

Transportation Safety

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100 years ago last Saturday . . .

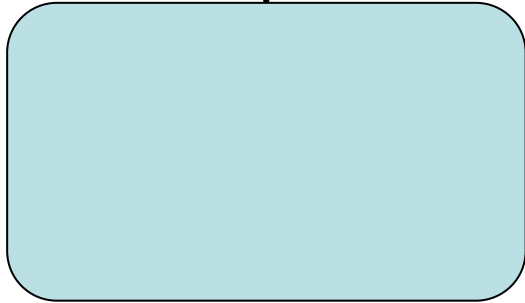
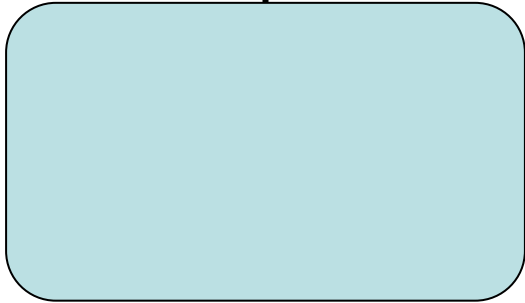
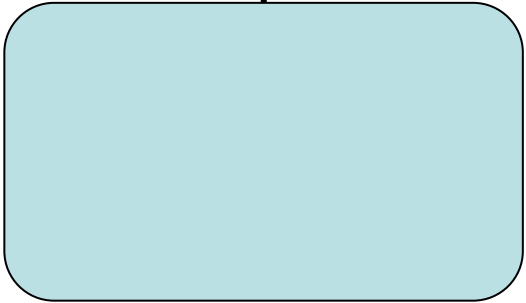
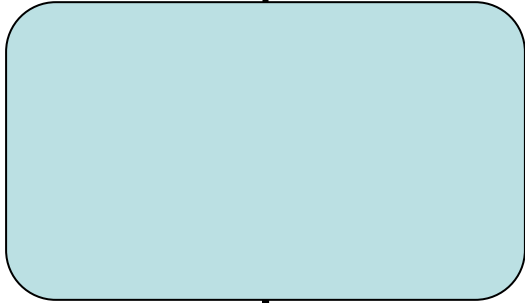


- Design
- Environment / weather
- Navigation
- Time of day (11:40pm)
- Safety equipment or lack thereof
- Crew action
- 1914 SOLAS Convention

Magnitude of the Risks . . .

- Transportation related fatalities are 1 in every 56 deaths in the United States (average over period 2000-2009)
- But are 38% of all “unintentional injury deaths”
- Equivalent to the sum of the 2nd and 3rd most prevalent causes (falls and poisonings)
- Over the 2000-09 decade annual average fatalities were 43,239

43,239
Average Annual Total
2000-2009



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Average Annual Total
2000-2009

36,849 (85.2%)
Private transportation
only

6,390 (14.8%)
Commercial
transportation

43,239
Average Annual Total
2000-2009

36,849 (85.2%)
Private transportation
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6,390 (14.8%)
Commercial
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5,306 (12.3%)
Private transportation
users

883 (2.0%)
Employees

182 (0.4%)
Passengers

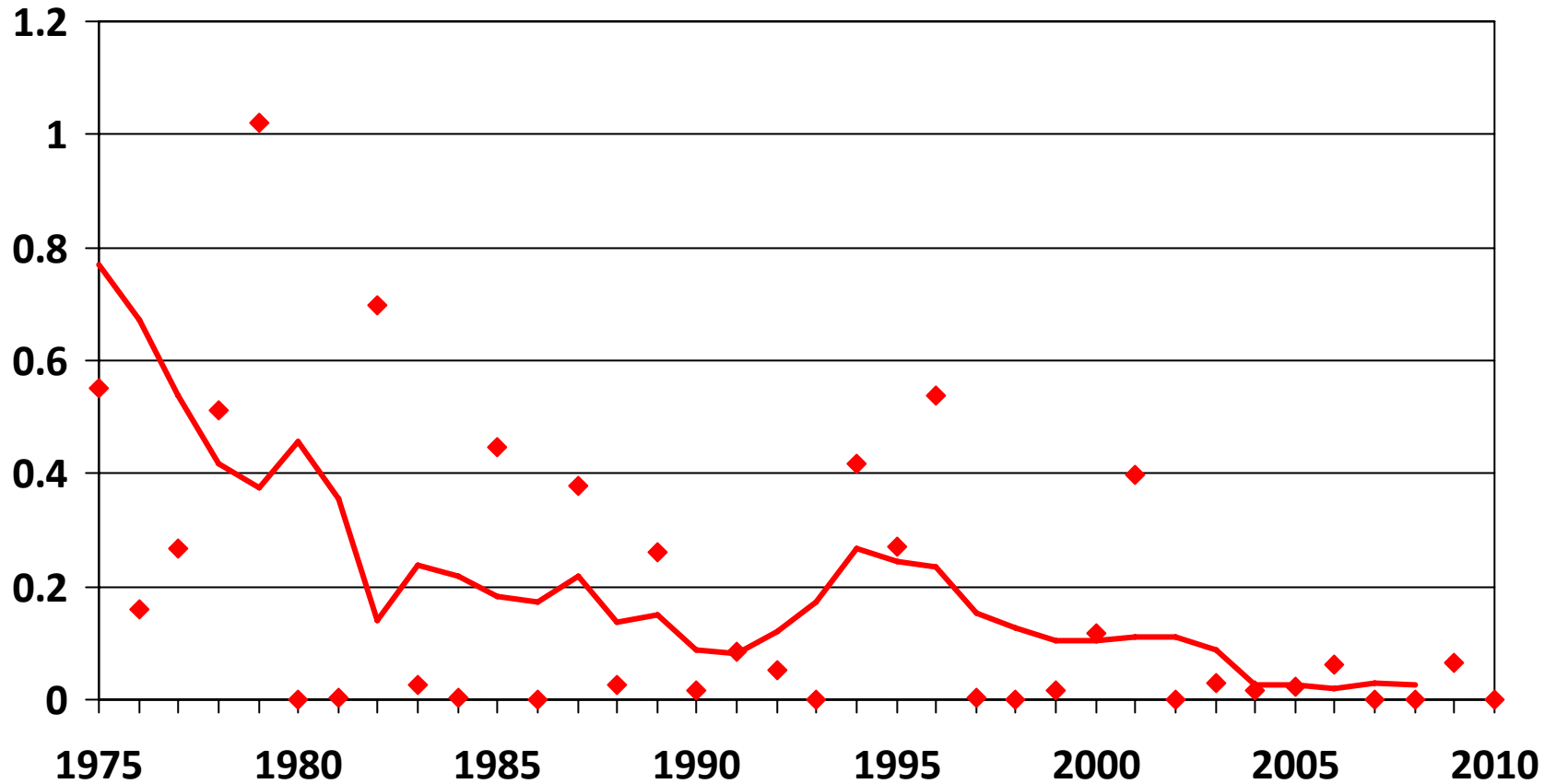
Passenger fatalities per billion passenger miles 2000-09

Riding a motorcycle	212.57
Driving or passenger in car and light truck	7.28
Passenger on commuter rail and Amtrak	0.43
Passenger on urban mass transit rail	0.24
Passenger on a bus (holding more than 10 passengers – transit, intercity, school, charter)	0.11
Passenger on commercial aviation	0.07

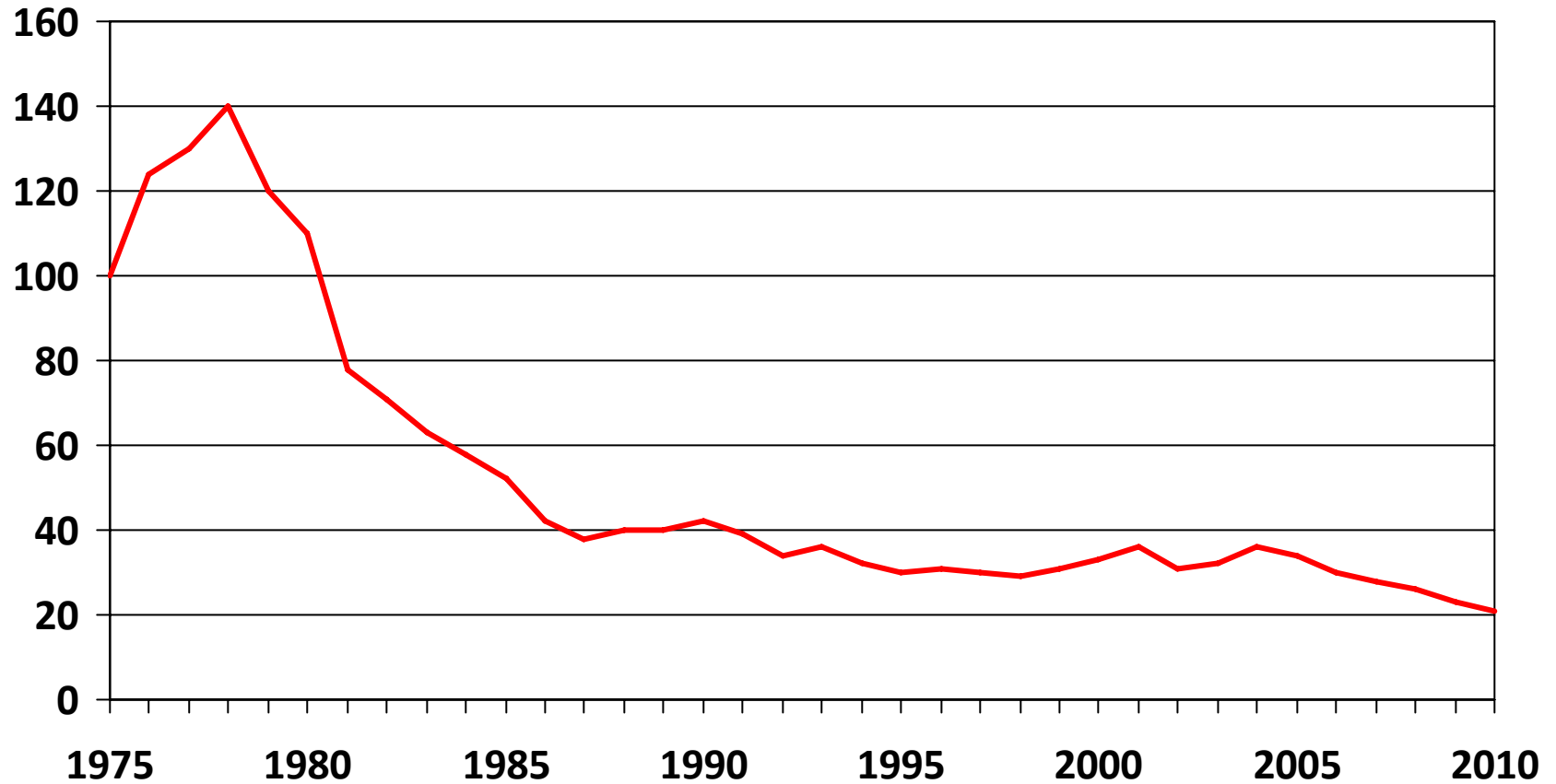
Rates per 1,000 Employees 2009

	Fatality	Non-fatal Injury
Fishing	8.81	15
<i>Agriculture</i>	<i>0.76</i>	<i>53</i>
Taxi and limousine	0.62	37
Truck transportation	0.29	57
Water transportation	0.24	33
<i>Construction</i>	<i>0.12</i>	<i>47</i>
Pipeline transportation	0.10	15
Rail transportation	0.06	23
Air transportation	0.06	71
<i>Utilities</i>	<i>0.03</i>	<i>31</i>
Bus transportation	0.03	33-48
<i>Manufacturing</i>	<i>0.03</i>	<i>50</i>

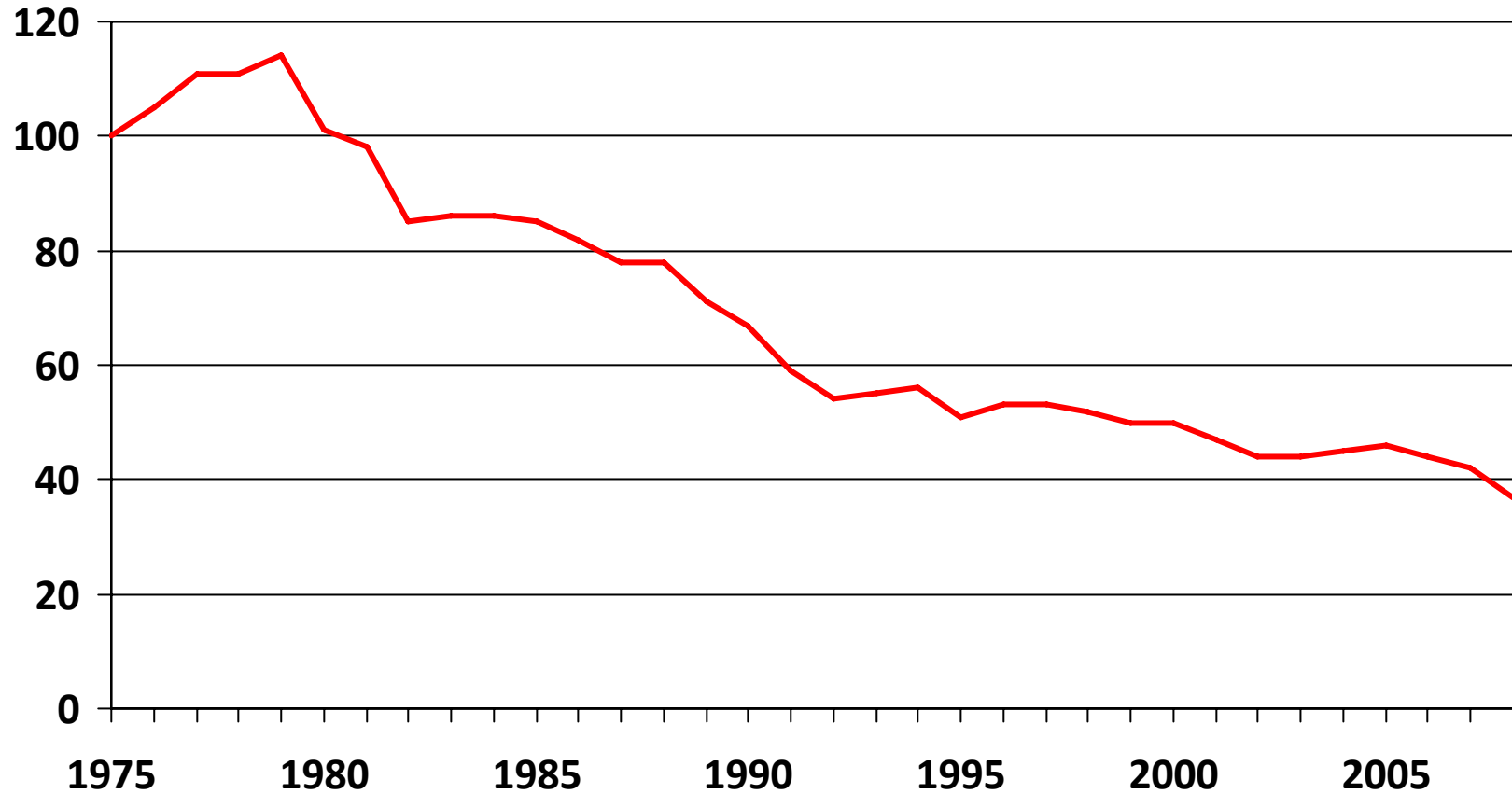
Aviation (Pt 121 scheduled) passenger fatalities per million enplanements (with 5yr m.a.)



Railroad collisions and derailments per train mile (1975=100)



Large truck-involved fatal crashes per truck mile (1975=100)



Three projects I am involved in . . .

- Deregulation and safety retrospective
- Special issue on safety of *Research in Transportation Economics*
- Analysis of railroad-related pedestrian fatalities



- 25th anniversary of landmark 1987 conference
- Thursday May 3
- Truck – Aviation - Railroads
- Were the concerns of the mid 1980s justified?
- What public policy changes arose from the debate, and were these changes justified or effective?
- Were there other issues that did not become apparent until much later?
- To what extent are contemporary safety issues still tied up with the deregulation debate?



- Editing of a special edition on safety in *Research in Transportation Economics*
- Bring together the (small) group of economists who think about safety
- Presentation of these papers:
 - May 3 Deregulation and Safety event
 - Special session at 2012 International Transportation Economists Association conference in Berlin

Fatalities on mainline railroads in the Metro Chicago region 2004-10 . . .

Pedestrians

Crossings/Stations	59
Trespassers	81
Suicides	<u>120</u>
	260

Other Fatalities

Vehicle Occupants	29
Employees	5
Contractors	6
Passengers on Trains	4
Misc. other	<u>3</u>
	47

And now to our panel . . .