


Improving Occupant Protection

Orthopedic Trauma Association
17th Annual Meeting
San Diego ♦ October 18, 2001

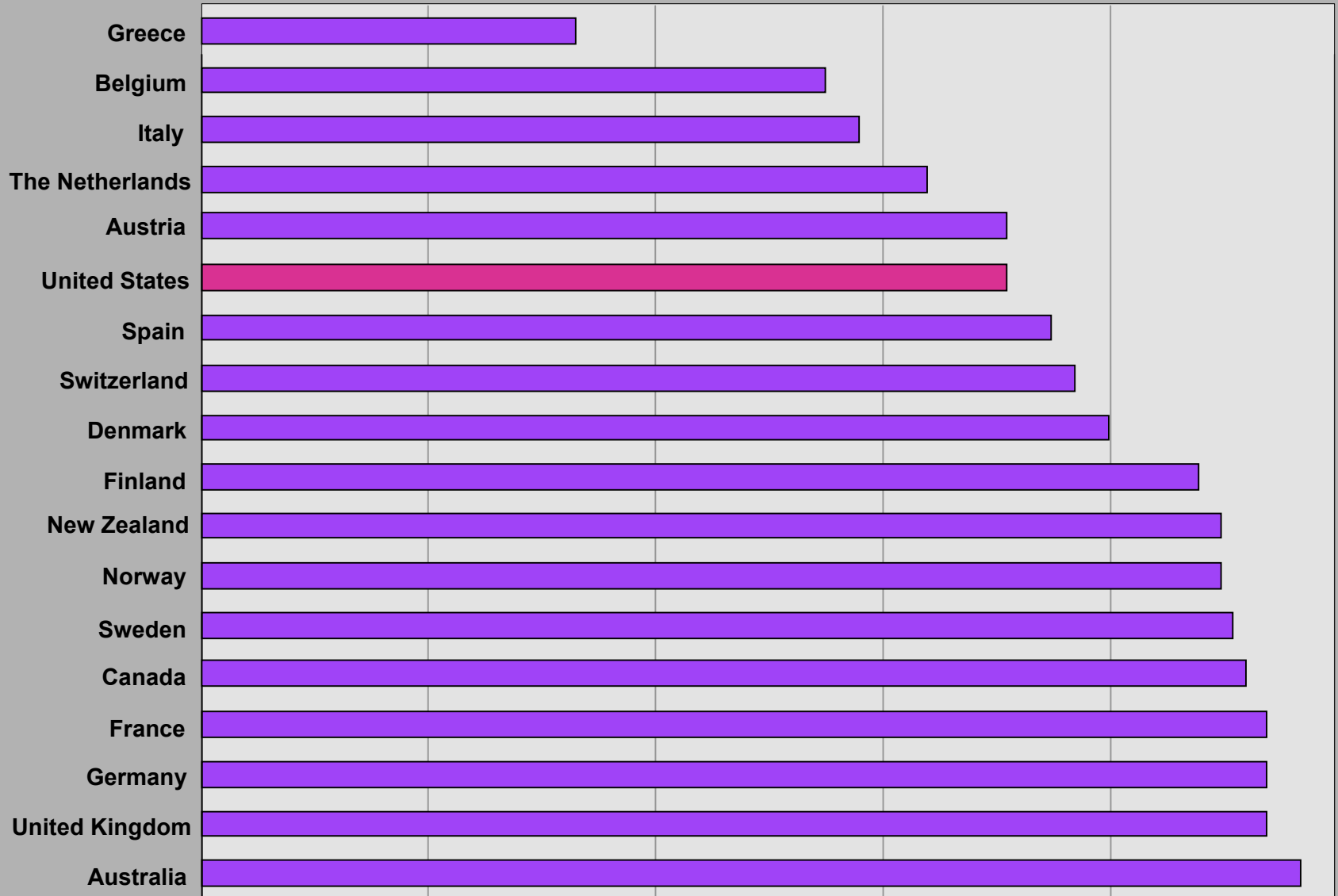
Brian O'Neill

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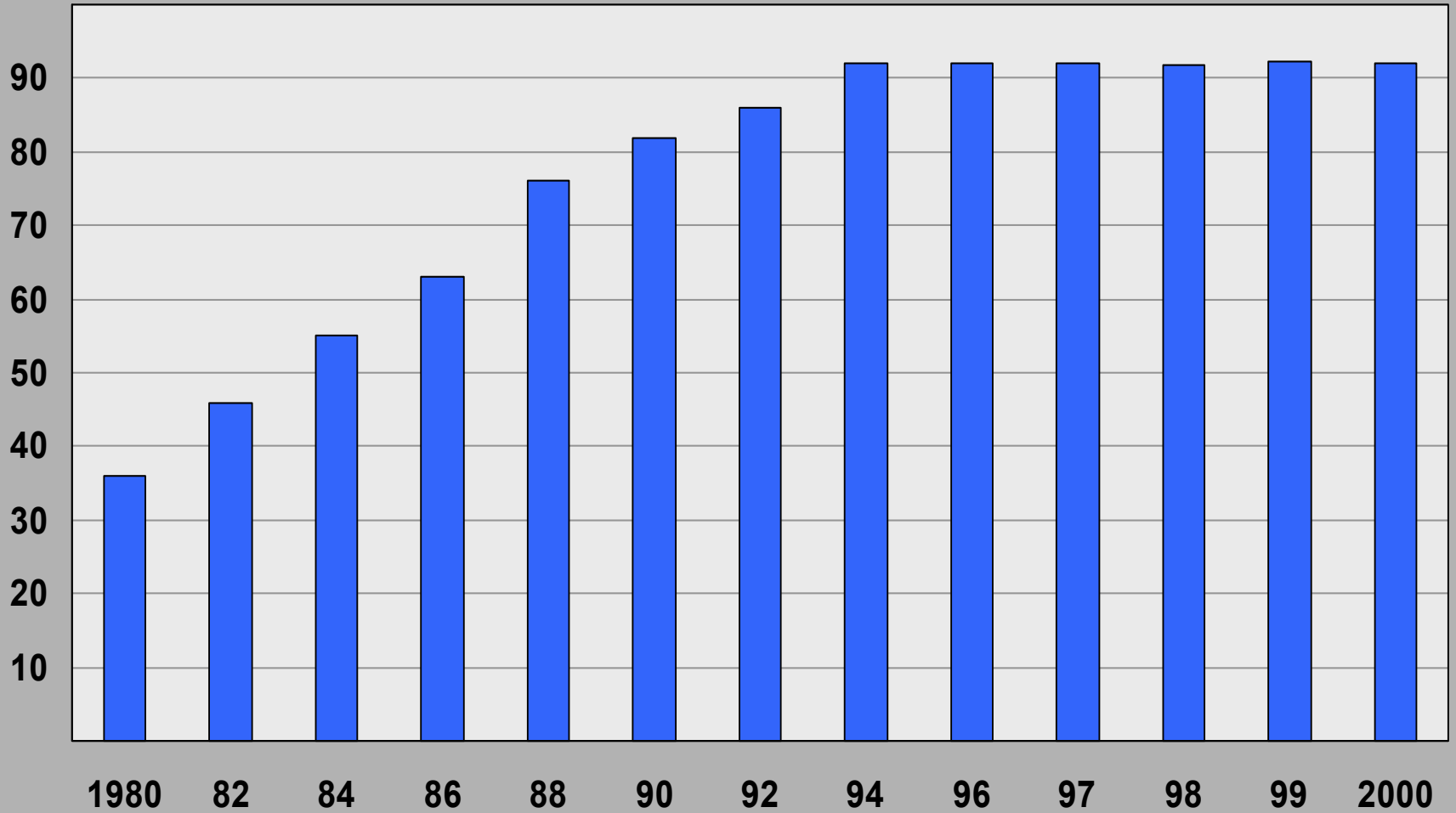


**The two principal components of
passenger vehicle CRASHWORTHINESS
design are VEHICLE STRUCTURE and
RESTRAINT SYSTEMS.**

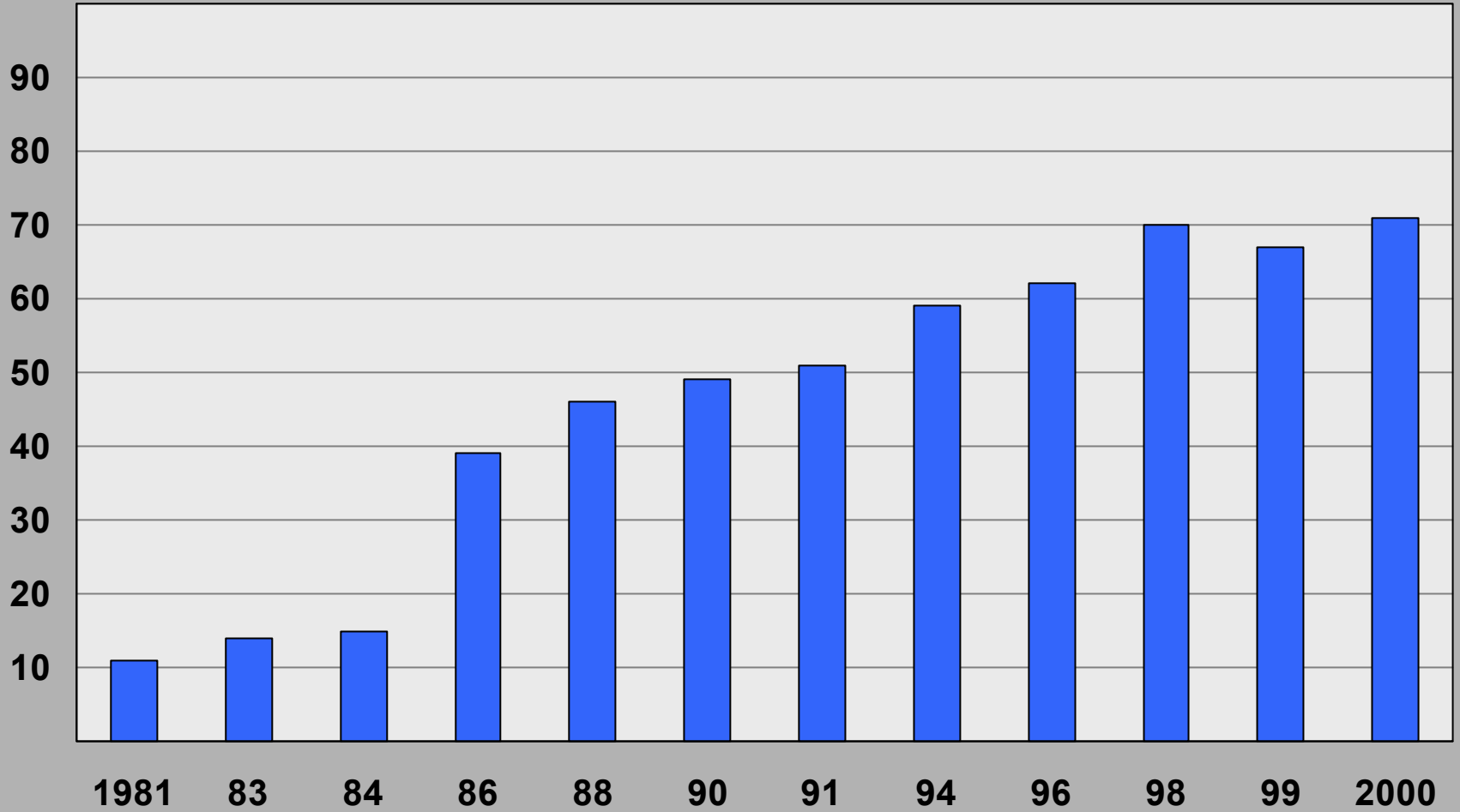
International Seat Belt Use



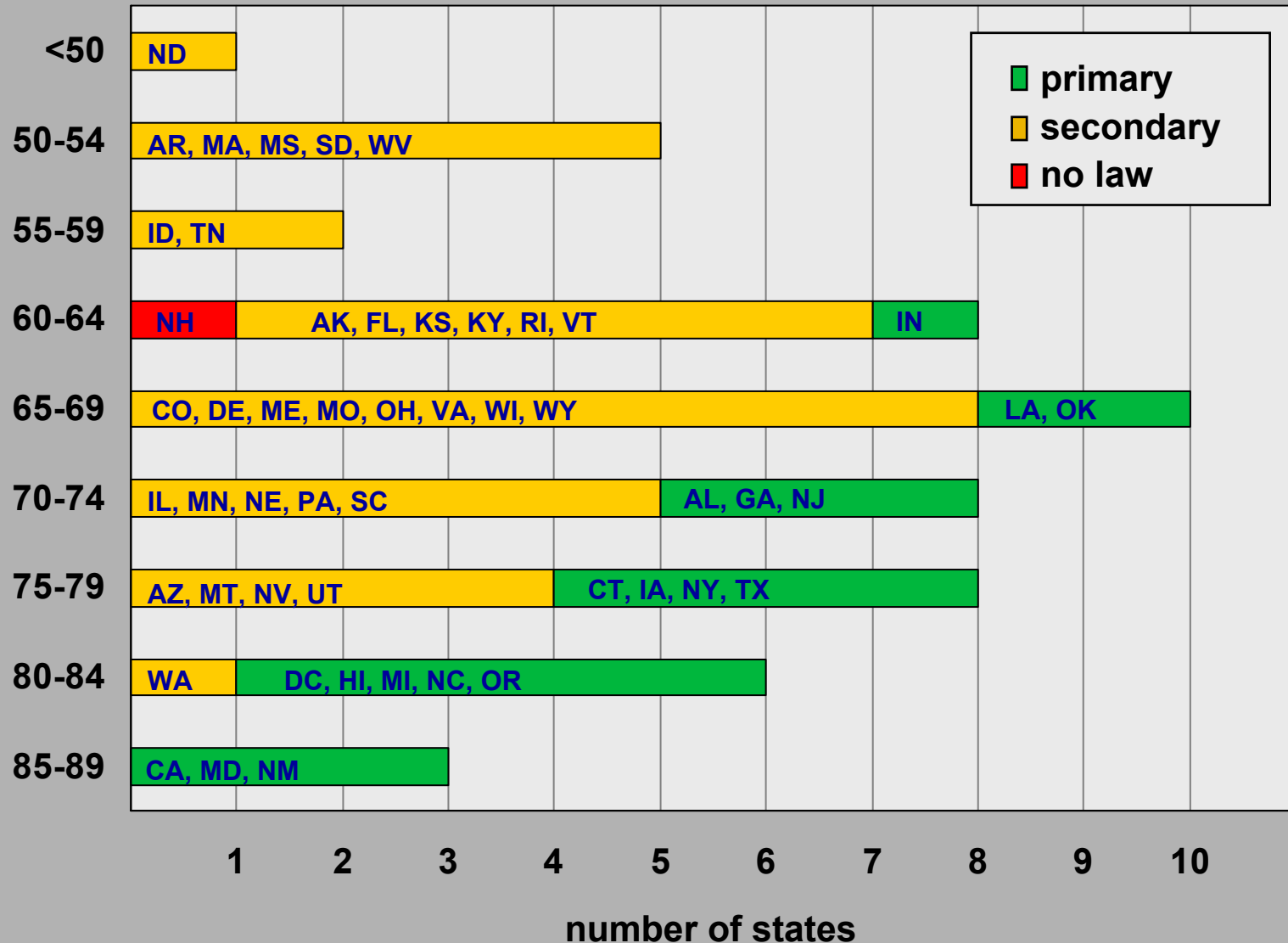
Percent Driver Belt Use in Canada



Percent Driver Belt Use in the United States

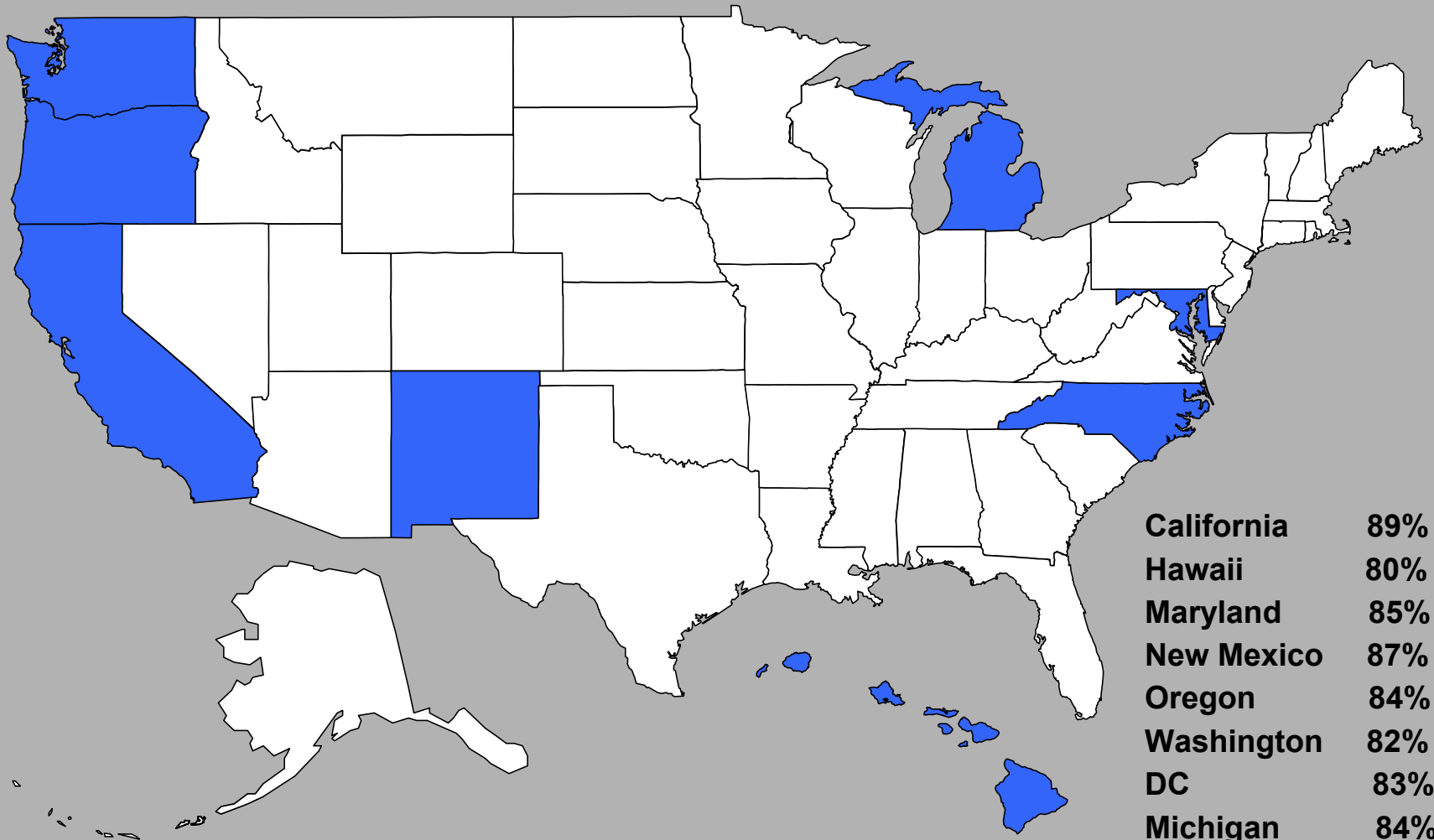


Percent Belt Use Reported by States, 2000



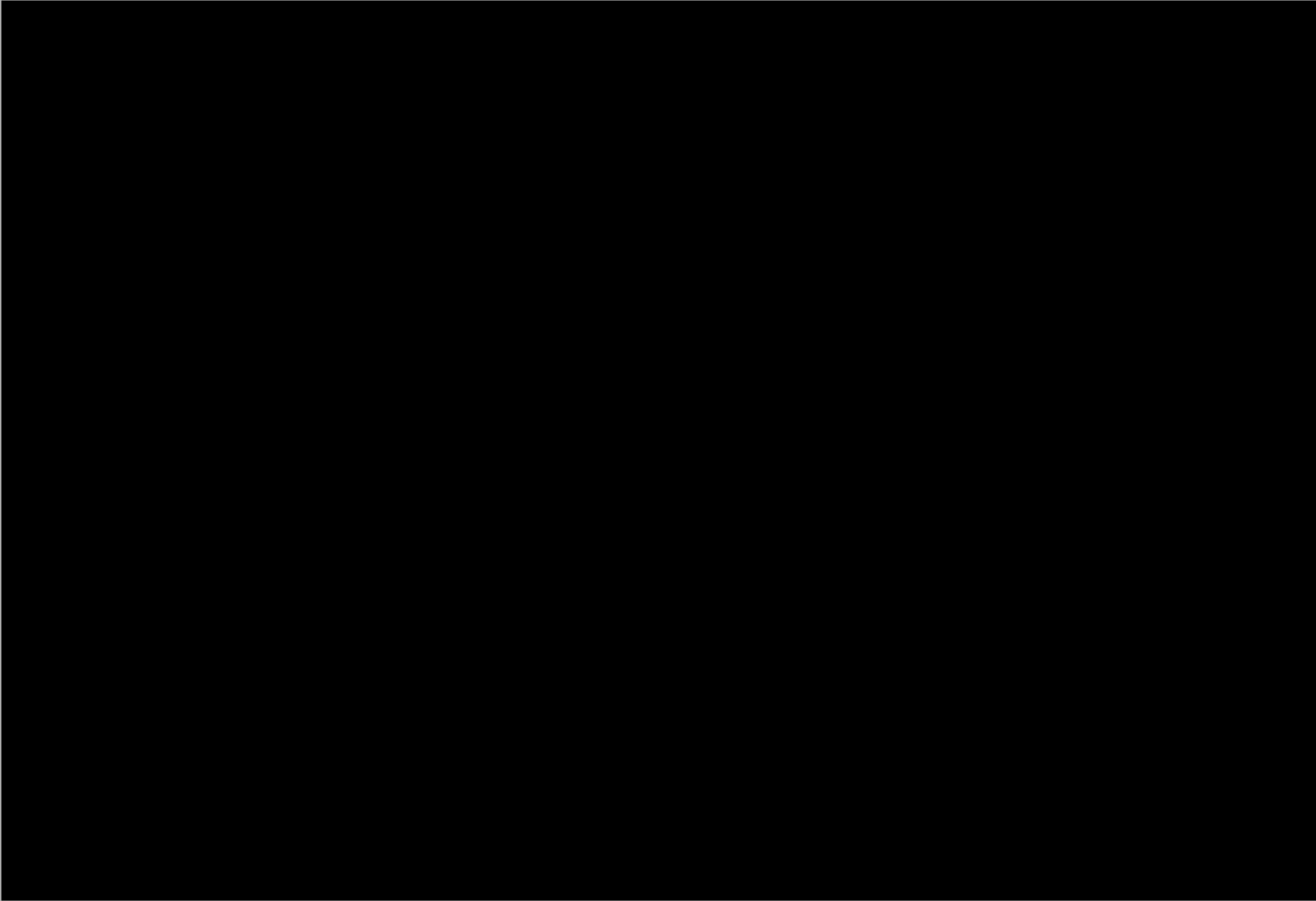
States Reporting Belt Use Rates 80% or Higher

2000



California	89%
Hawaii	80%
Maryland	85%
New Mexico	87%
Oregon	84%
Washington	82%
DC	83%
Michigan	84%
North Carolina	80%





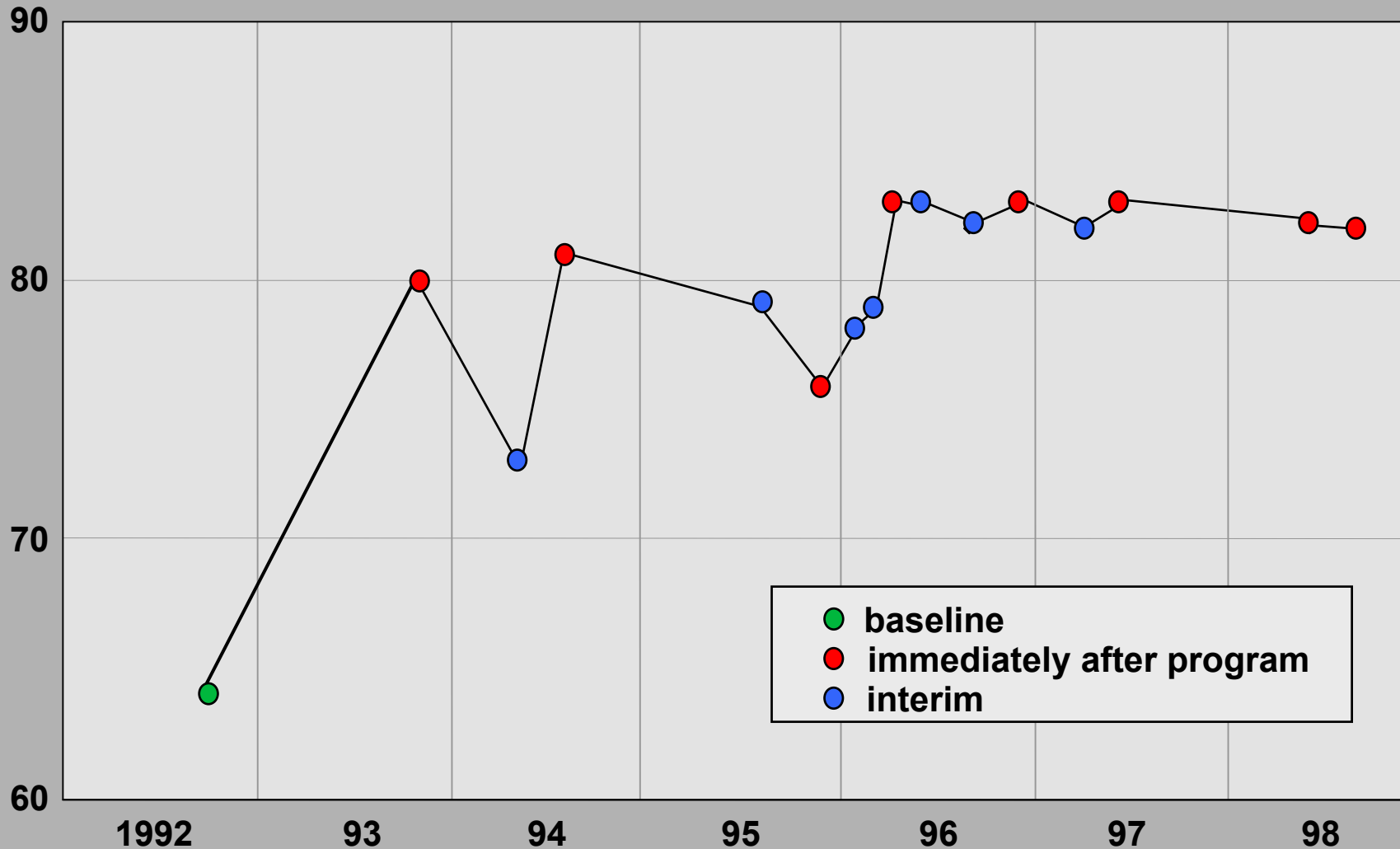


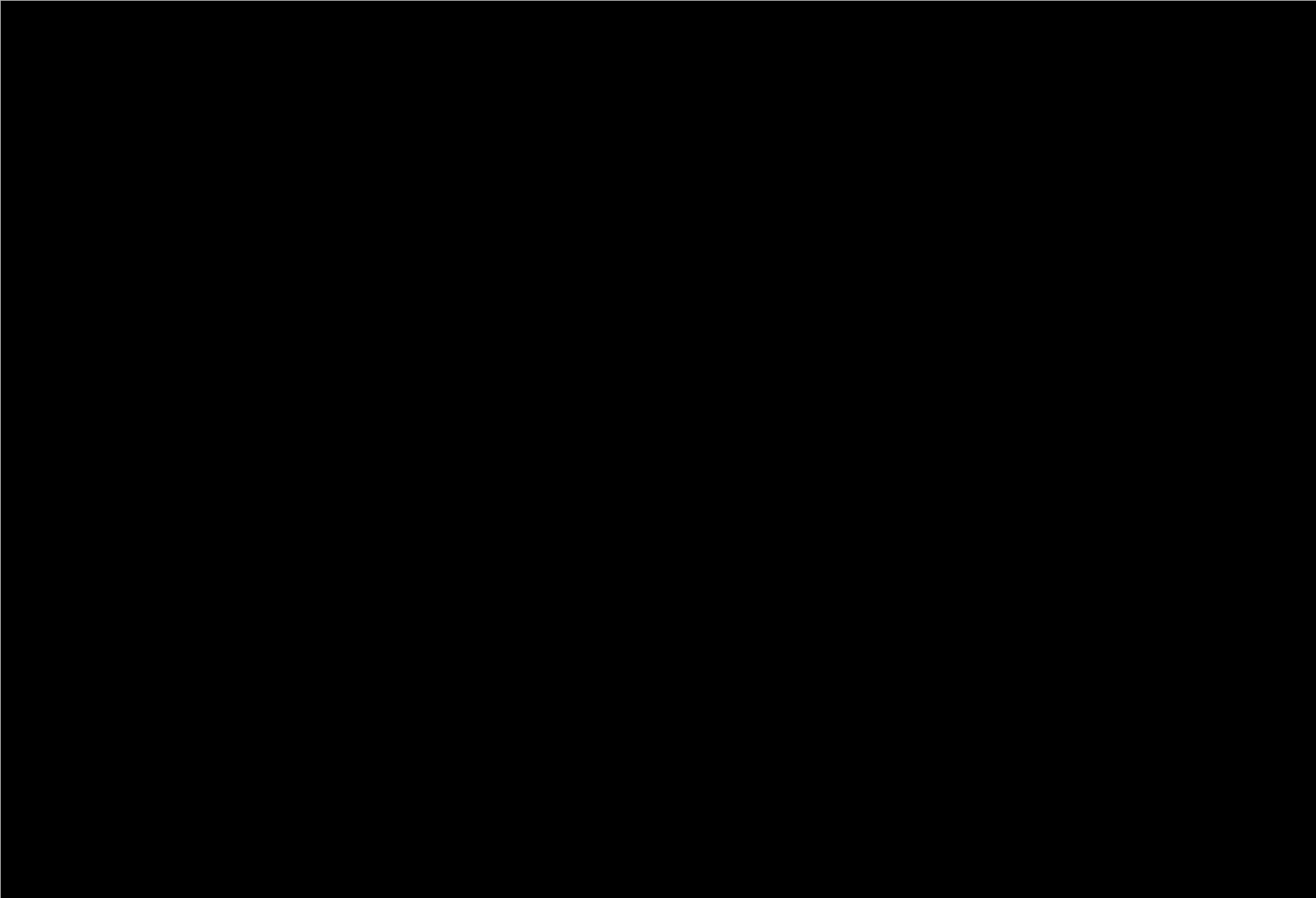
*Click It or Ticket Campaign —
Raleigh*



Percent Driver Seat Belt Use in North Carolina

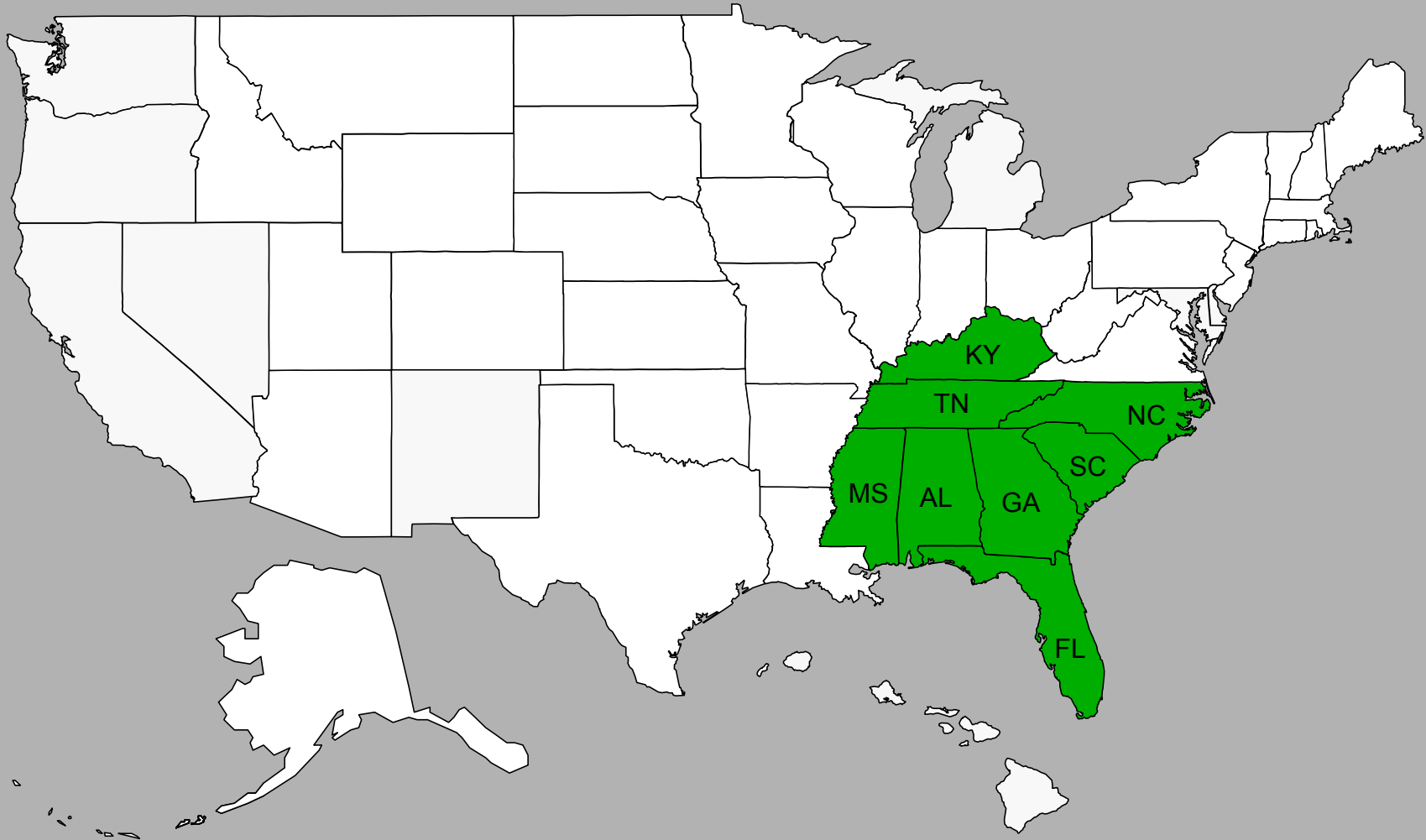
Click It or Ticket, 1992-98





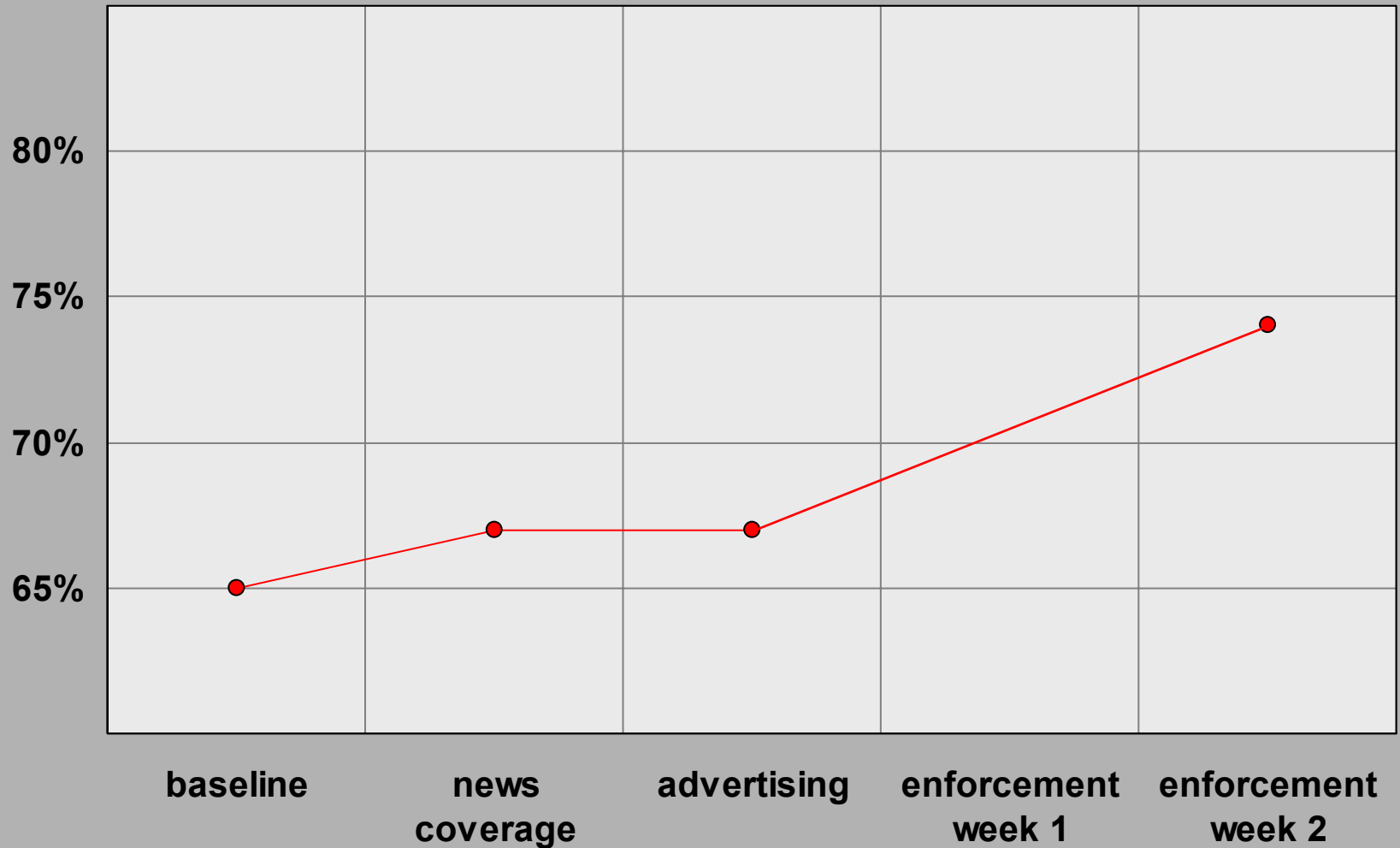
Click It or Ticket

May 2001



Front Seat Belt Use in 8 Southeastern States

Click It or Ticket, May 2001





Police Stops of Seat Belt Violators Rejected in Va.

Measure Dies in House Panel, but Backers Promise Renewed Efforts Next Month

Washington Post — December 13, 2000

Percentage of New Car Buyers For Whom Safety Features Are “Extremely” or “Very Important” Reason for Buying

Source: Daimler/Chrysler – Automotive News, March 6, 2000

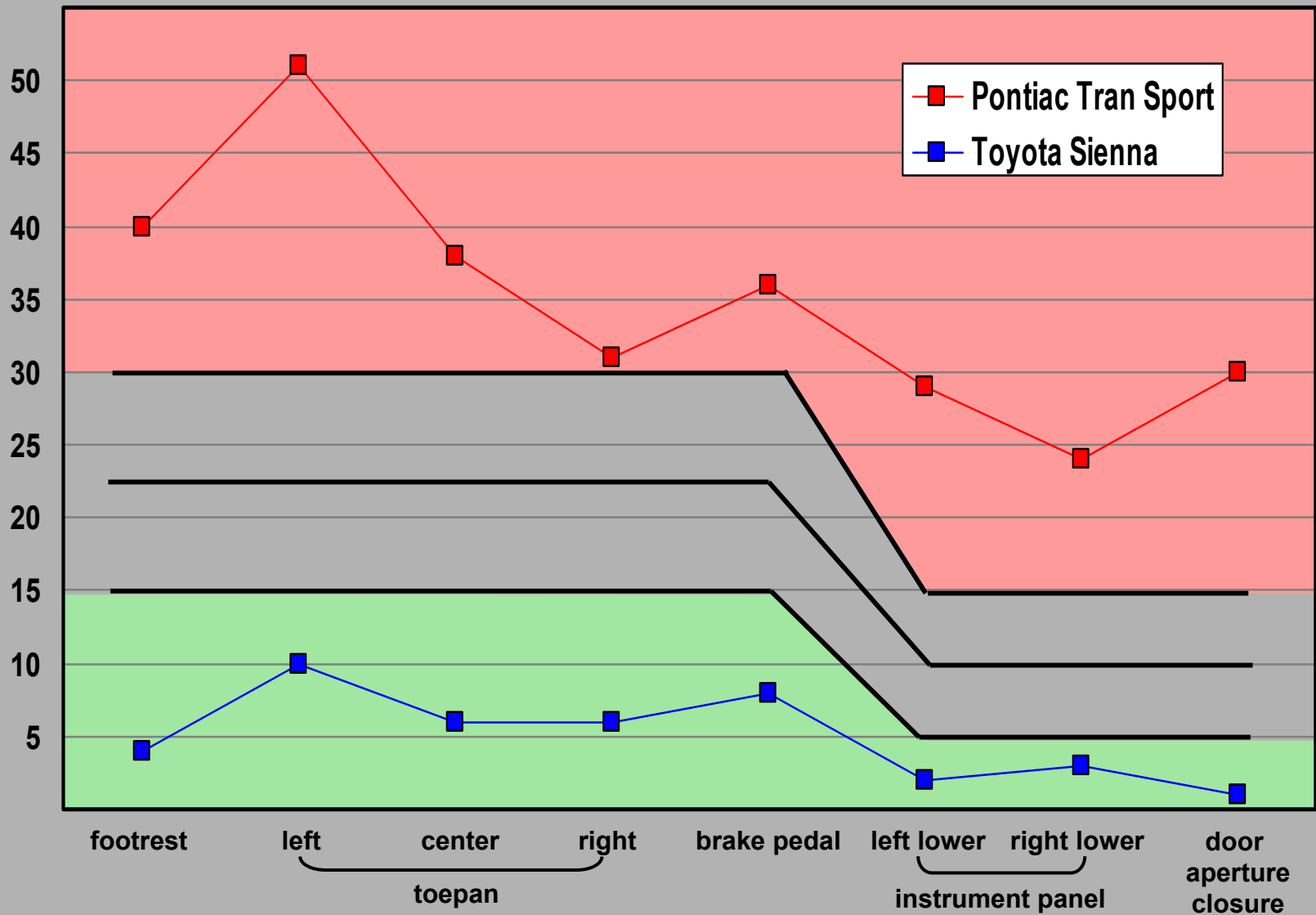
1981	64%
1983	67%
1985	73%
1987	74%
1989	76%
1991	77%
1993	79%
1995	83%
1997	83%
1999	84%



*Offset frontal, deformable barrier crash test —
IIHS Crashworthiness Evaluations
40 mph, 40% overlap*

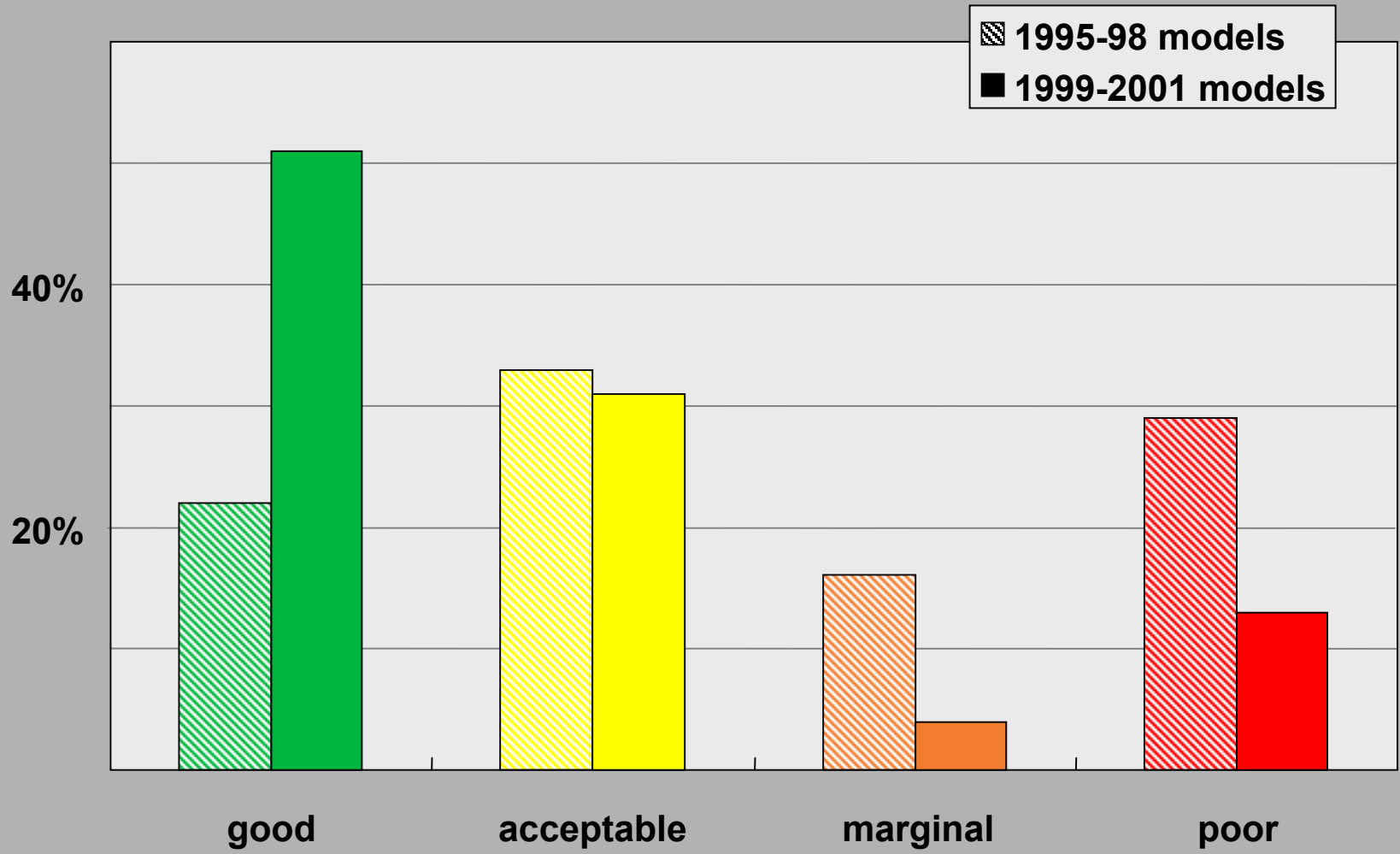


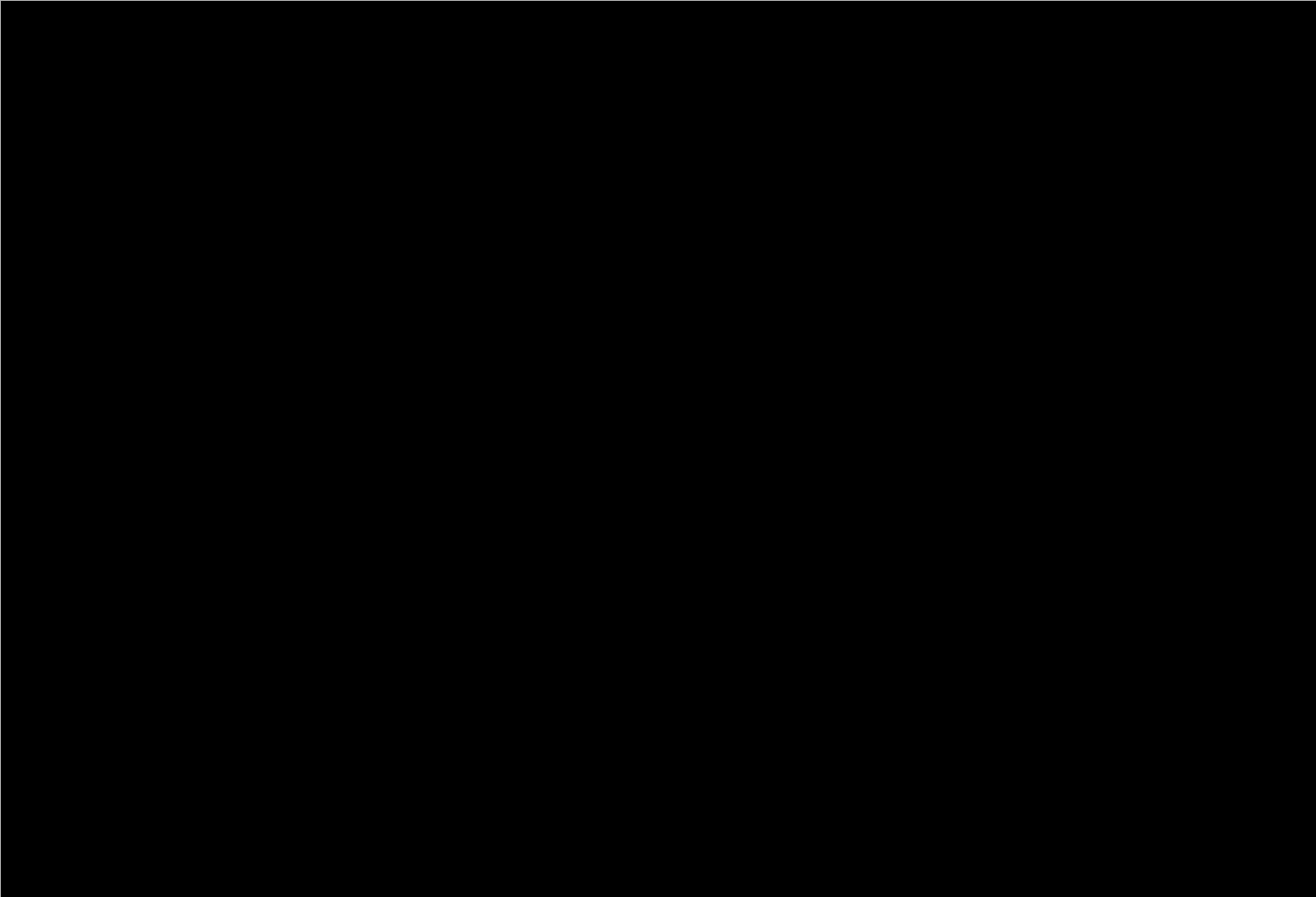
1998 Toyota Sienna versus 1997 Pontiac Trans Sport Occupant Compartment Intrusion (cm)

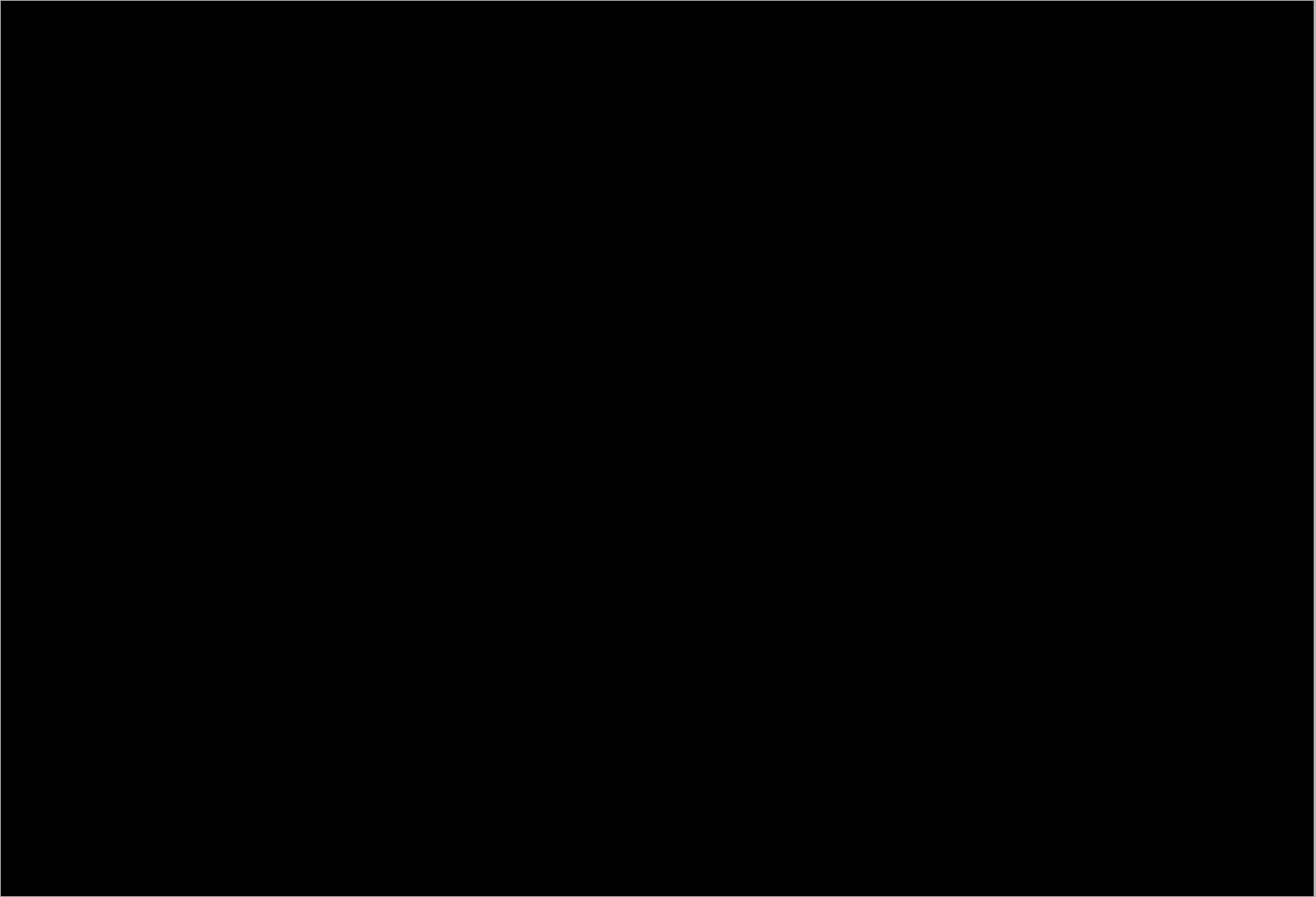


Offset Crash Test Performance Improvements

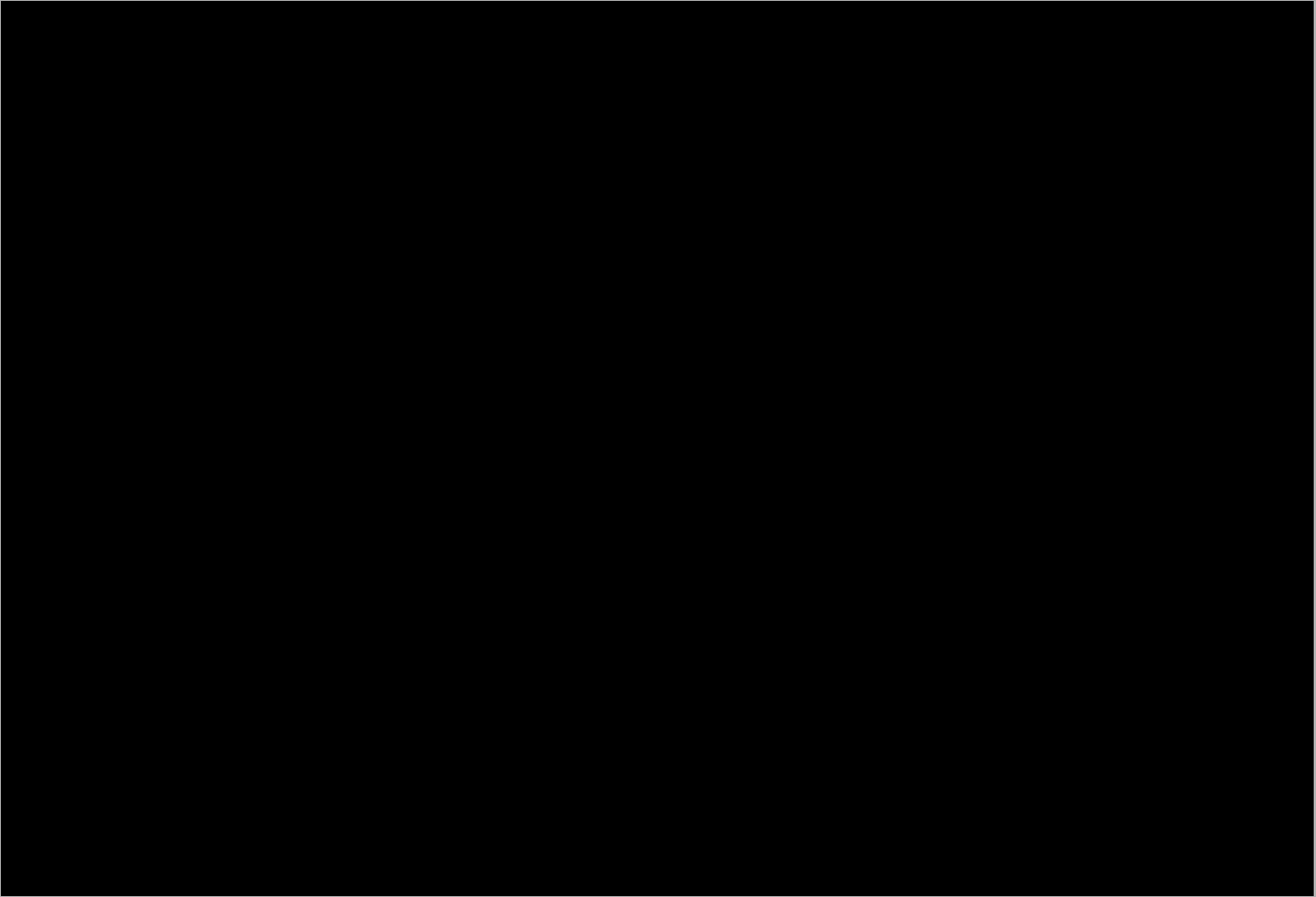
1995-98 Model Cars versus 1999-2001 Models



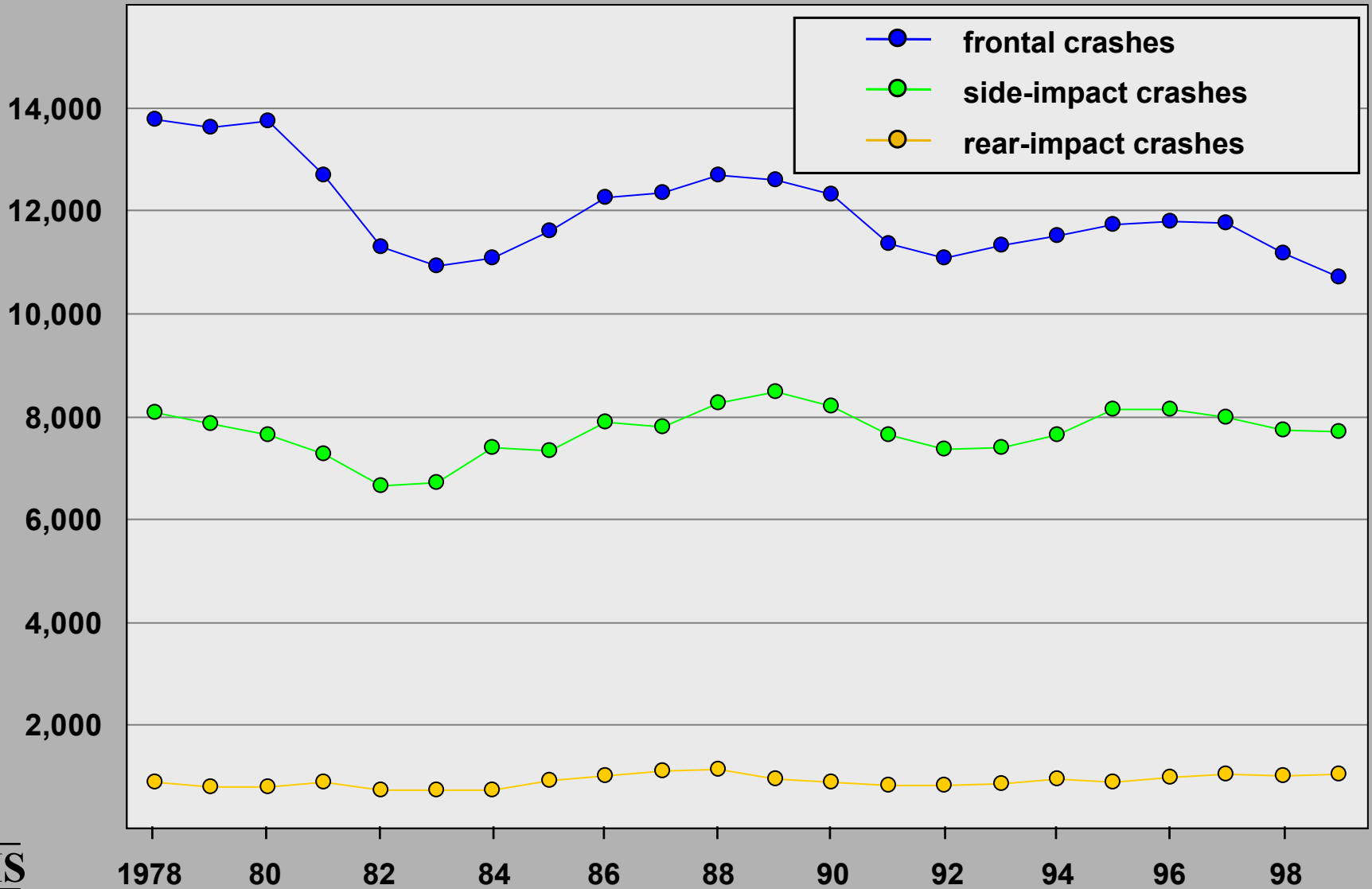








Passenger Car Occupant Deaths By Direction of Impact



Typical Passenger Car and Barriers

IIHS Barrier Taller and Rides Higher, Contoured Edges



FMVSS 214 Barrier



IIHS Barrier



For more information:

www.highwaysafety.org

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