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JOHNS HOPKINS
BLOOMBERG
SCHOOL *of* PUBLIC HEALTH

Events and Exposure

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Lecture Topics

- Describing and quantifying injurious events
- Measuring exposure
- Identifying and quantifying risk factors
- Case study



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Section A: Describing and Counting Events

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What Do We Mean by Events?

- Situations where energy is being released in either greater or smaller amounts than ordinary, in less than an ordinary amount of time, or both
- Circumstances that could lead to personal injuries (regardless of whether they actually occur)
 - For example, car or airplane, crashes, fires, falls

Relevance of Events Data

- Necessary to understand circumstances leading to fatal or nonfatal injuries
 - Helps identify circumstances (or aspects of circumstances) that could be addressed by injury prevention programs

Relevance of Events Data

- Necessary to understand circumstances leading to fatal or nonfatal injuries
 - Key for secondary injury prevention planning
 - There is a lot that can be learned from events that do not lead to injuries despite the fact that they look like other events where injuries occurred

Events

- Used as numerators
 - There were 6,335,000 crashes in the U.S. in 1998
- Used as denominators
 - 0.6% of motor vehicle crashes lead to at least one death (41,471 deaths/6,335,000 crashes)

Data Sources

- Multiple
 - Police reports
 - ▶ Car crashes—normally there is a minimum amount of damage required before reporting
 - ▶ Home robberies
 - Firefighter records (e.g., fires)
 - Nursing home records (e.g., falls among elderly)

Data Sources

- Personal surveys (e.g., recreational injuries)
- And all the same sources where the injuries are reported

Data Coding

- Events that lead to injuries
- We have listed the most frequent ones in mortality and morbidity sessions
- For example
 - International Classification of Diseases (E codes in the 9th version), NOMESCO Classification of External Causes of Injuries, New Zealand, Australian codes, International Classification of External Causes of Injury (ICECI)

Data Coding

- Events
 - Other multiple data system-specific codes

Event Data Comparability

- Beware of
 - Data source variability
 - Case identification variability
 - ▶ Normally there is a minimum physical/economic damage amount used to define the event as reportable, but that can vary
 - Coding system variability