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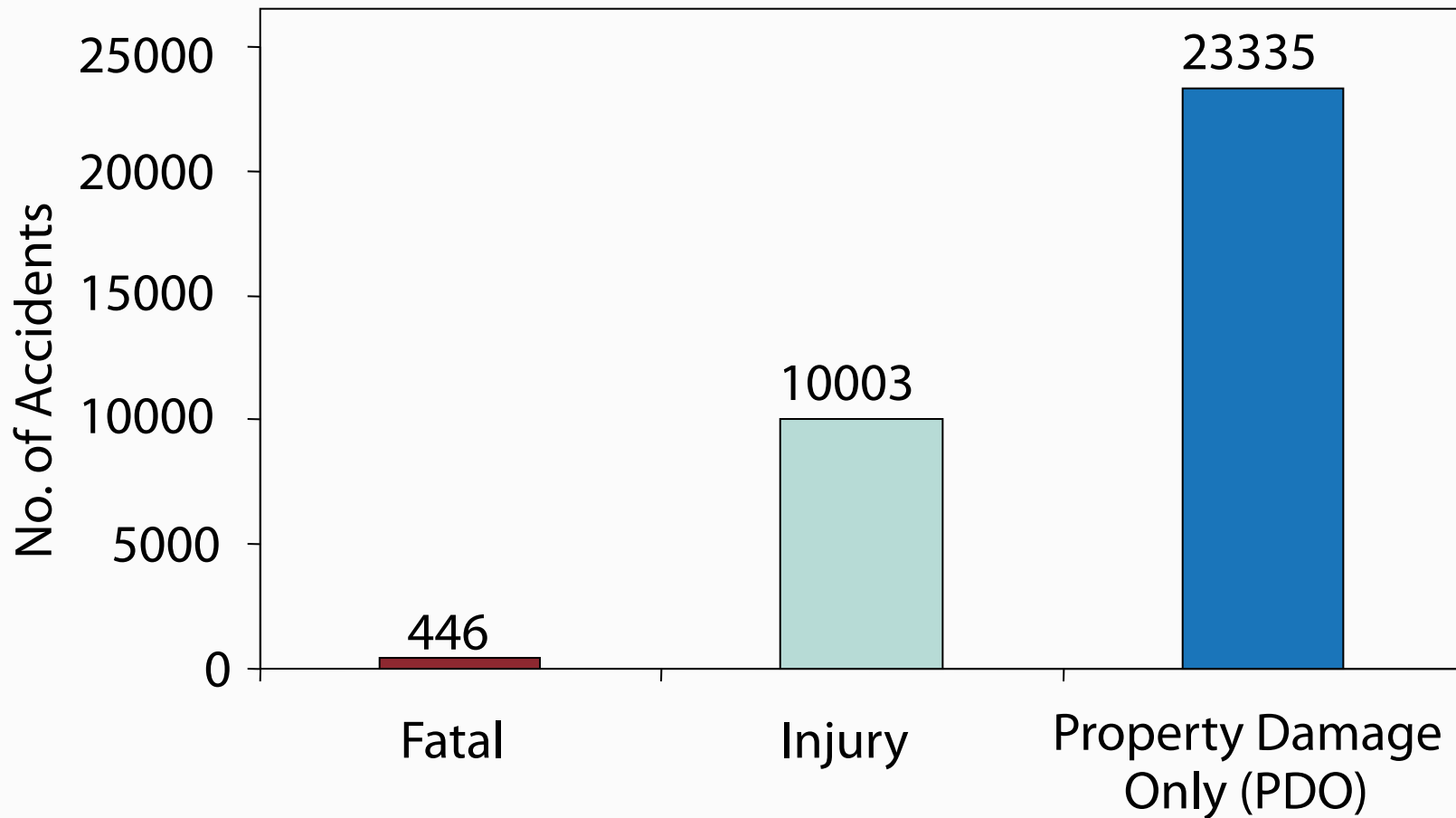
Section D: The Cost of Injuries—Examples

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Examples of . . .

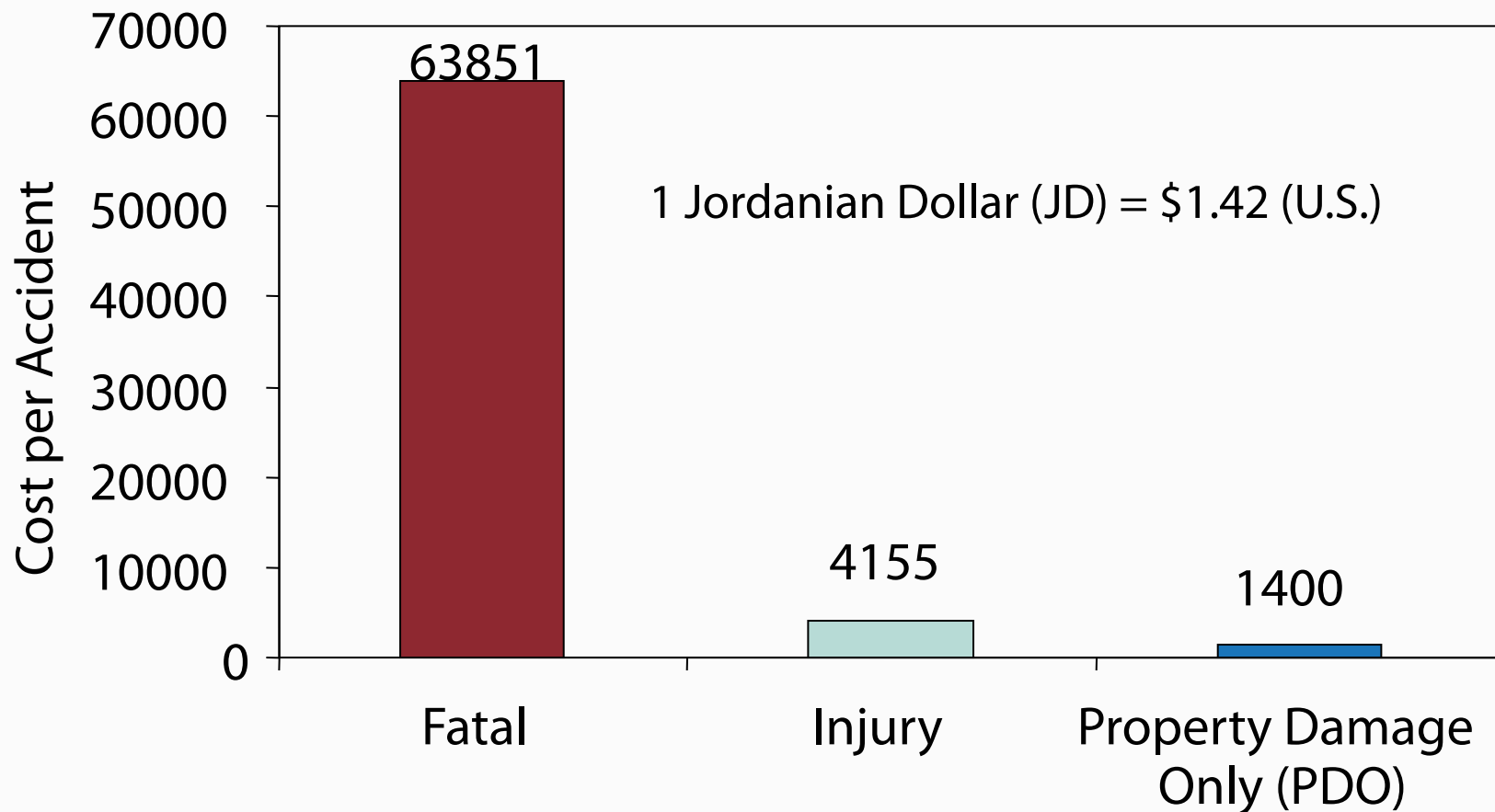
- Unit and total costs
- Cost comparison with GNP
- Cost of occupational injuries
- Cost of trauma and inpatient care

Traffic Accidents (Units) by Severity Level (Jordan, 1996)



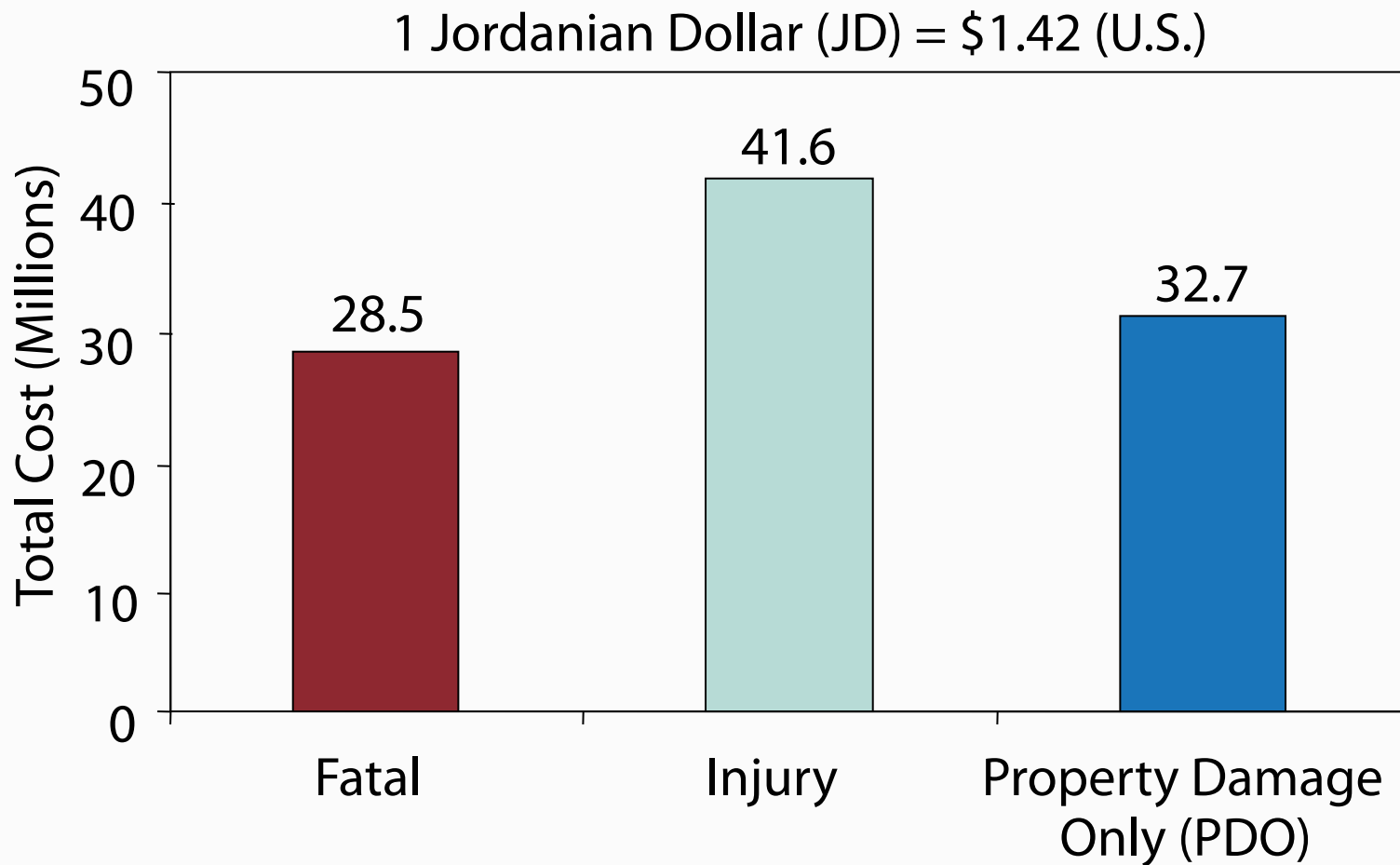
Cost per “Accident” in Jordan by Severity Level

- Average unit cost in Jordanian dollars (JD) per “accident” by severity level (Jordan, 1996)



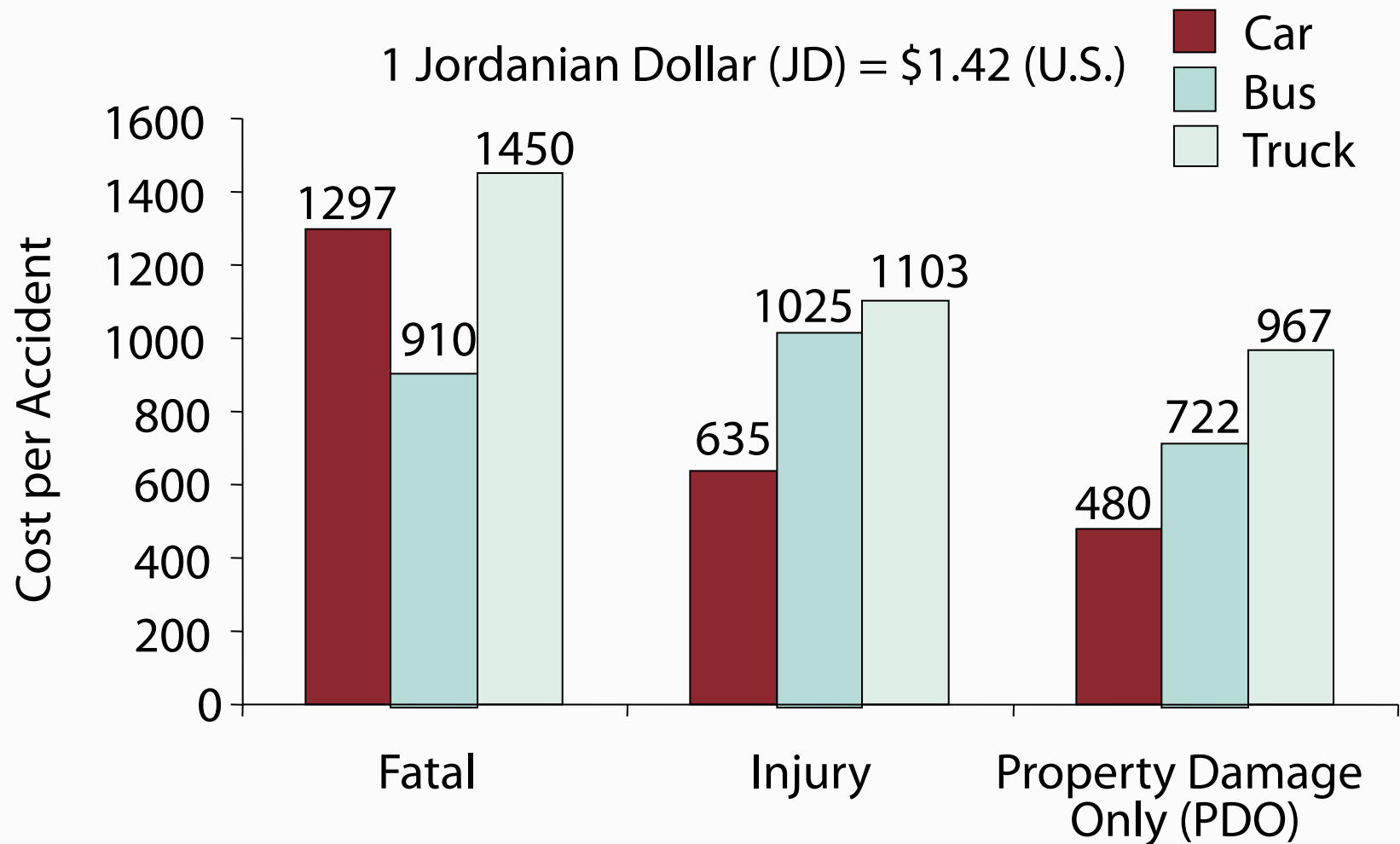
Total Cost by Severity Level (Jordan, 1996)

- Total costs = units x cost per unit



Vehicle Repair Cost per Accident by Severity Level

- Vehicle repair cost per accident by severity level (Jordan, 1996)



Overall Costs of RTA to Jordan

- 1996 traffic accidents in Jordan cost the country 103 million Jordanian dollars (146.3 million U.S. dollars)
- Fatal accidents accounted for 1.3% of all accidents but 28% of overall costs
- Accidents with property damage made up 69% of all accidents but contributed only 32% to overall costs

Overall Cost of Traffic Injuries in Kuwait

- Cost per fatality: \$500,000 (U.S. dollars)
- Per capita GNP of Kuwait: \$13,890 (U.S. dollars)
- Cost per fatality/per capita GNP: 36:1

Cost of Injuries in Malaysia

- Annual economic loss due to all injuries in Malaysia (U.S. \$1 = approximately 2.76 Malaysia Ringgits):
 - Two billion Malaysia Ringgits (MR)
- Costs for road injuries in 1988:
 - Unit cost **per person killed** = MR 184,000 or U.S. \$66,666

Cost of Injuries in Malaysia

- Costs for road injuries in 1988:
 - Unit cost ***per slightly injured person*** = MR 1,840 or U.S. \$666
 - Unit cost ***per seriously injured person*** = MR 184,000 or U.S. \$66,666

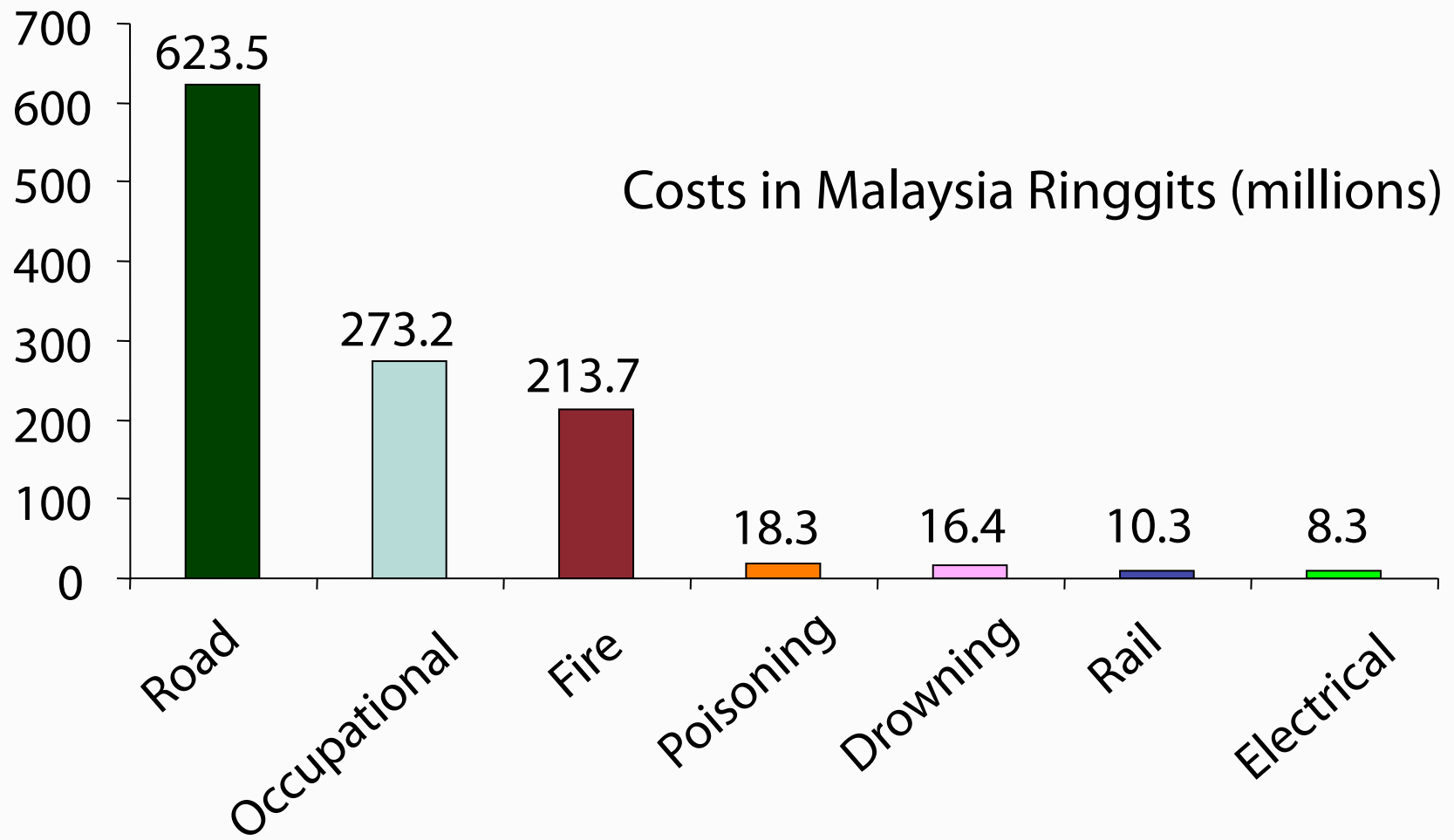
Ratio of Cost per Fatality/per Capita GNP

- Ratio of cost per fatality/per capita GNP in developing countries*

Country	GNP per Capita	Cost per Fatality	Ratio of Cost per Fatality/ per Capita GNP
Jordan	\$1,623	\$74,210	92:1
Kuwa it	\$13,890	\$500,000	36:1
Malay sia	\$1,835	\$66,666	36:1

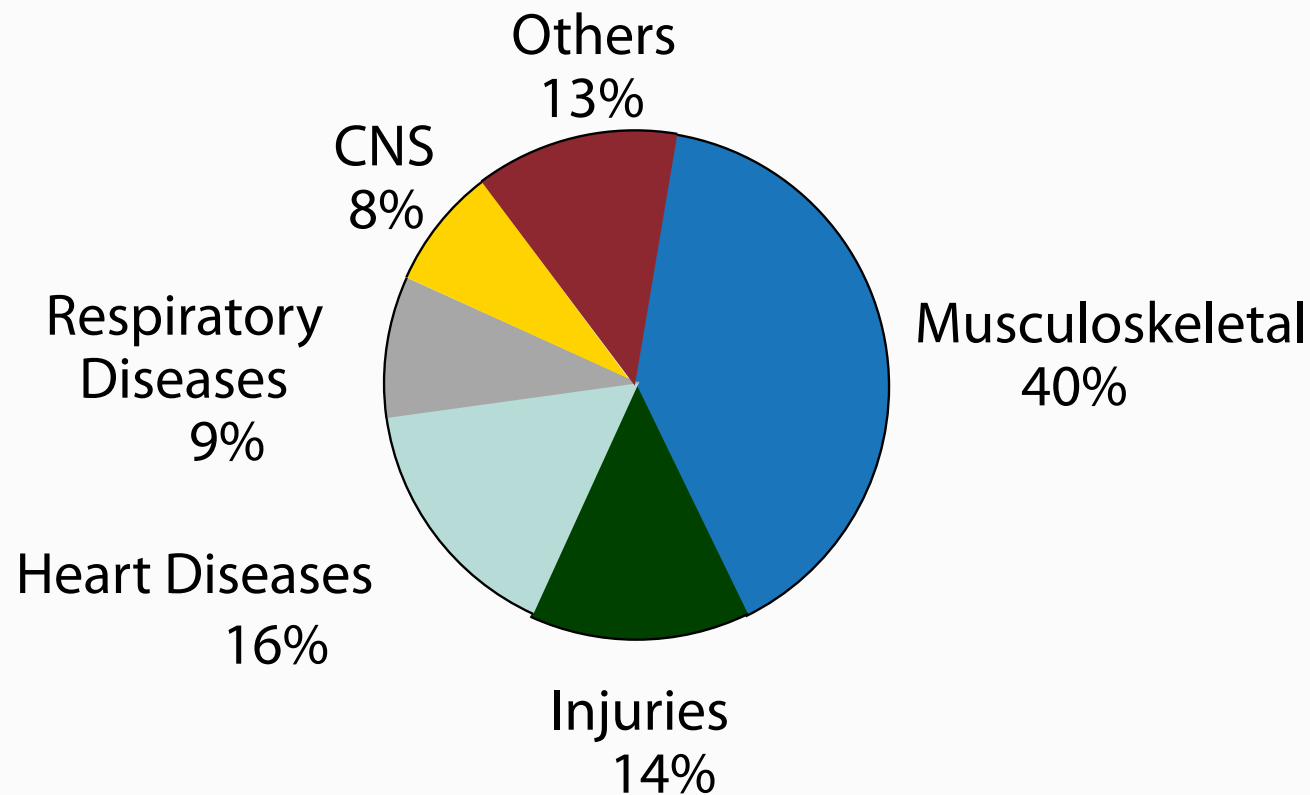
*All currency in U.S. dollars

Injuries and Economic Costs in Malaysia, 1998



Cost Distribution for Work-Related Injuries and Diseases

- Distribution of costs for work-related injuries and diseases (globally)



Costs of Nonfatal Occupational Injuries, Saudi Arabia

- Cohort study conducted on 65,915 insured industry workers admitted to two randomly selected private hospitals in Al-Khobar City, Saudi Arabia
- The injury incidence rate was 7.1 per 1,000 full-time workers per year
- Direct medical cost per admission was less than U.S. \$533 (SR 2,000) in 63.9% of the cases

Monetary Quantification of Occupational Injuries

- Taiwan
 - Occupational injuries among workers of steel companies in Taiwan, 1984–1996
 - **Disability frequency rate** (DFR) =
(total number of disabling injuries x 1,000,000)/total number of employee hours worked
 - DFR = 4.85 in 1994

Monetary Quantification of Occupational Injuries

- Taiwan
 - **Disabling severity rate** (DSR) = (total disabling days x 1,000,000)/total number of employee hours worked
 - DRS = 231 in 1994
 - Average potential salary lost of the whole company was more than two million U.S. dollars

Occupational Injury and Illness in the United States

- Approximately 6,500 job-related deaths from injuries and 13.2 million nonfatal injuries
- Injuries cost \$145 billion in 1992
- These estimates are low because they ignore costs associated with pain and suffering, within-home care, and undercounting of events

Trauma Cost in the Accident and Emergency Unit

- Trauma accounted for 37% of 22,311 patients seen in the Accident and Emergency Unit (A and E) at the University Hospital of the West Indies during 1996

Trauma Cost in the Accident and Emergency Unit

- The average cost of caring for each injury patient in the A and E unit was U.S. \$70, resulting in an annual cost of U.S. \$578,000

Inpatient Injury Costs in New Zealand from MVCs

- The hospital inpatient costs for the treatment of injuries were obtained for Dunedin Hospital for a two-year period using the resource utilization system
- Results show that injuries were, on average, more expensive to treat than non-injuries (\$3,115 vs. \$2,749 per case)

Inpatient Injury Costs in New Zealand from MVCs

- At a mean cost of \$5,253 per case, injuries due to MVCs were the most expensive class of injury events to treat
- Pedestrians were, on average, twice as costly to treat as motor vehicle occupants