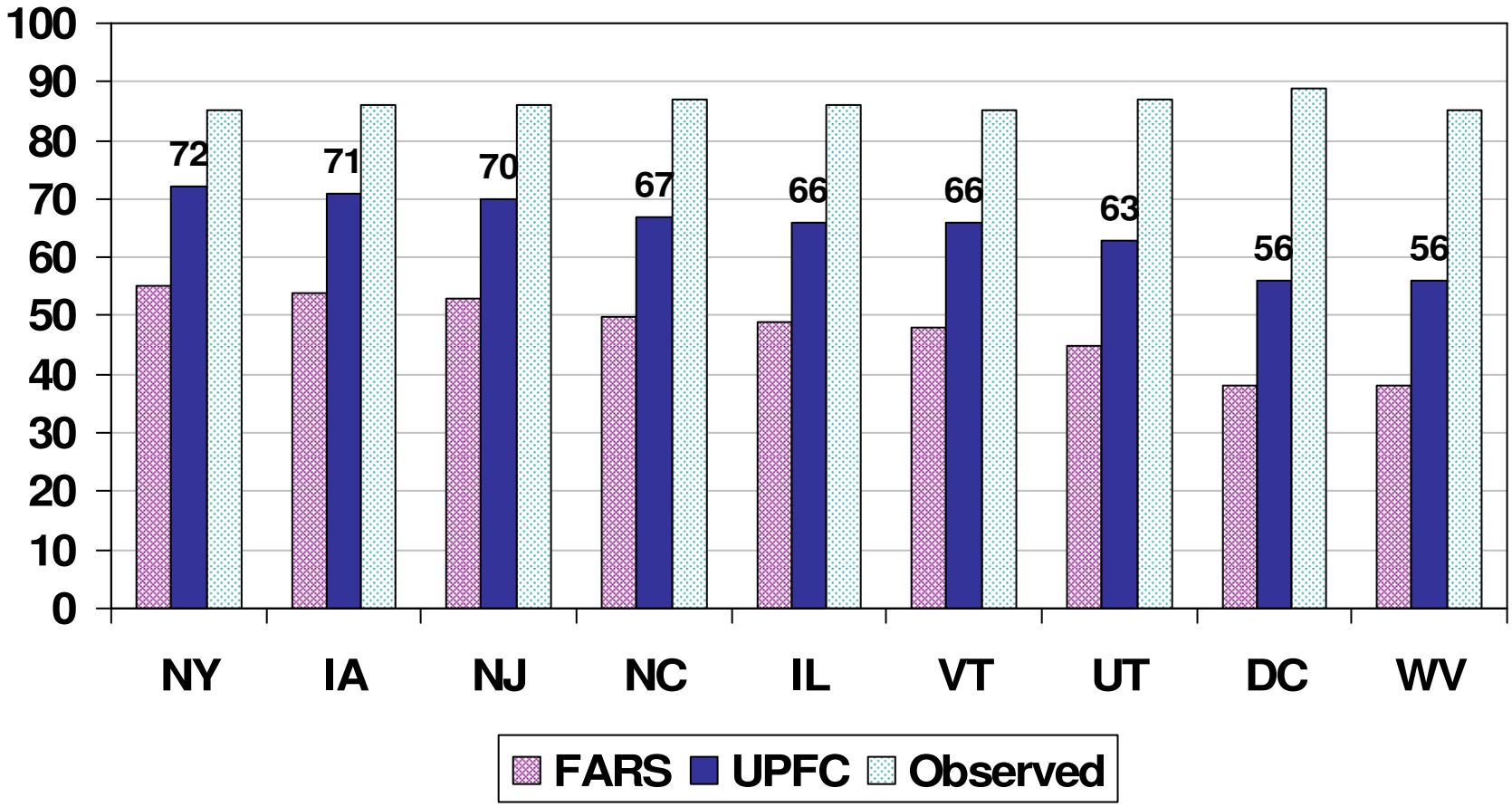


UPFC among Nine States with 85-89% Observed Use



Nine States with 85-89% Use

FARS, UPFC, and Observed Use



Who do we need to reach?

Usual Suspects

- Crash Involved Drivers/Passengers

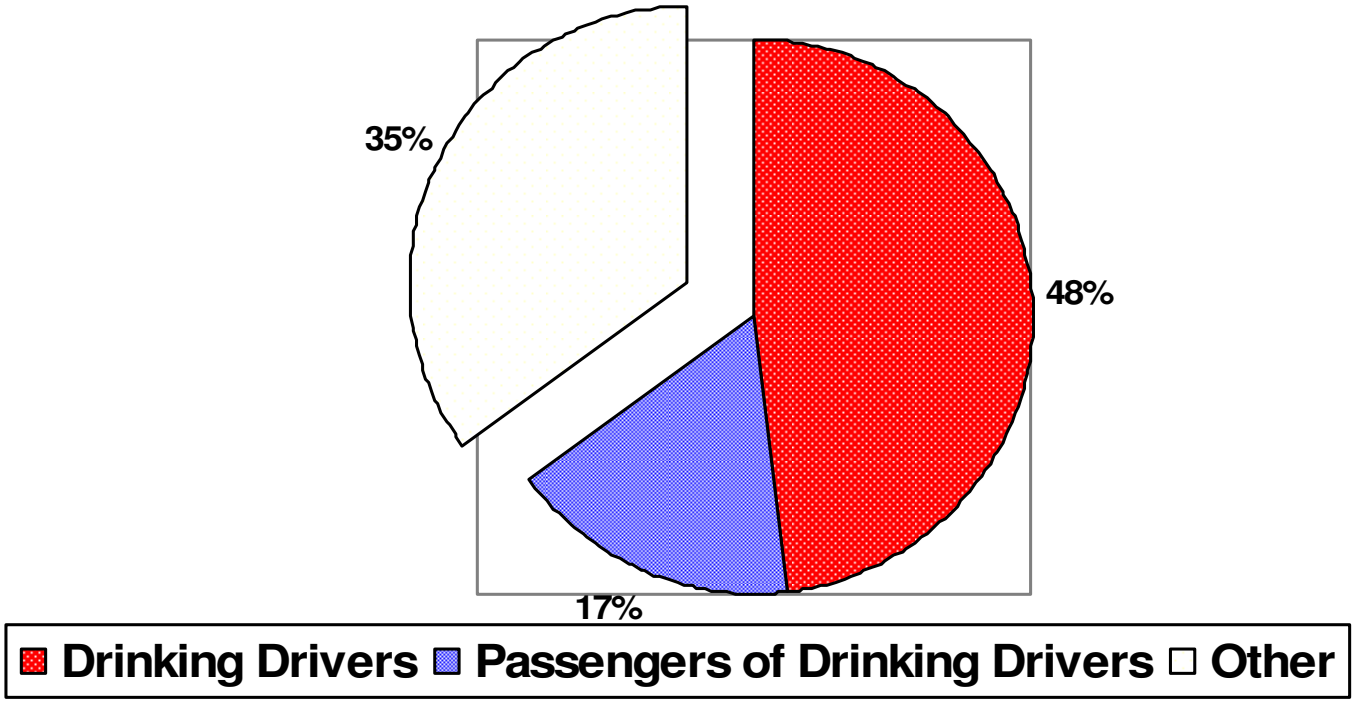
- Daytime Drivers/Passengers (CIOT)

- Young Males/Passengers (nearly all CIOTs)
- Rural Drivers/Passengers (rural demo)
- Pickup Drivers/Passengers (pickup demos)
- Traffic Law Violators/Passengers

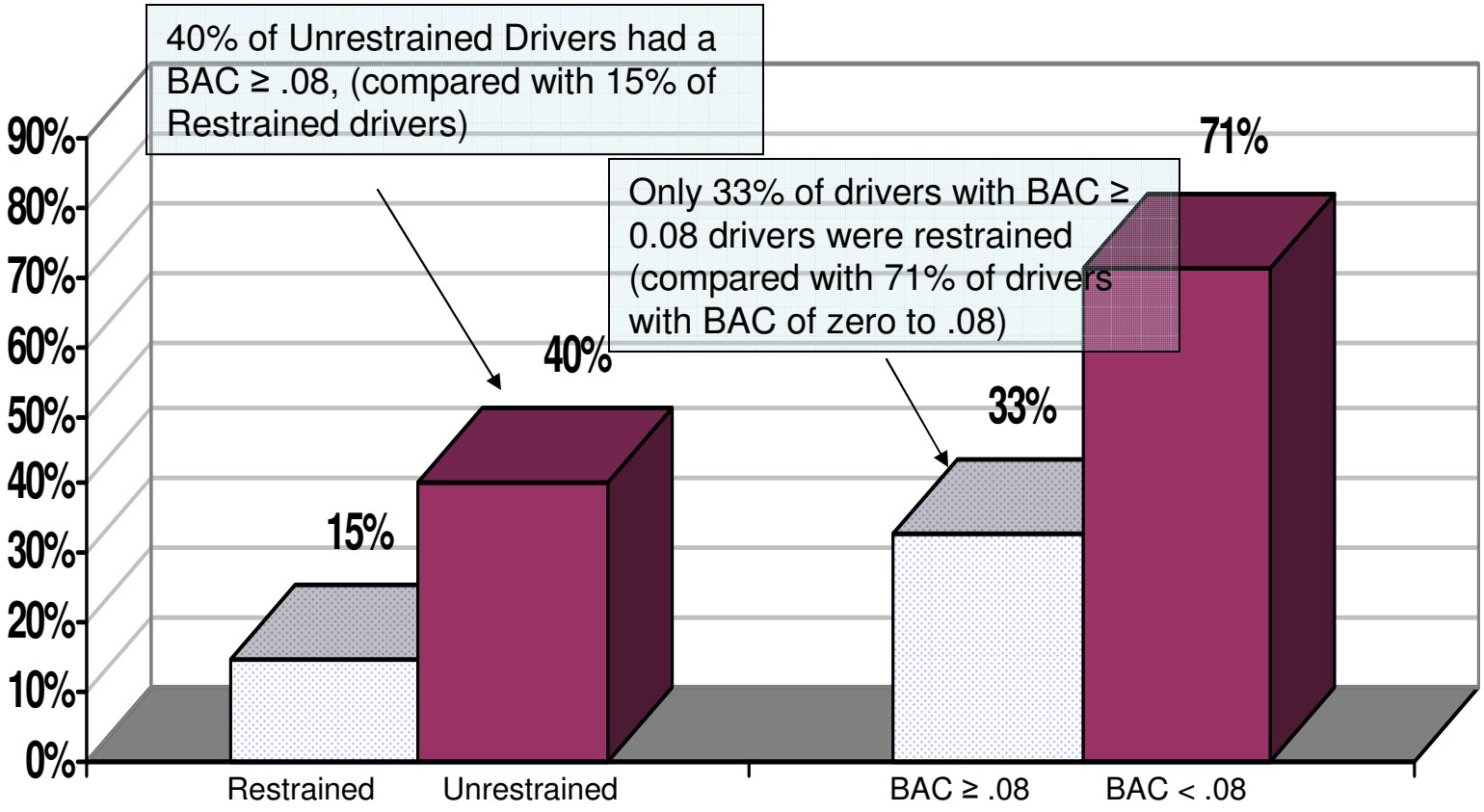
- Drinking Drivers/Passengers
- Nighttime Drivers/Passengers

Alcohol

Fatally Injured Victims of Alcohol-Related Crashes by Role in Crash

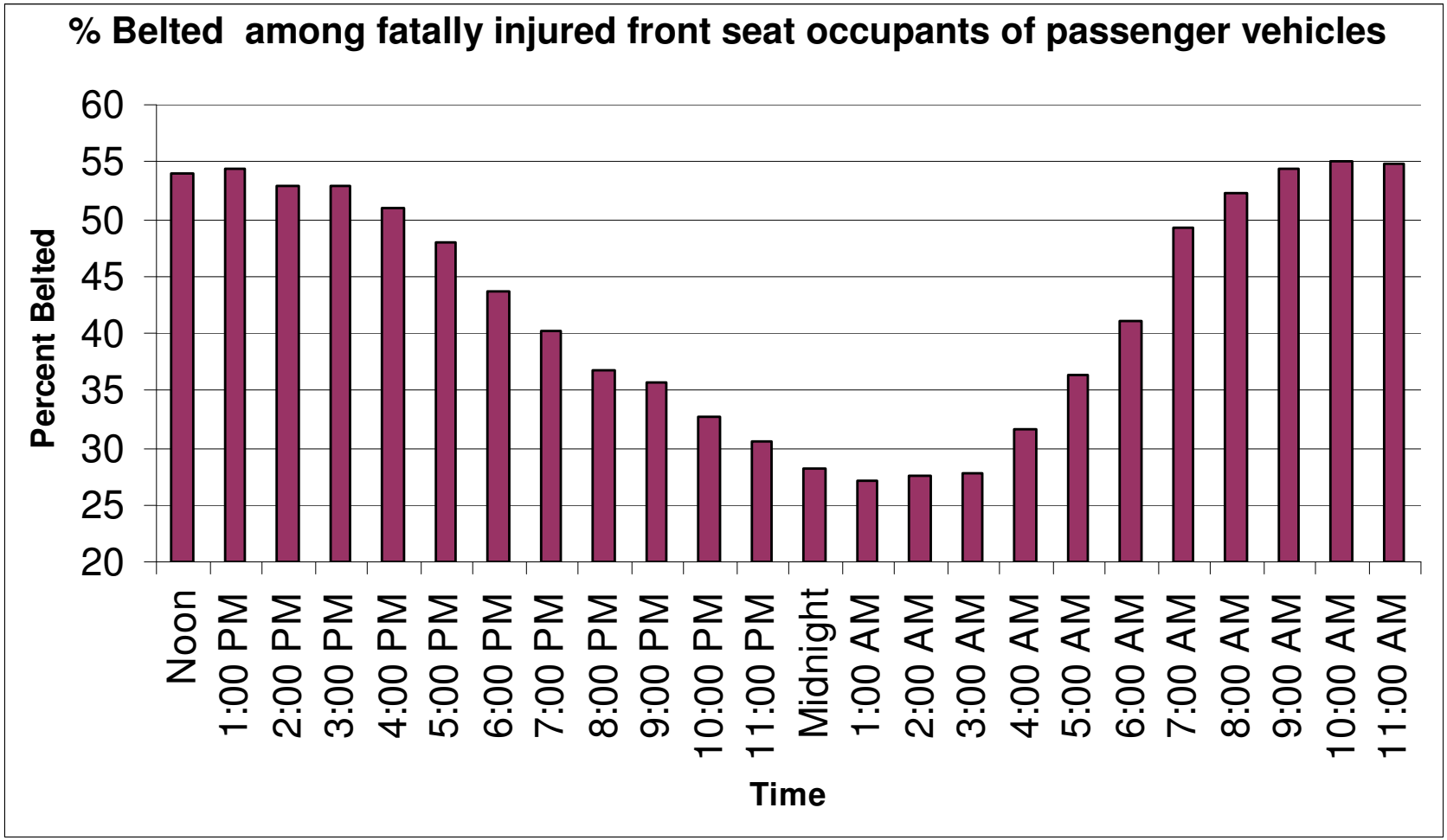


Strong Relationship Between Alcohol and Non-Use
Drivers of Passenger Vehicles Involved in Fatal Crashes: by BAC and Restraint Use



Nighttime NON-Usage

The Problem

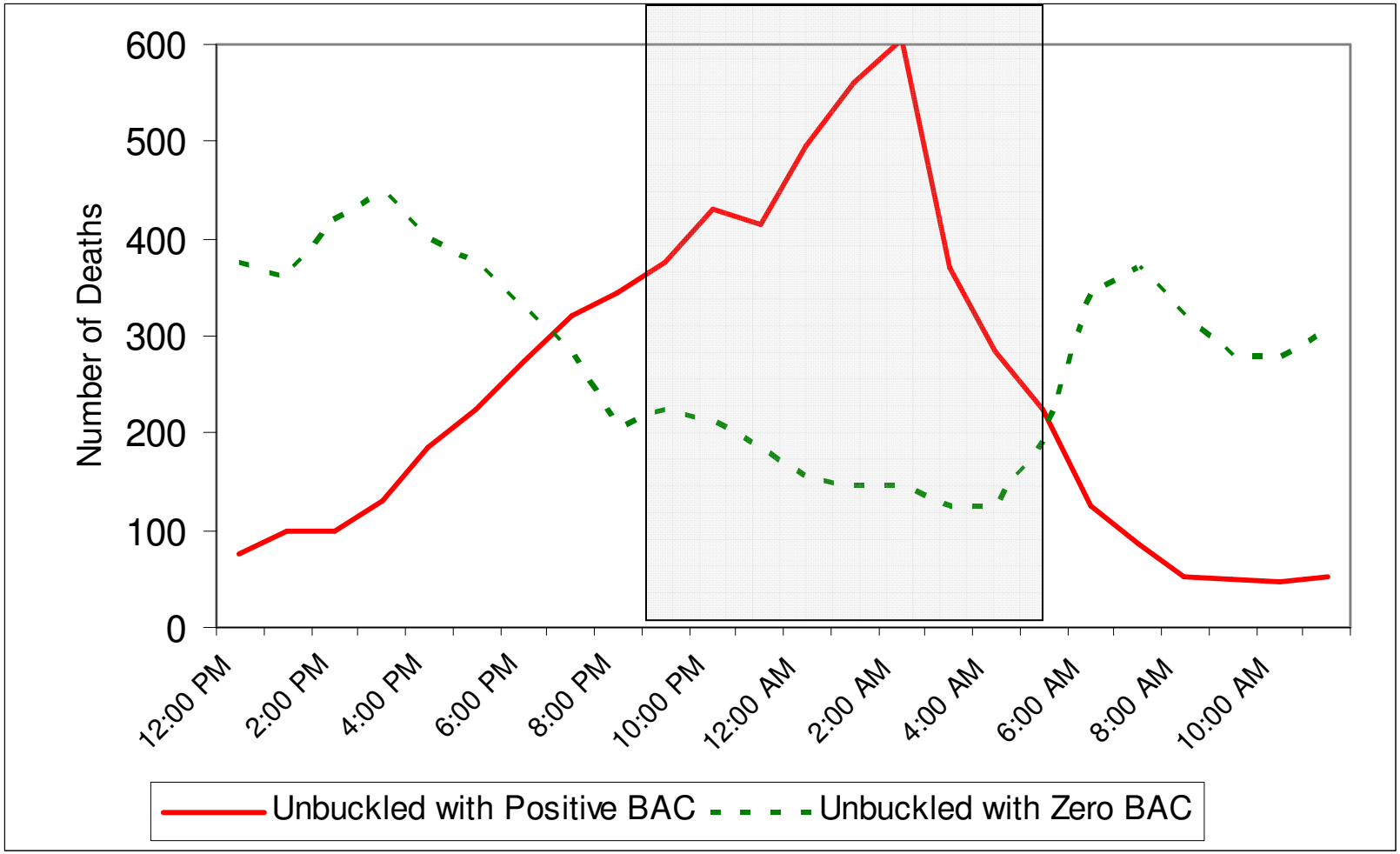


Source: FARS 1998-2004

Nighttime NON-Usage

<u>and</u> Alcohol

Number of Unbuckled Driver Fatalities by Time of Day and by Presence or Absence of Alcohol



Some Interesting Recent Findings

- Recent law upgrades have affected nighttime usage (Masten, 2007)
  - Some have affected night use more than day use (MI and NJ)
- Several law upgrades (e.g. MI) increased use among drinking drivers (killed) and reduced A/R deaths (Voas et al., in press)
- Many upgrades have been facilitated by enforcement efforts (e.g., MI, WA, IL)

There is evidence that primary laws/upgrades <u>and</u> high visibility enforcement (HVE) can affect high-risk occupants such as drinking drivers

Unfortunately little HVE has been at night when such persons are more frequently on the road

Observed Use vs.
FARS Use: Matrix of States

% Use Among Crash Victims	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96
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Observed Usage (%)

% Use Among Crash Victims

	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	
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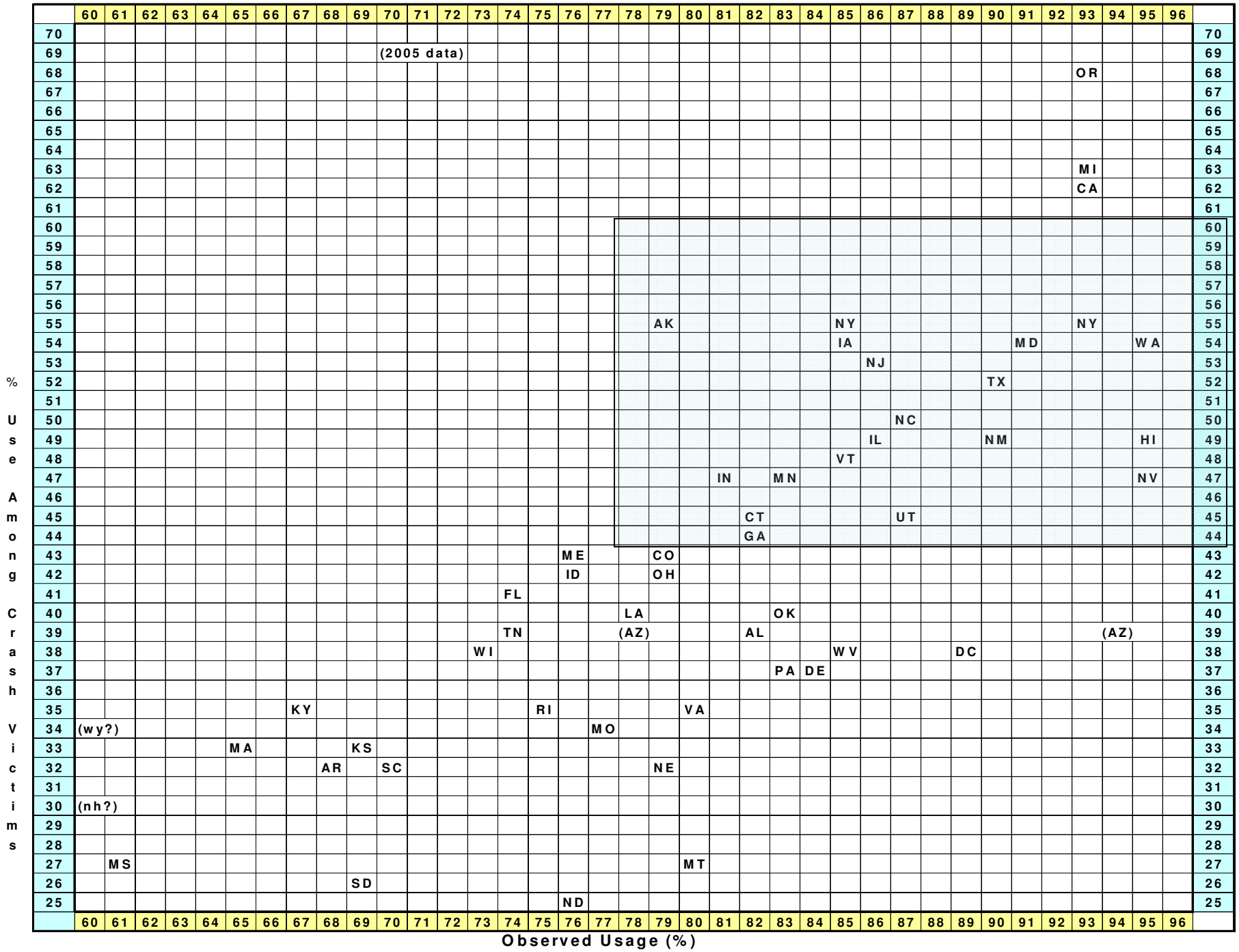
Observed Usage (%)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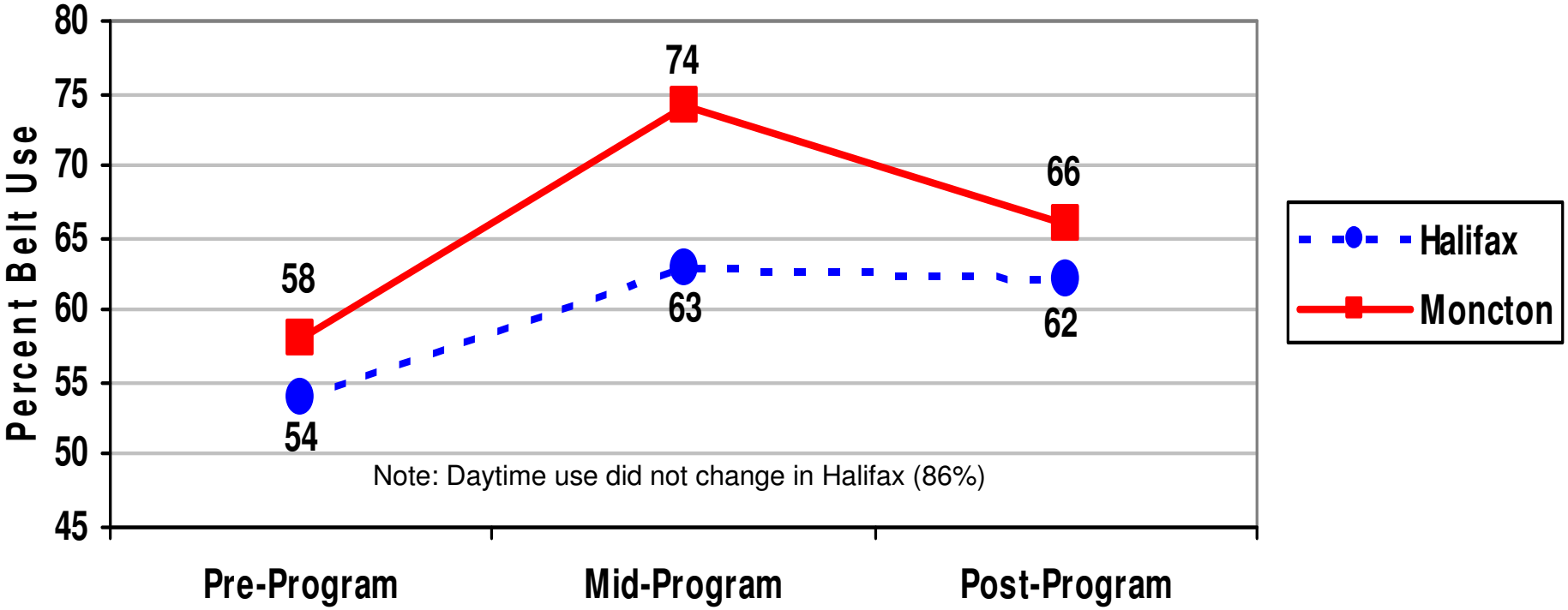
There is some evidence that day enforcement affects day use more than night use

‘

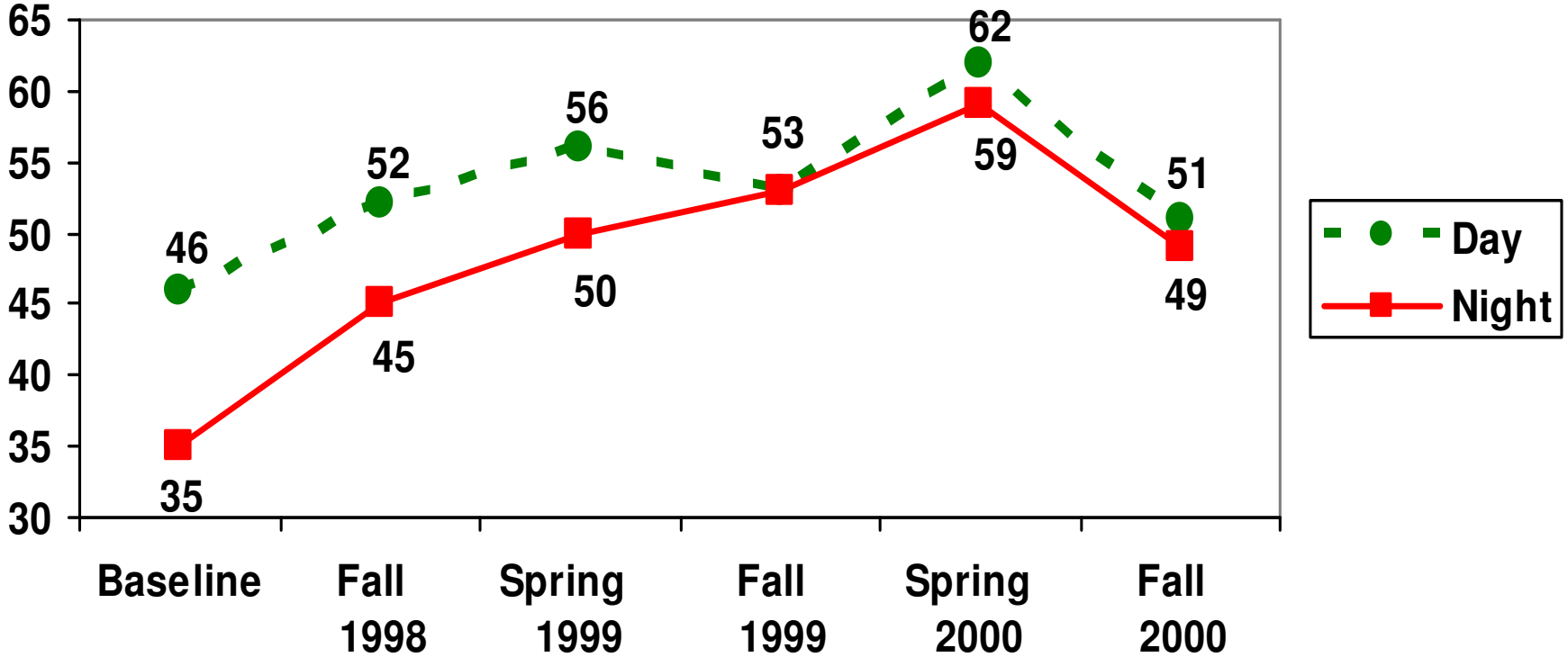
…. and that night enforcement may affect night use more than day use

Nighttime Safety Belt se in Halifax and Moncton, Nova Scotia Following Night Enforcement Effort

Source: Malenfant and Van Houten, 1988



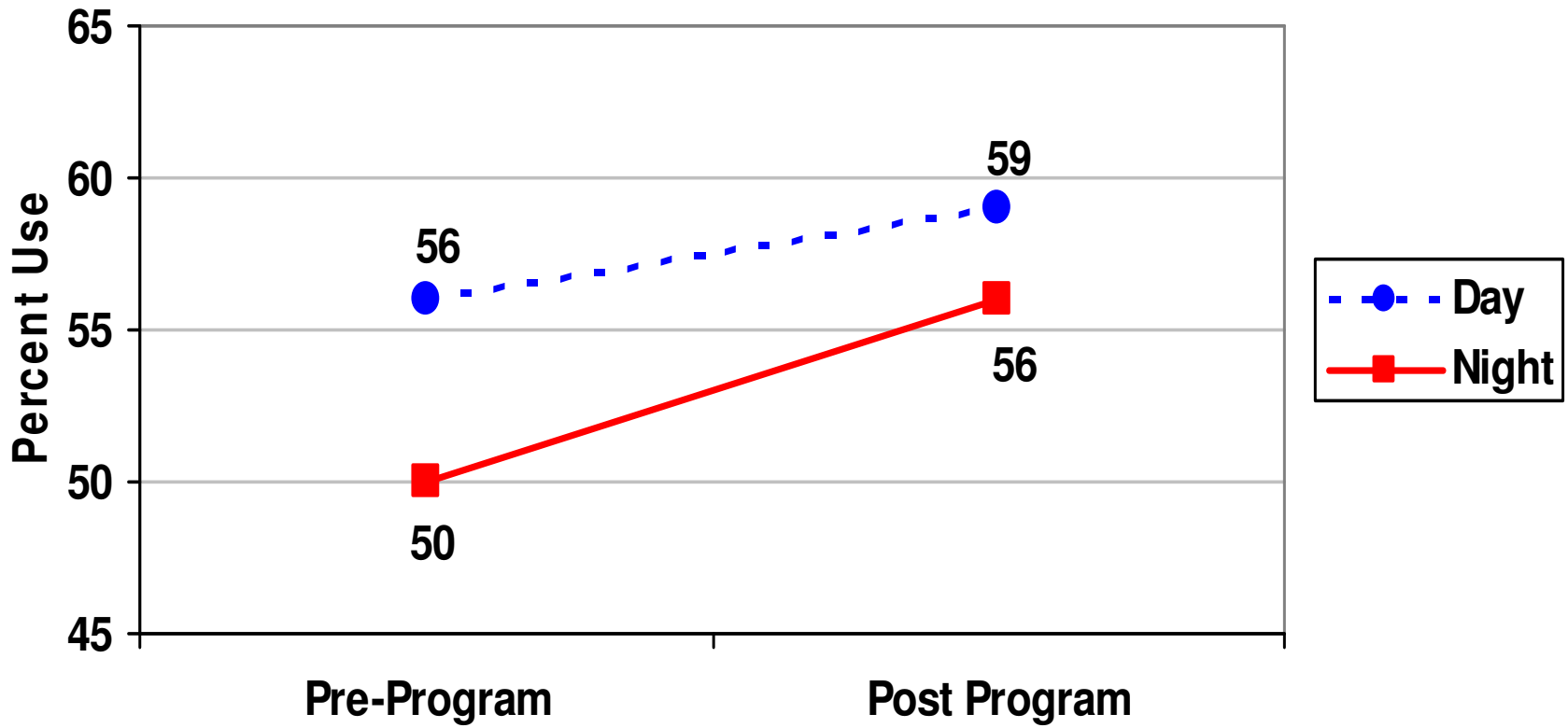
Daytime and Nighttime Belt Use in Binghamton, NY Following a Combined Alcohol and Safety Belt Enforcement Effort



Note: most SB enforcement was during the day and most alcohol enforcement was at night, but night alcohol enforcement included warnings for non-use.

Percent Daytime and Nighttime Safety Belt Use in Reading, PA following A Nighttime Enforcement Effort.

Source: Chaudhary, Alonge, and Preusser, 2005



Note: One problem with this effort is that it included only earned media, which may have been inadequate to reach most high risk drivers

In Summary

- We have made progress with CIOT (and law upgrades) but progress has slowed
- States with high observed usage still have quite low FARS use and UPFC (especially secondary law states)
- The combination of law upgrades, HVE, and perhaps increased and publicized sanctions offers the greatest potential for impact
- There is a strong relationship between seat belt non-use and alcohol impaired driving
- Both are nighttime issues
- We still have not adequately demonstrated the efficacy of nighttime enforcement efforts.

In Summary (continued)

- But it does appear that:
  - Daytime efforts to increase night belt use are not as effective as nighttime efforts to increase night belt use.
  - We can *likely* address the impaired driving and seat belt non-use problems with effective nighttime enforcement programs targeting both issues.

Ongoing Nighttime Efforts

- Indiana
  - Measuring nighttime change from a daytime CIOT mobilization
- Washington State
  - A statewide effort involving nighttime enforcement
- North Carolina and West Virginia
  - Local nighttime enforcement efforts in a primary-law state and a secondary-law state
- Others?