MOVING FROM PLANS TO DEPLOYMENT: RURAL CONSIDERATIONS

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Rural Characteristics

+ Half rural roads are paved

+ City or county governments are responsible for 95% of unpaved and 55% of paved

+ 95% of rural residents depend on vehicles

Rural Characteristics

+ Less than 10% of rural roads are four lanes

+ The remaining 90% are two lanes or less

+ Most rural lanes are less than 10 feet in width

Rural Characteristics

+ 80% of road miles (3.1 Million out of 3.9 Million)

+ 40% of VMT (.9 1 Trillion out of 2.34 Trillion)

Source: FHWA 's I994 Highway Statistics

Rural Driving Statistics

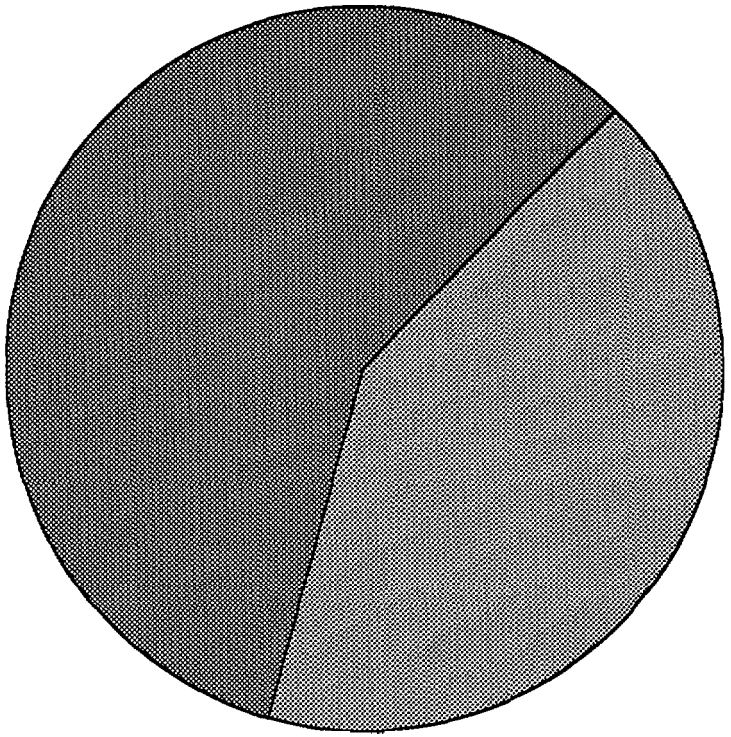
- 78% of rural trips greater than 150 miles are for pleasure

- The average age of rural drivers is 45.8, urban drivers is 40.5

- 18% of rural drivers are over 64 years, 8% of urban drivers

Motor Vehicle Fatalities

Number of Deaths by Accident Location



Source: FHWA's 1994 Highway Statistics

Motor Vehicle Fatalities

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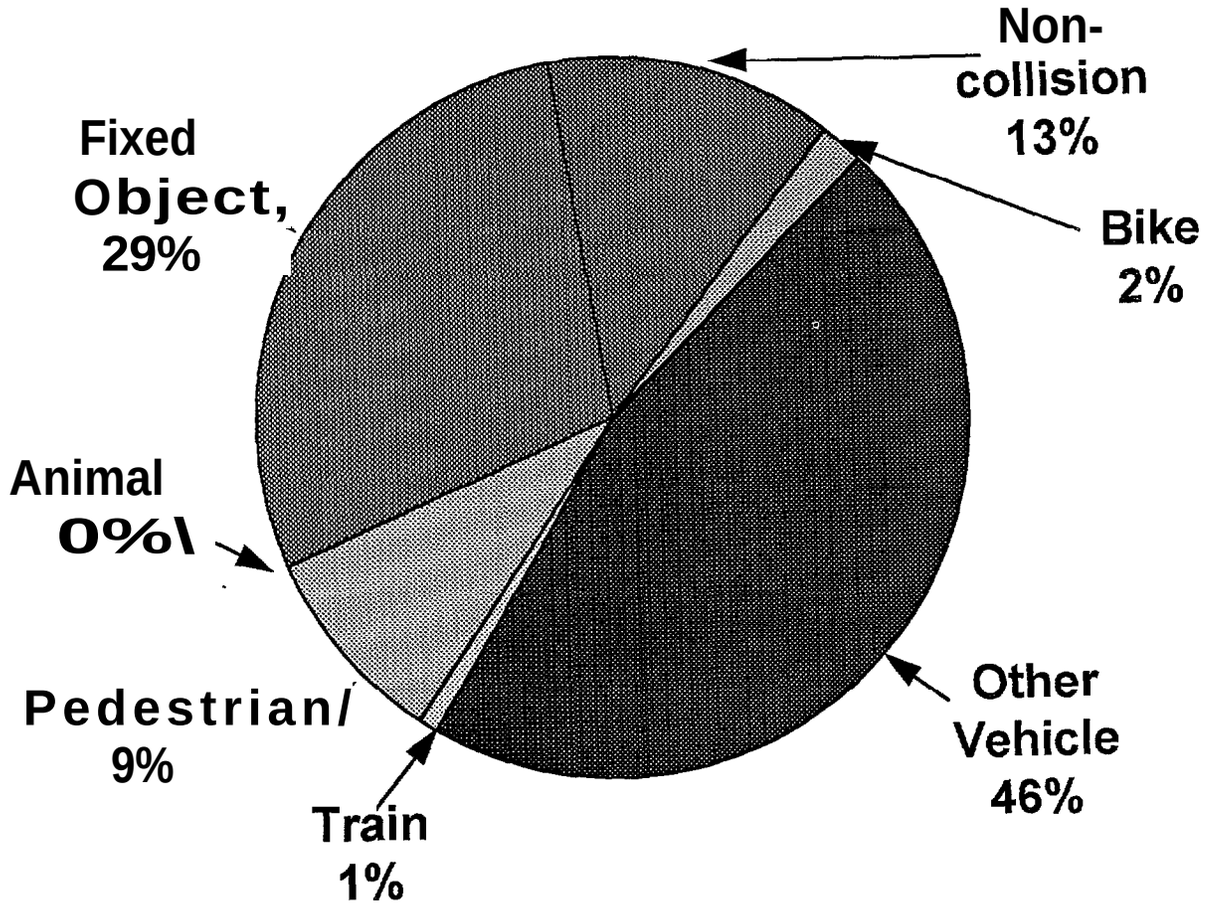


Source: Natl...Safety Council, "Accident Facts. " 1994 Edition

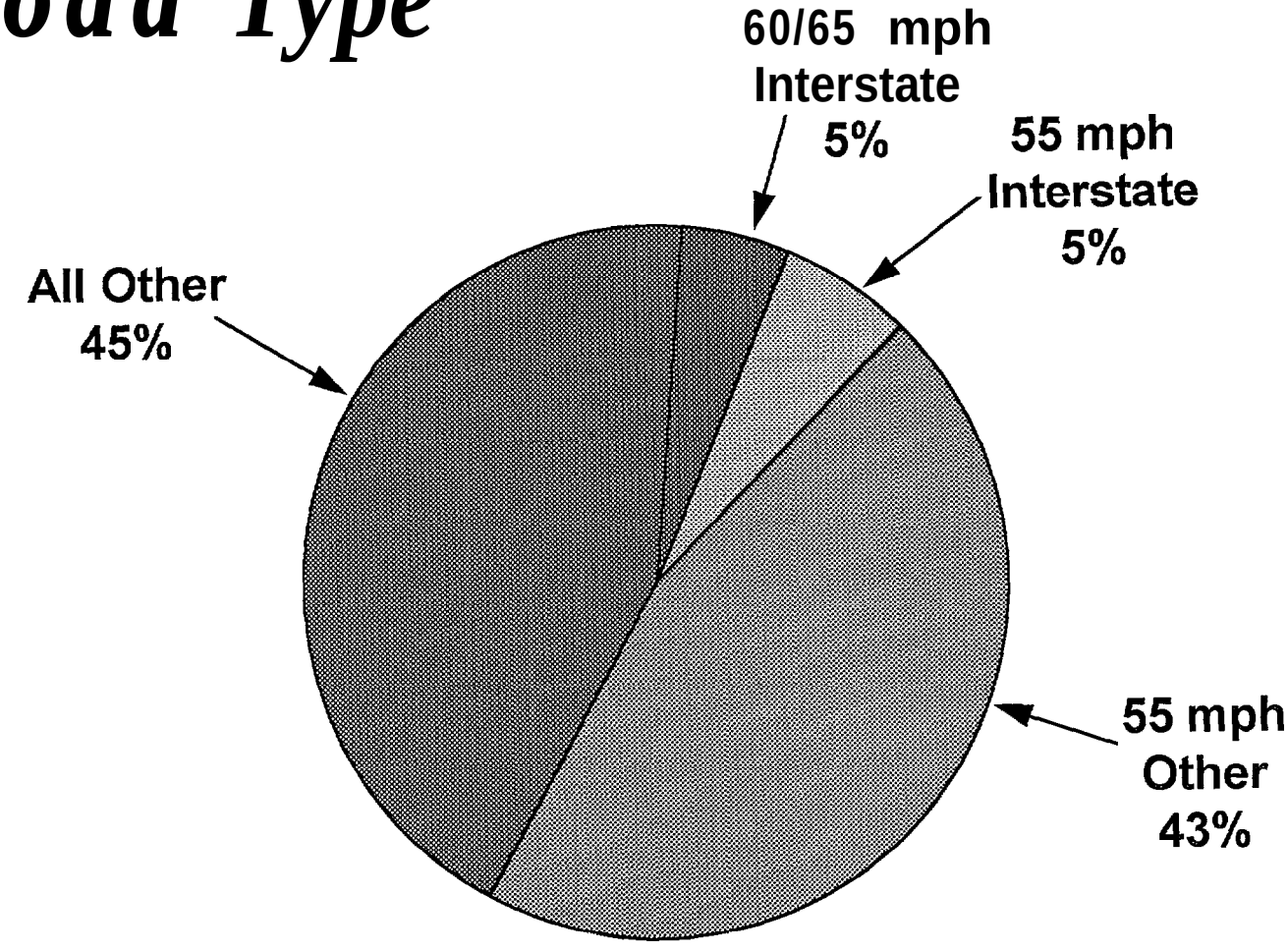
Fatality Rate Comparisons

Urban versus rural areas in the United States

+ Fatalities per 100 million vehicle miles traveled:
  - -Urban areas: 1.17
  - -Rural areas: 2.61
+ Fatal accidents per 100 million vehicle miles traveled:
  - -Urban areas: 1.08
  - -Rural areas: 2.26

Source: FH WA 's I994 Highway Statistics

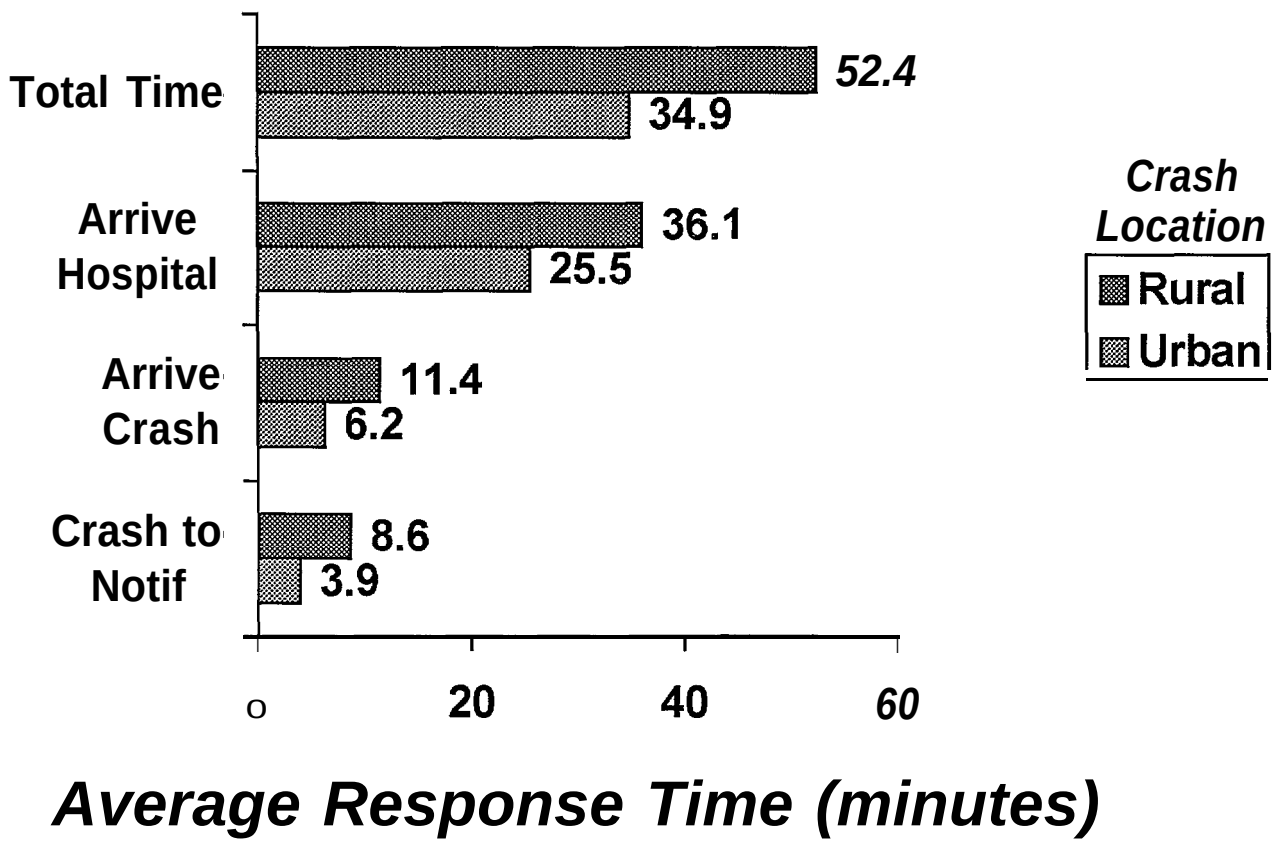
Percent of Fatalities by Road Type



Source: FHWA 's I994 Highway Statistics

Emergency Response Times

Urban versus rural fatal crashes



Motor vehicle crash dataporn USDOT I994 FARS and GES datajles

Promising ITS Technologies

- ‘Mayday’ systems - several tests underway, highest priority by rural users
- Traveler Services Information - lodging, food, entertainment, fuel, maintenance, etc. (major challenge is lack of infrastructure)
- Weather Monitoring and Traveler Advisories - provide dynamic weather, congestion, incident, and construction information to travelers

Promising ITS Technologies

- Public Transportation - many rural residents, primarily elderly and physically challenged, depend on public transit
- Commercial Vehicle Operations - looking at technology aimed at improving safety and efficiency
- Collision Avoidance Systems - great potential to save lives, reduce disabling injuries & decrease property damage losses

Summary

- A careful look at the statistics offers insight on rural issues
- Rural crashes tend to be more severe, emergency response is more important
- Accident prevention also takes on more importance if we are to save lives
- ITS technologies can and will play an important role in saving lives and improving quality of life in rural areas

Conclusions

- ITS is not just Urban

- Key to Rural implementation is SAFETY & TRAVELER INFORMATION

- CVO applications are “early winners”

- ITS can help preserve a way-of-life

Issues in ITS Deployment

- Uncertainty in public funding
- Lack of “champion” with ITS knowledge
- Lack of effective ITS marketing program
- Limited deployable research products
- Overselling research
- Lack of interaction between end-users and researchers

Issues Continued

- Lack of research on fundamentals, e.g. capacity, driver behavior, etc.
- Lack of realistic assessment of benefits
- No clear definitions of ITS and related benefits
- Lack of guidelines relative to evaluation
- Lack of efficient methodologies to quantify benefits