

Overview of injuries from falls among seniors in Hawaii

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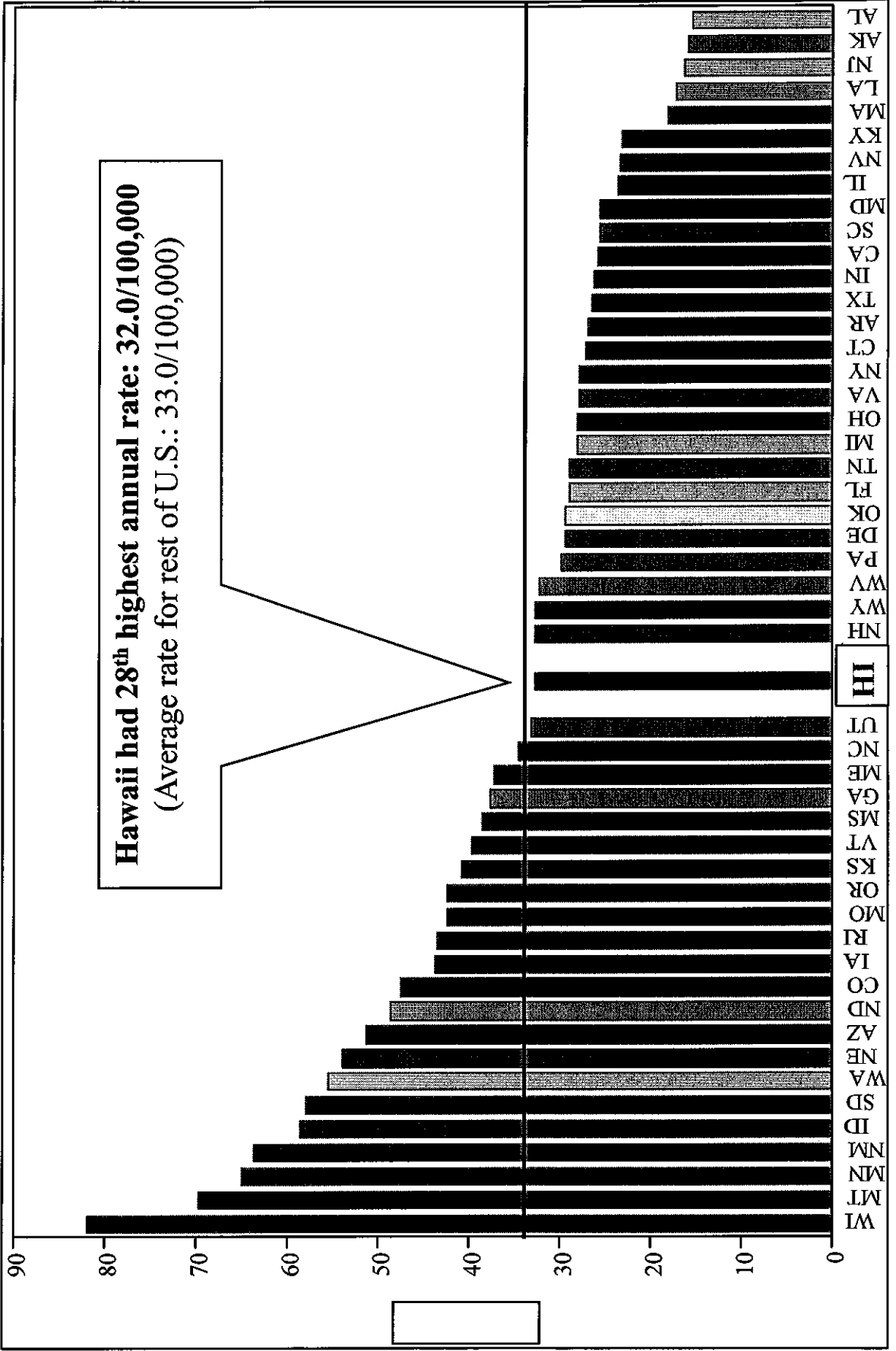
Overview of presentation

- **Importance of falls prevention among seniors**
- **Fatal falls**
 - *Comparisons w/ rest of U.S.*
 - *Local description*
 - *Leading cause of injury-related death among seniors*
 - *Limitations of death certificate data*
- **Other injuries from falls**
 - *Hospitalizations—statewide*
 - *EMS data—Honolulu county only*
 - *More detailed study of EMS reports*

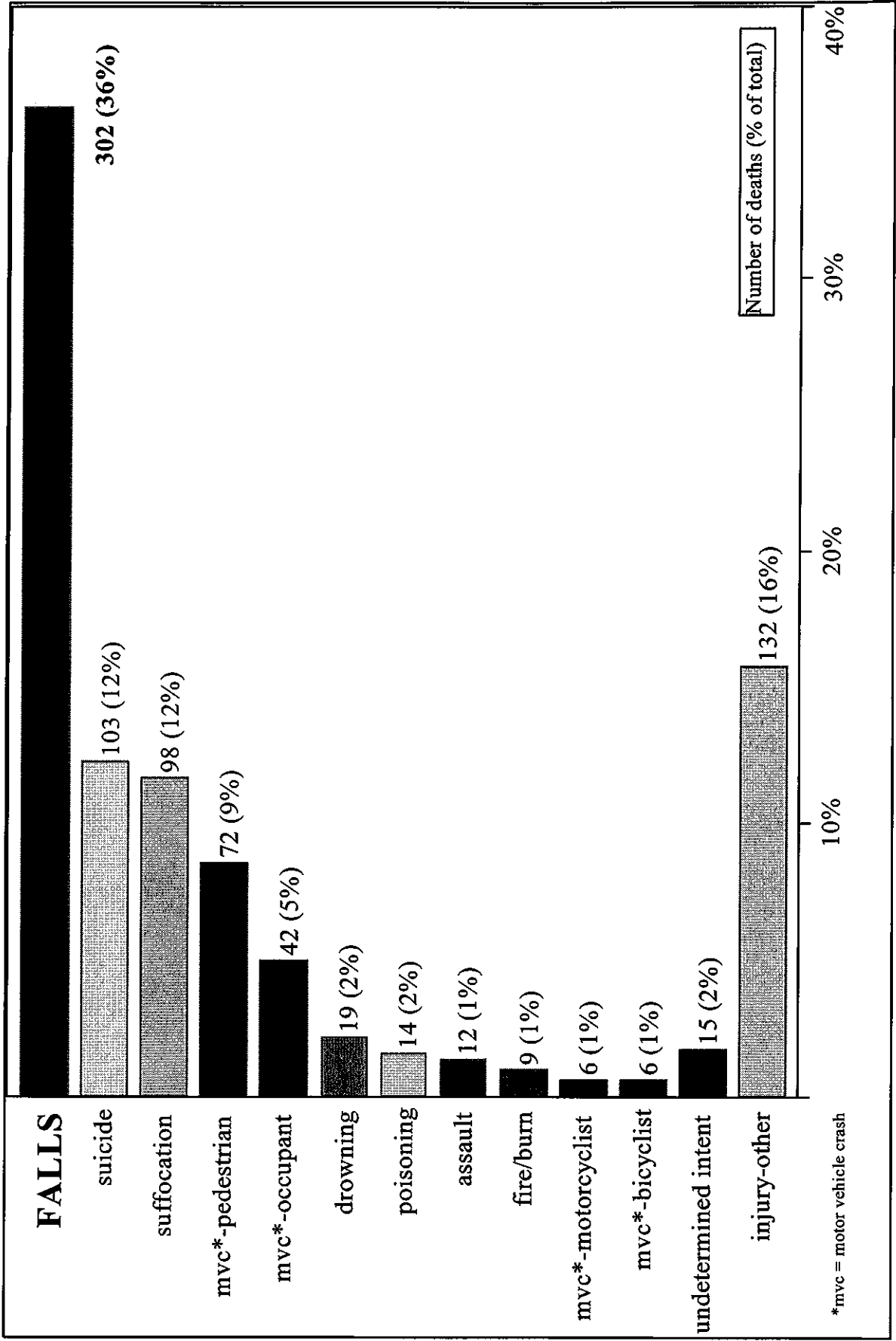
Importance of fall prevention: *Falls among seniors are...*

- **The 2nd leading cause of fatal injuries for residents of all ages (14%)**
 - The leading cause of fatal injuries among seniors (36%)
- **The leading cause of injury-related hospitalizations for all ages (29%)**
 - The leading cause of injury hospitalizations among seniors (79%)
- **The leading cause of hospitalizations for TBI for all ages (29%)**
 - The leading cause of hospitalizations for TBI among seniors (82%)
- **The 9th leading cause of injury-related ED visits for all ages (5%)**
 - The leading cause of injury ED visits among seniors (55%)
- **The 3rd leading cause of injury-related EMS calls (12%)**
 - The leading cause of injury-related EMS calls among seniors (67%)

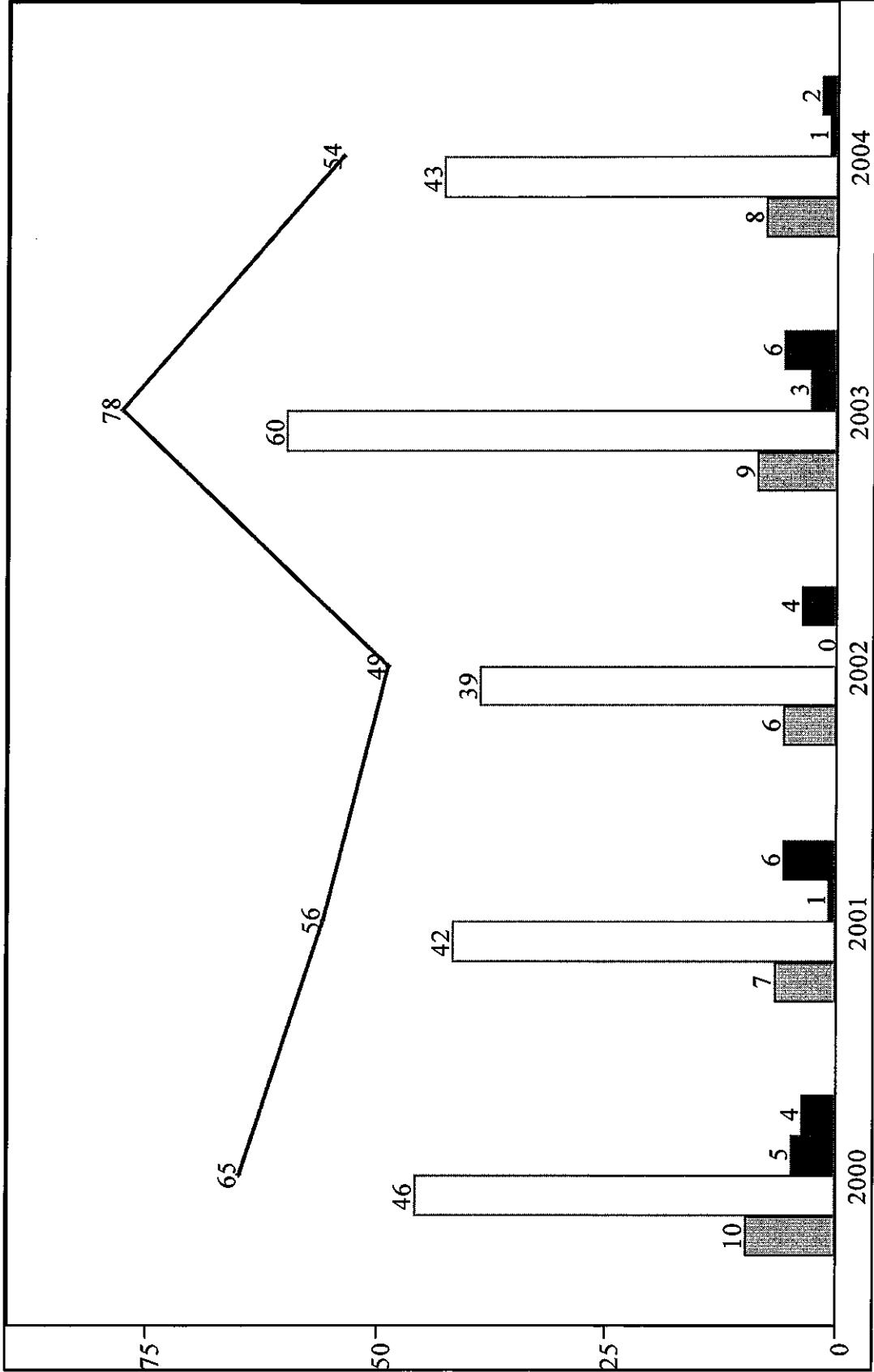
Fatal fall rates among seniors in the U.S., by state, 1999-2002.



Causes of fatal injuries among senior residents of Hawaii, 2000-2004

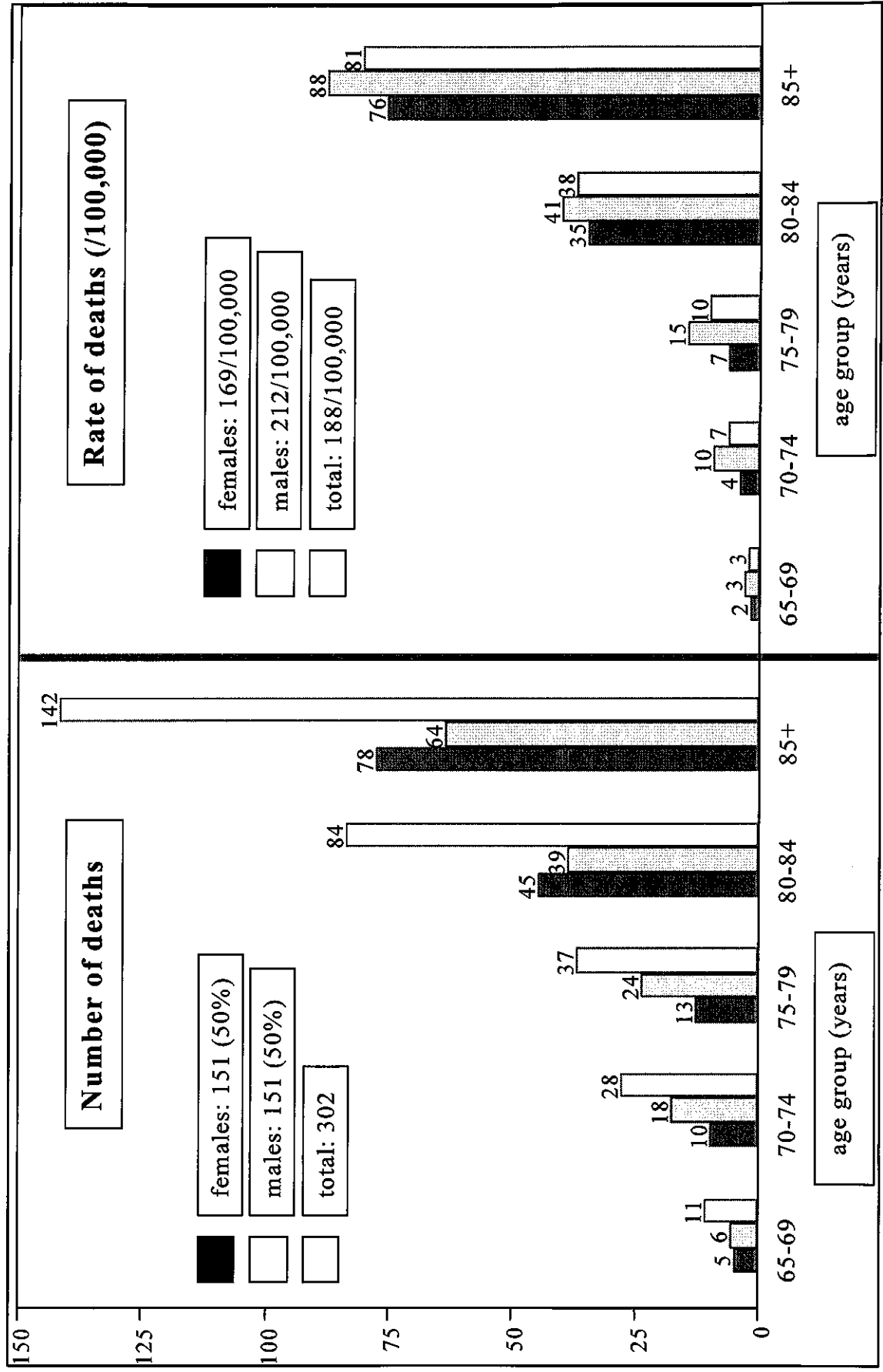


Annual number of fatal falls among senior residents of Hawaii, by county, 2000-2004



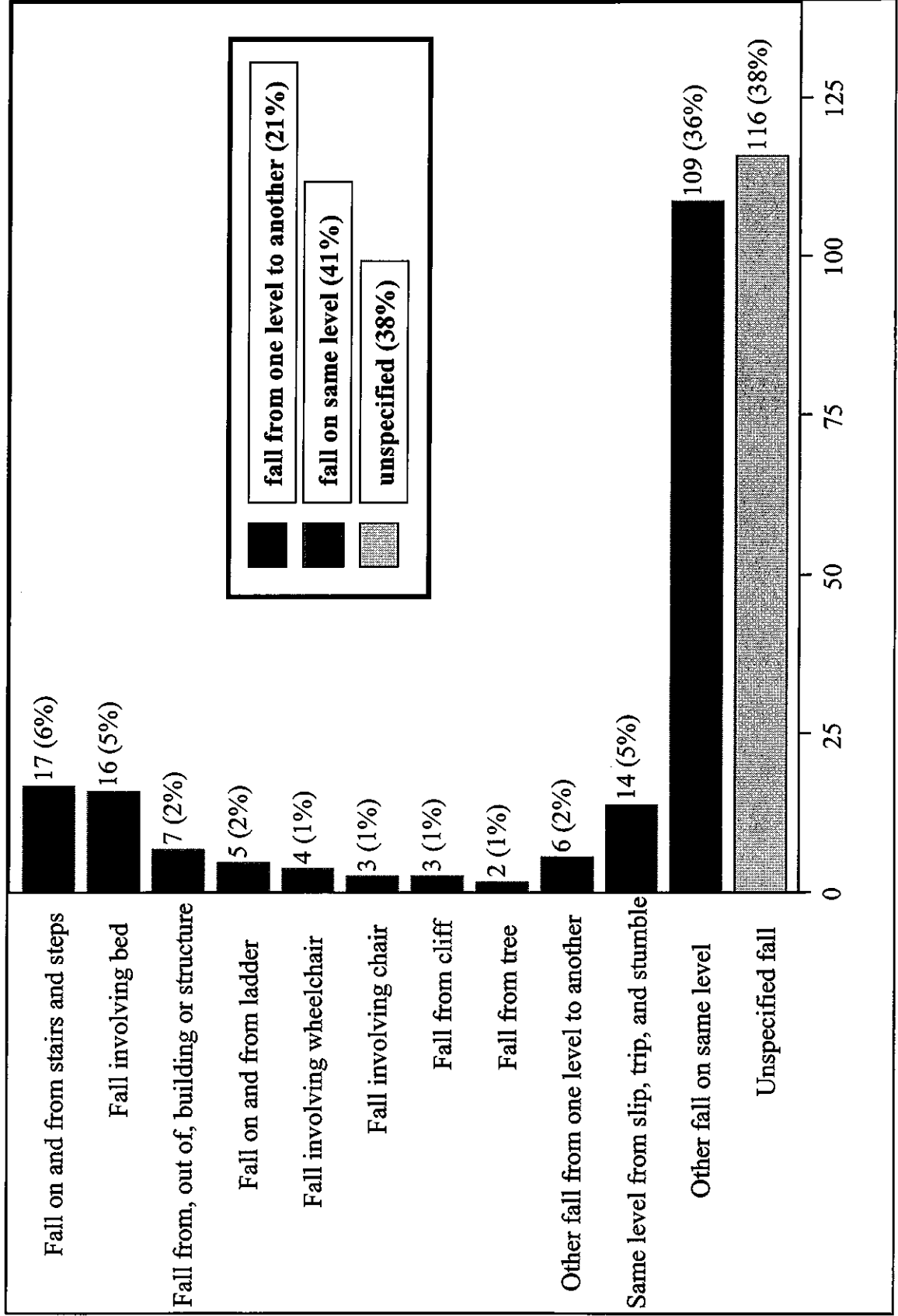
state
 Hawaii: 40 (13%)
 Honolulu: 230 (76%)
 Maui: 22 (7%)
 Kauai: 10 (3%)

Number and rate of fatal falls among senior residents in Hawaii, by age and gender, 2000-2004.

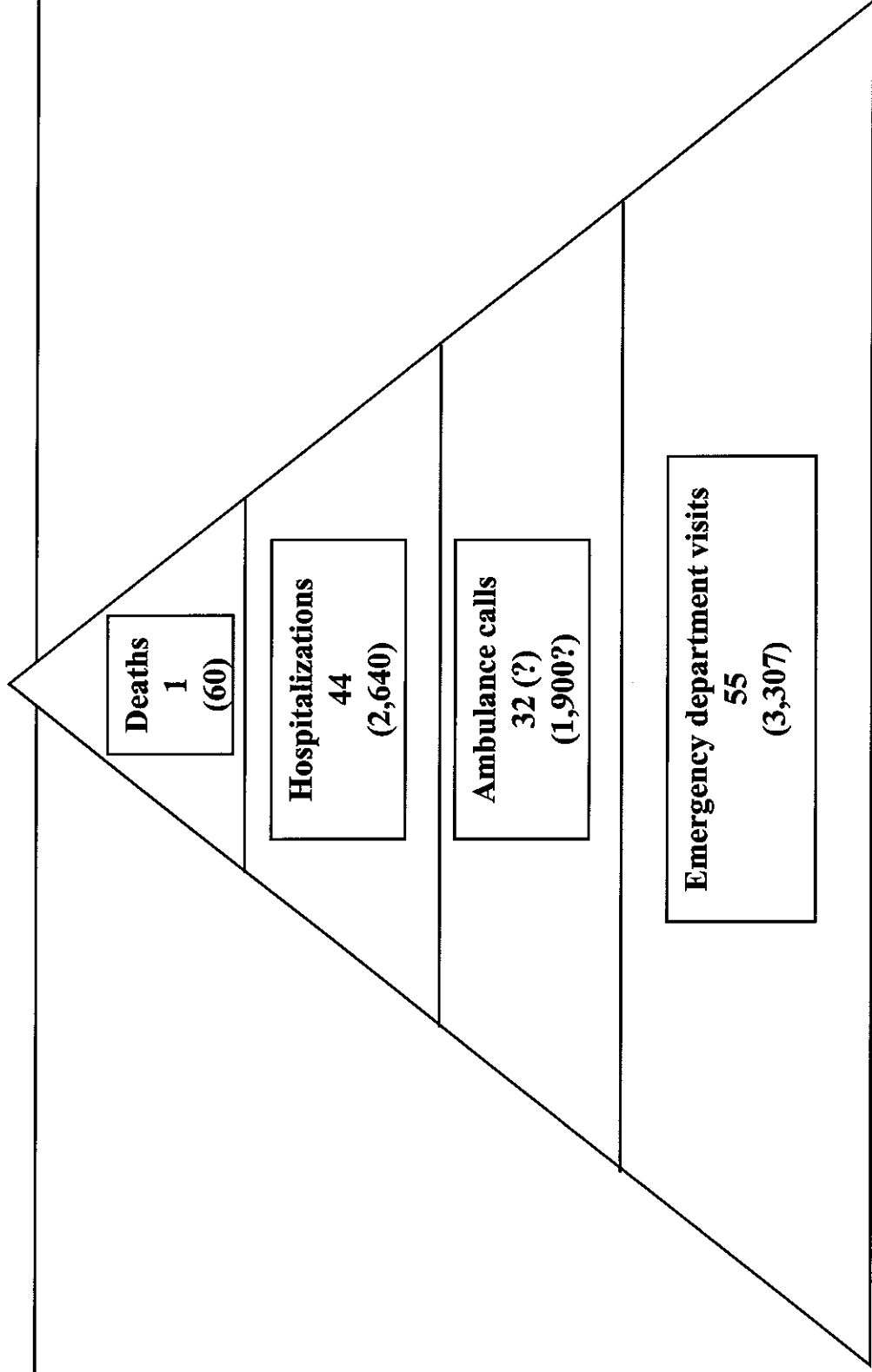


Causes of fatal falls among seniors in Hawaii, 2000-2004:

Limitations of data from death certificates.



The “injury pyramid” for falls among seniors in Hawaii.

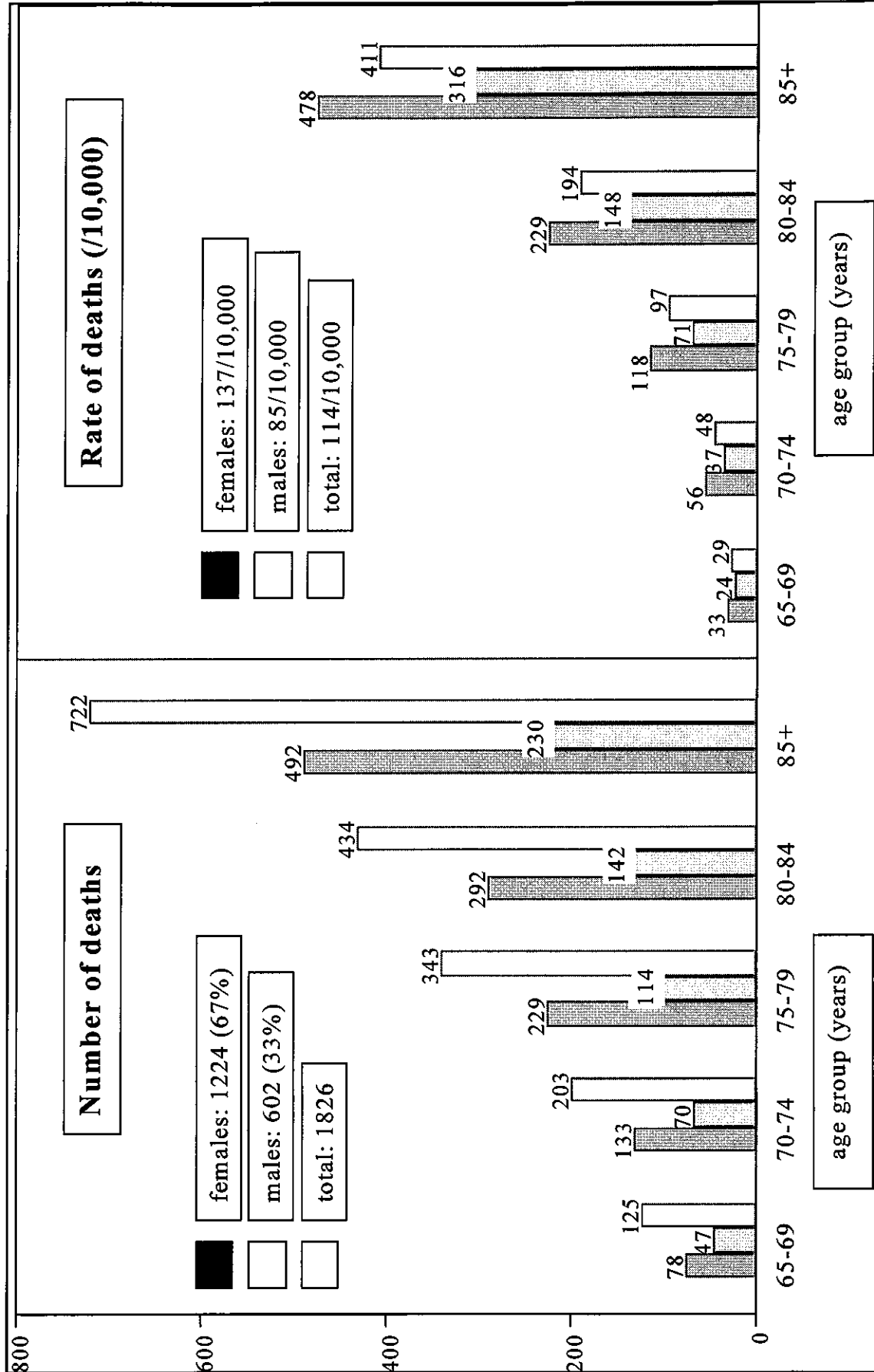


Hospitalizations for falls among seniors in Hawaii, 2000-2003

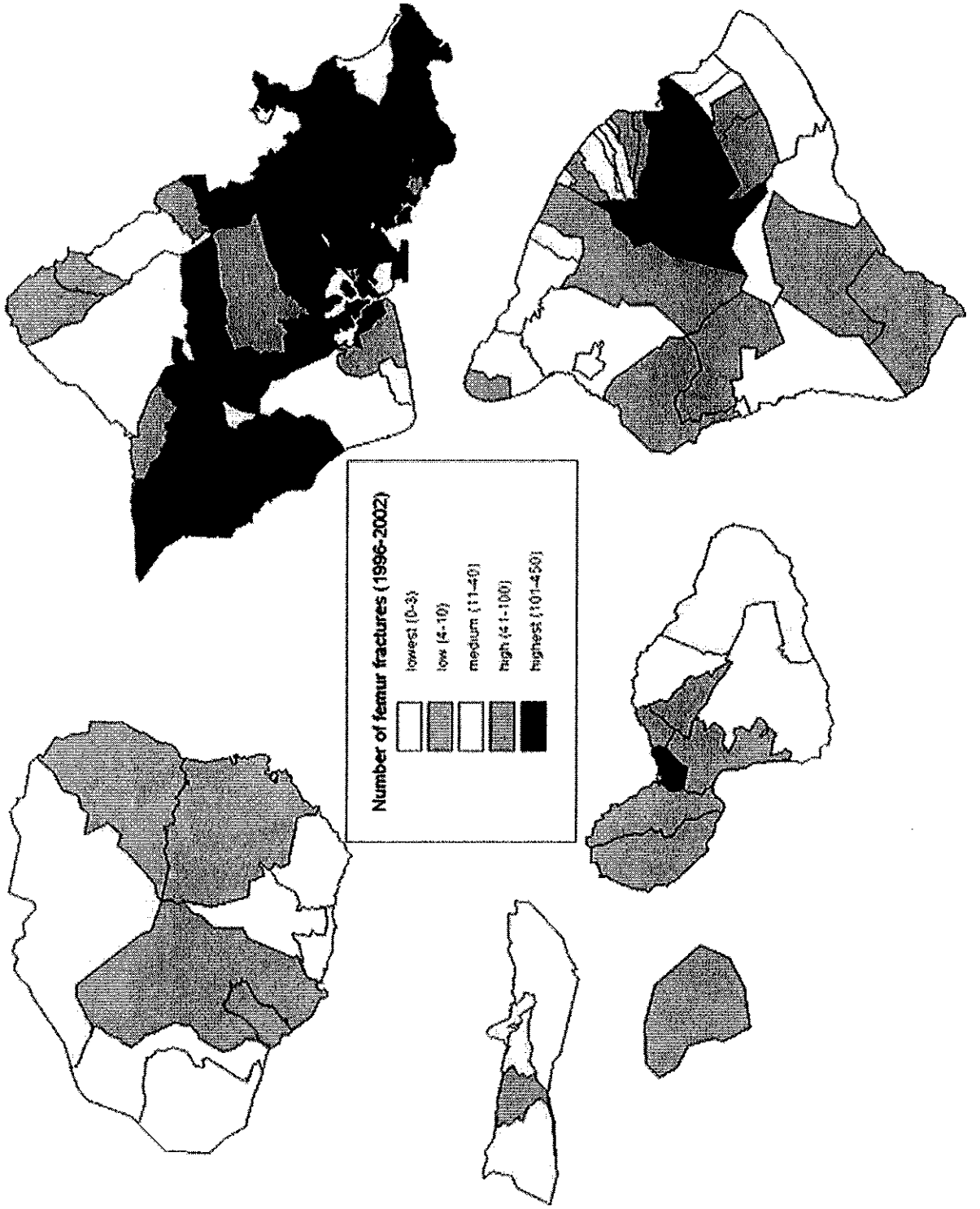
**Hospitalizations for injuries from falls
among senior residents in Hawaii, 2000-2003.**

- **1,826 E-coded falls or hip fractures per year (~2,635 actual?)**
 - *Almost all (94%) of femur fractures are caused by falls*
- **Number and rate increases with age**
 - *Rates among 85+ year-olds 14 times higher than 65-69 year-olds*
- **Mostly (67%) female**
- **Geographic location (femur fractures):**
 - *Highest numbers on Oahu, urban parts of Neighbor Is.*
 - *Highest rates in urban Honolulu/east Oahu*

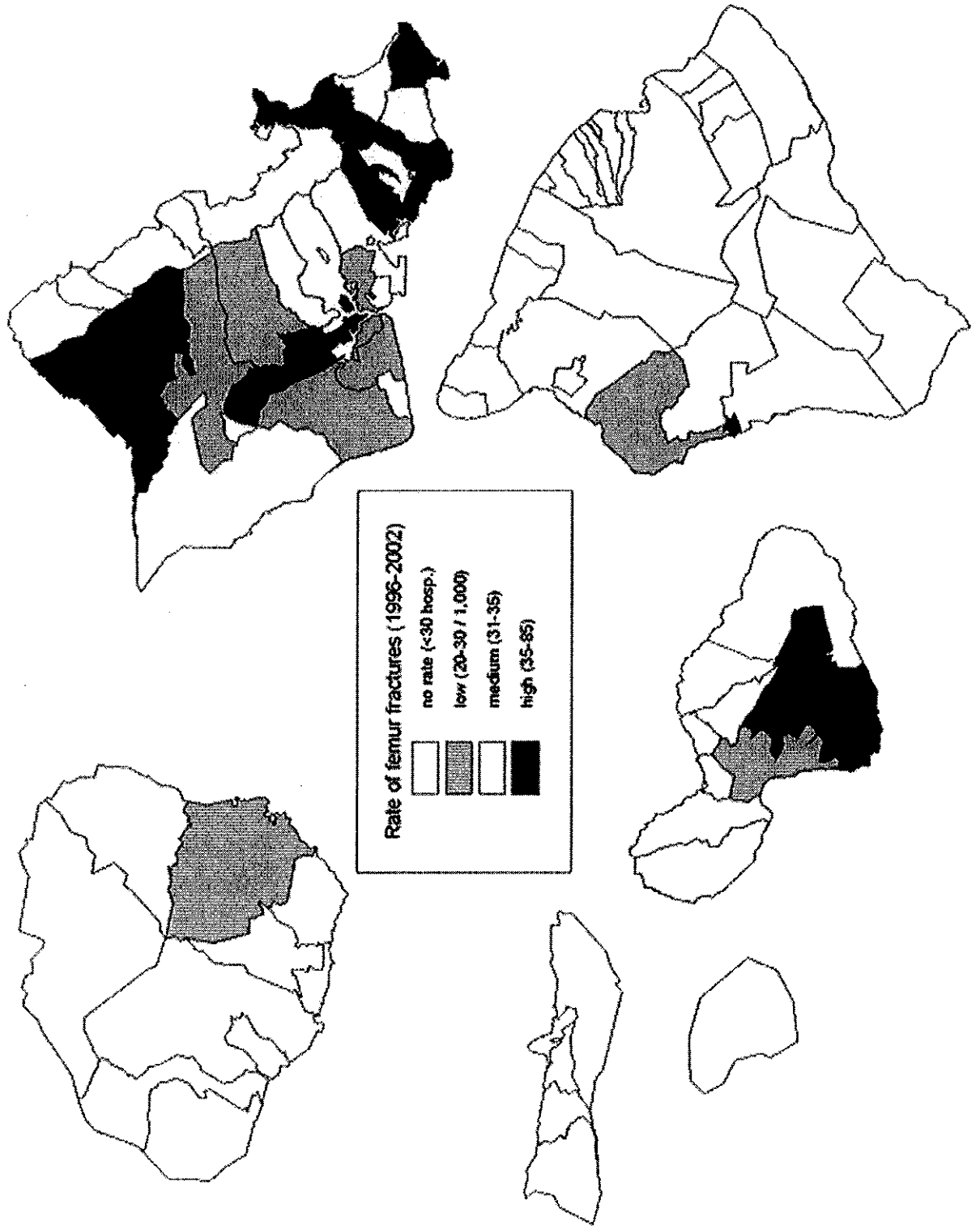
Annual number and rate of falls requiring hospitalizations among senior residents in Hawaii, by age and gender, 2000-2003.



**Seniors hospitalized for femur fractures, 1996-2002:
Total number by zip code of residence.**



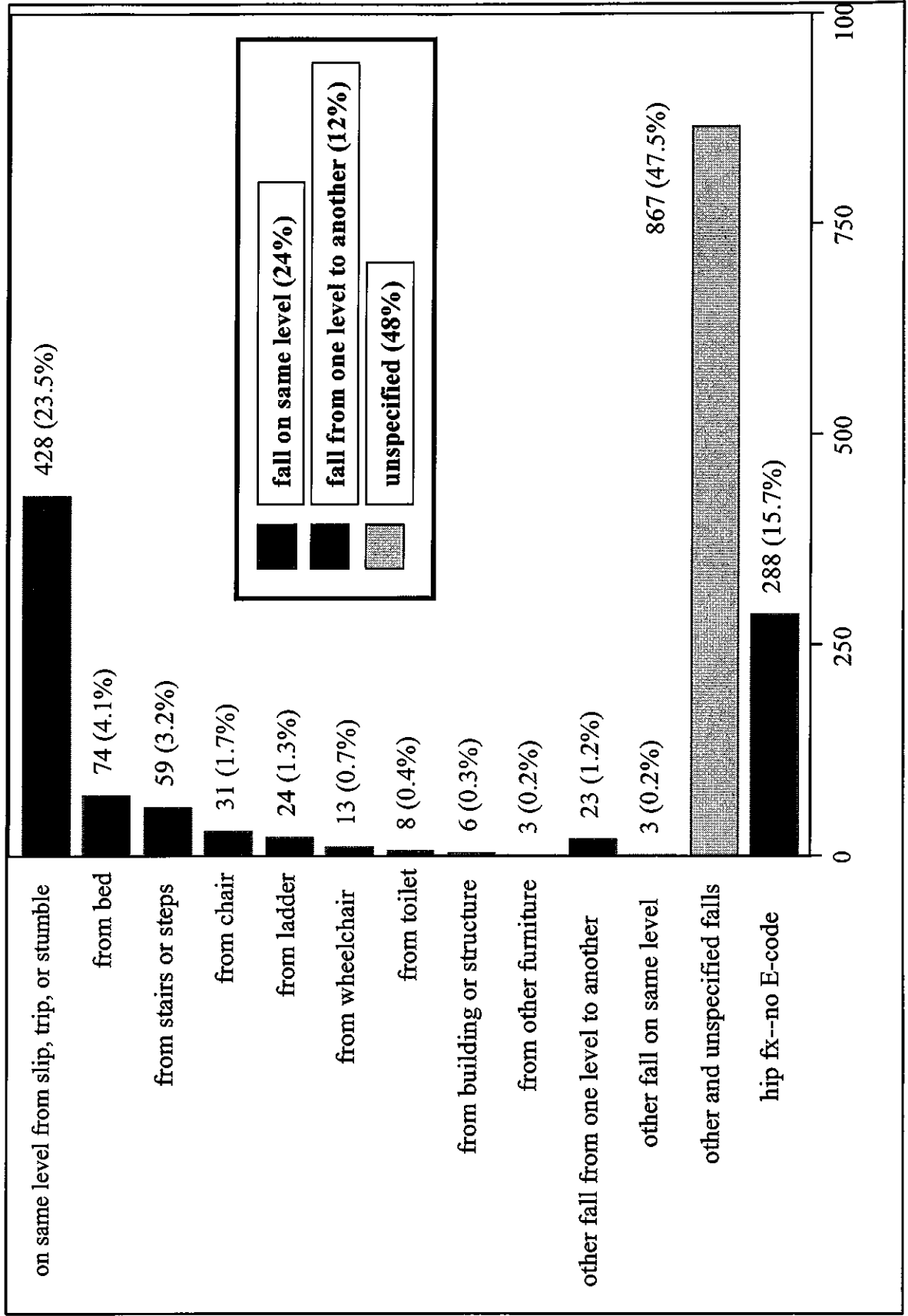
**Seniors hospitalized for femur fractures, 1996-2002:
Rate (/1,000) by zip code of residence.**



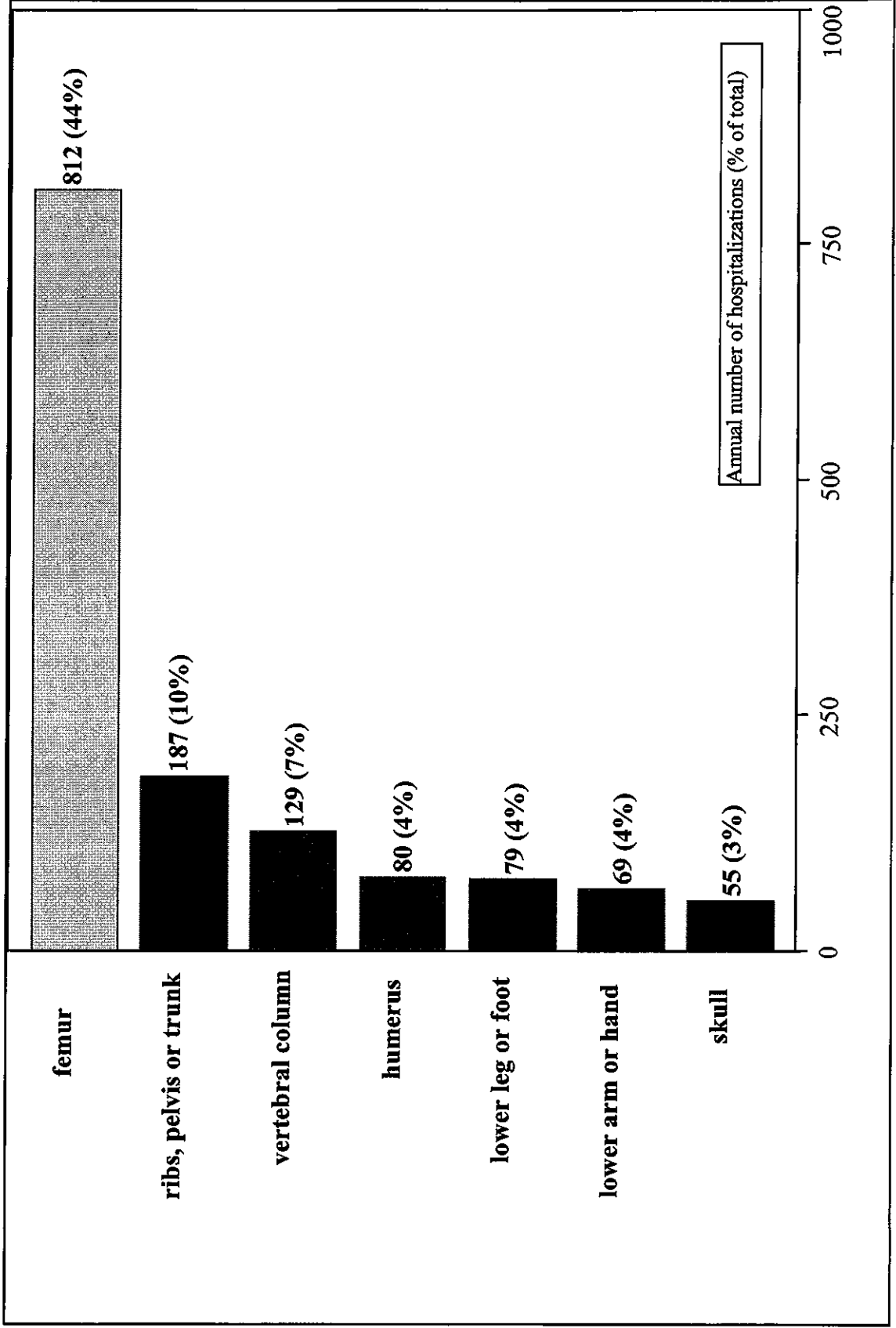
Hospitalizations for injuries from falls among seniors in Hawaii, 2000-2003. (cont.)

- **Causes of falls**
 - *Mostly unknown—even with E-codes*
- **Types of injuries**
 - *Most (71%) sustained fractures (femur: 44%)*
 - *Contusions (17%), internal injuries (12%), open wounds (10%)*
 - *Traumatic Brain Injury (TBI): 14%*
 -
- **Other statistics:**
 - *Long stays: 44% 1 week or more, 5% died in hospital*
 - *Average hospital charge: ~\$22,900 (not incl. MD charges)*
 - *~\$60.3 million/year*
 - *67% paid by Medicare/Medicaid, 22% HMSA, 7% Kaiser*

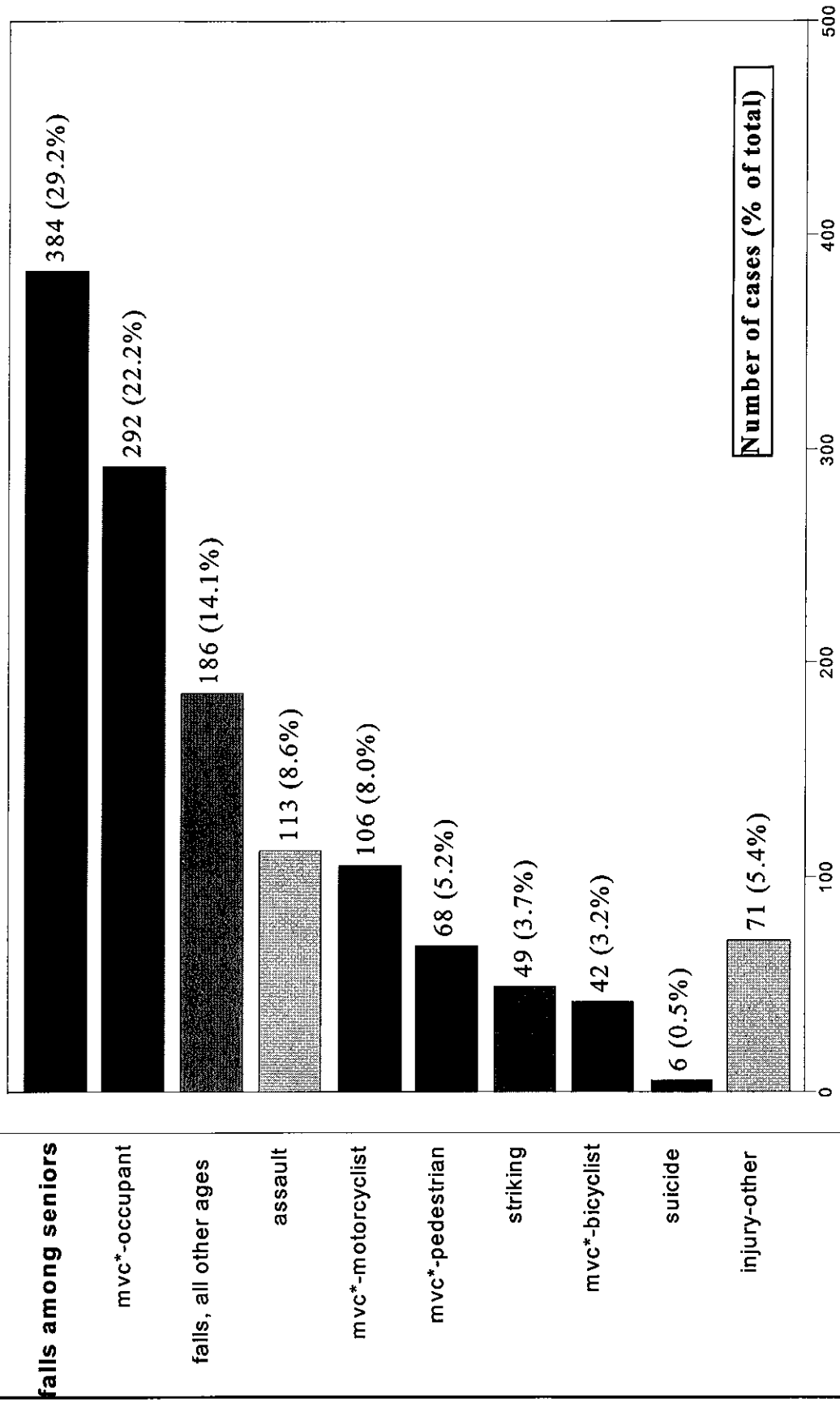
Causes of falls requiring hospitalizations among senior residents in Hawaii, 2000-2003



Type of fracture for senior residents hospitalized for falls in Hawaii, 2000-2003.

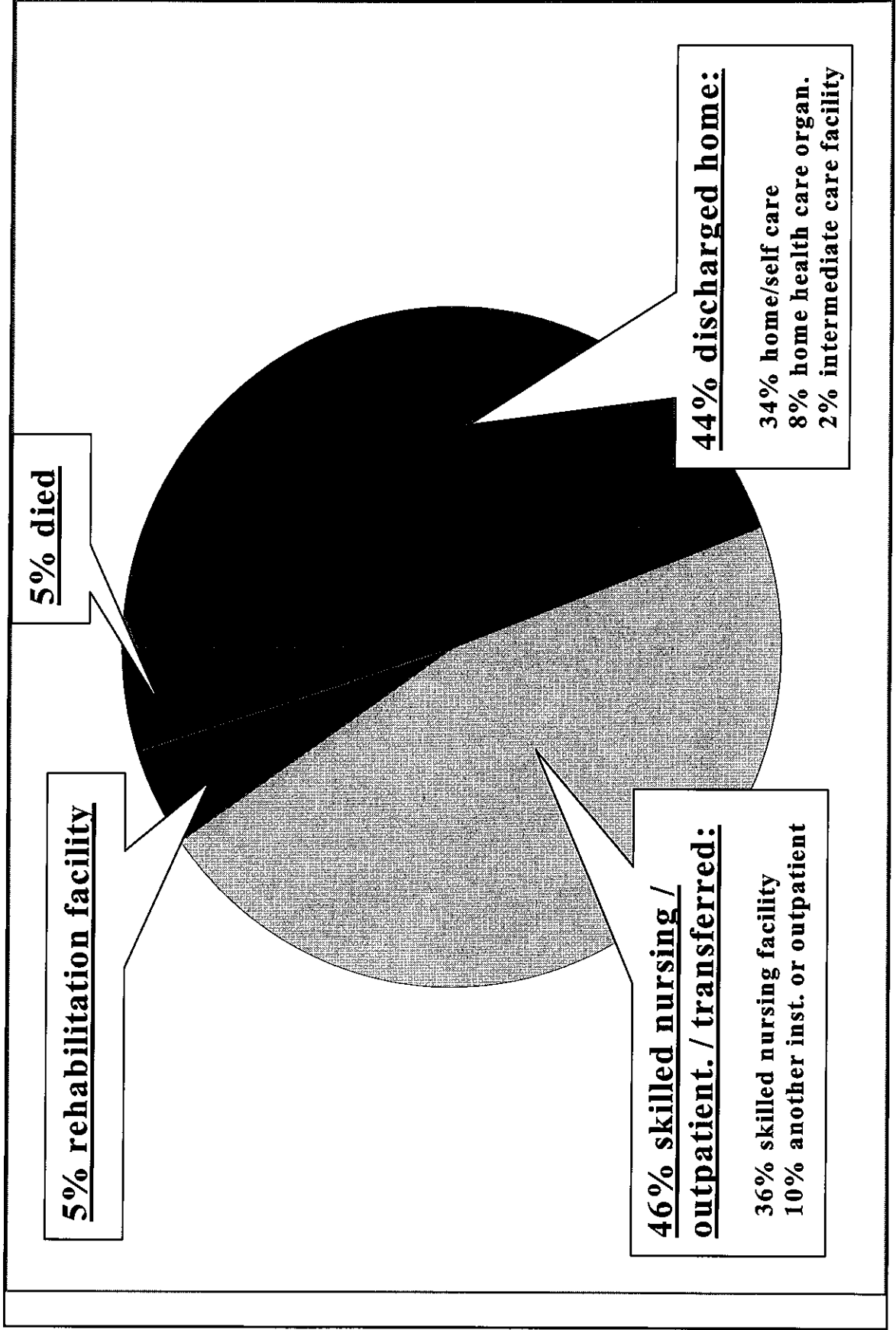


Causes of hospitalizations for TBI among Hawaii residents, 2003

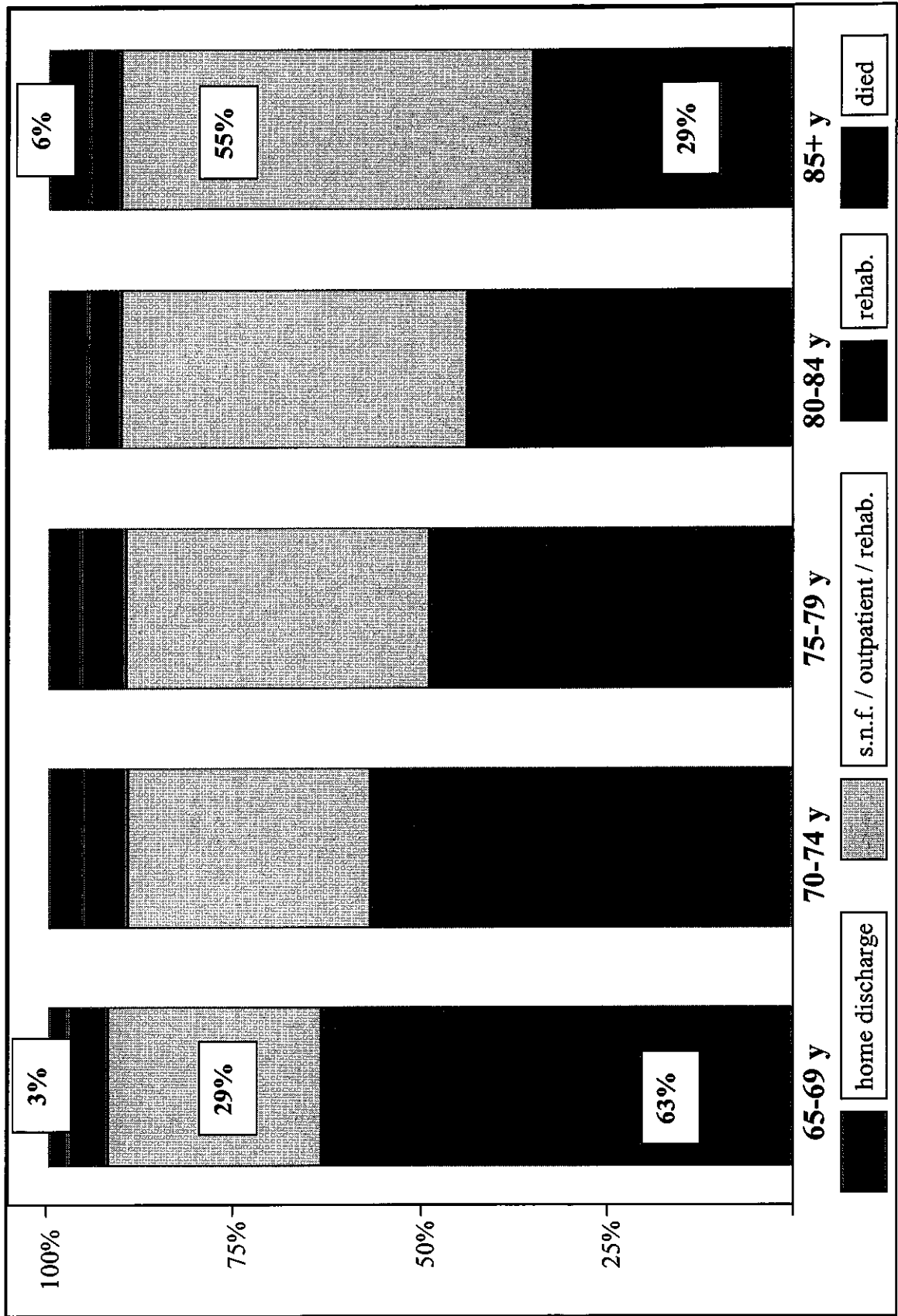


*mvc = motor vehicle crash

Disposition of senior residents hospitalized for falls in Hawaii, 2000-2003.



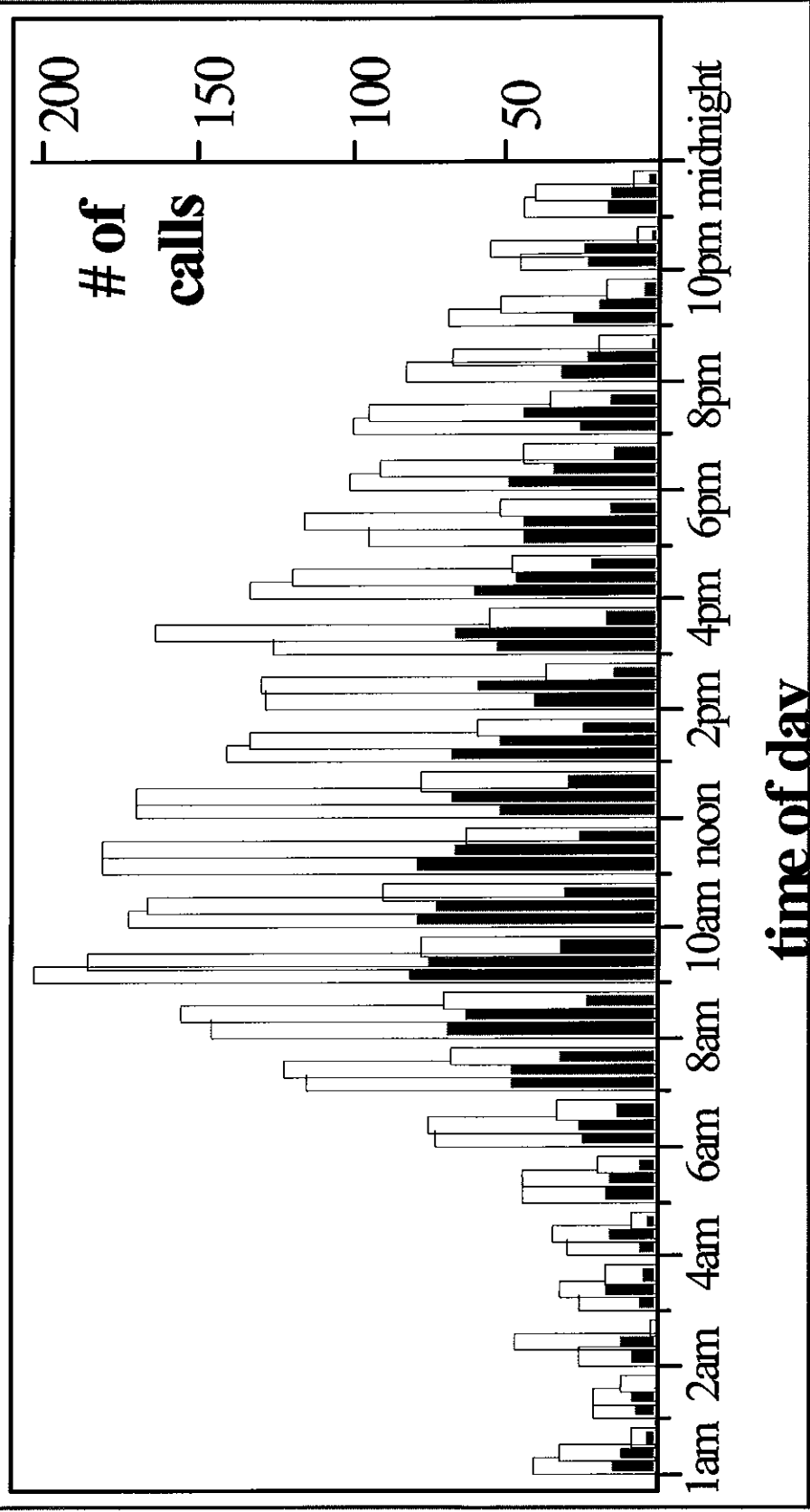
Disposition of senior residents hospitalized for falls in Hawaii, by age group, 2000-2003.



**Oahu EMS ambulance reports:
Falls among seniors, 1995-1998.**

Oahu EMS reports: Falls among seniors, by time and severity

(Shading indicates non-minor injuries.)



Causes of EMS attended falls on Oahu, 1995-1998.

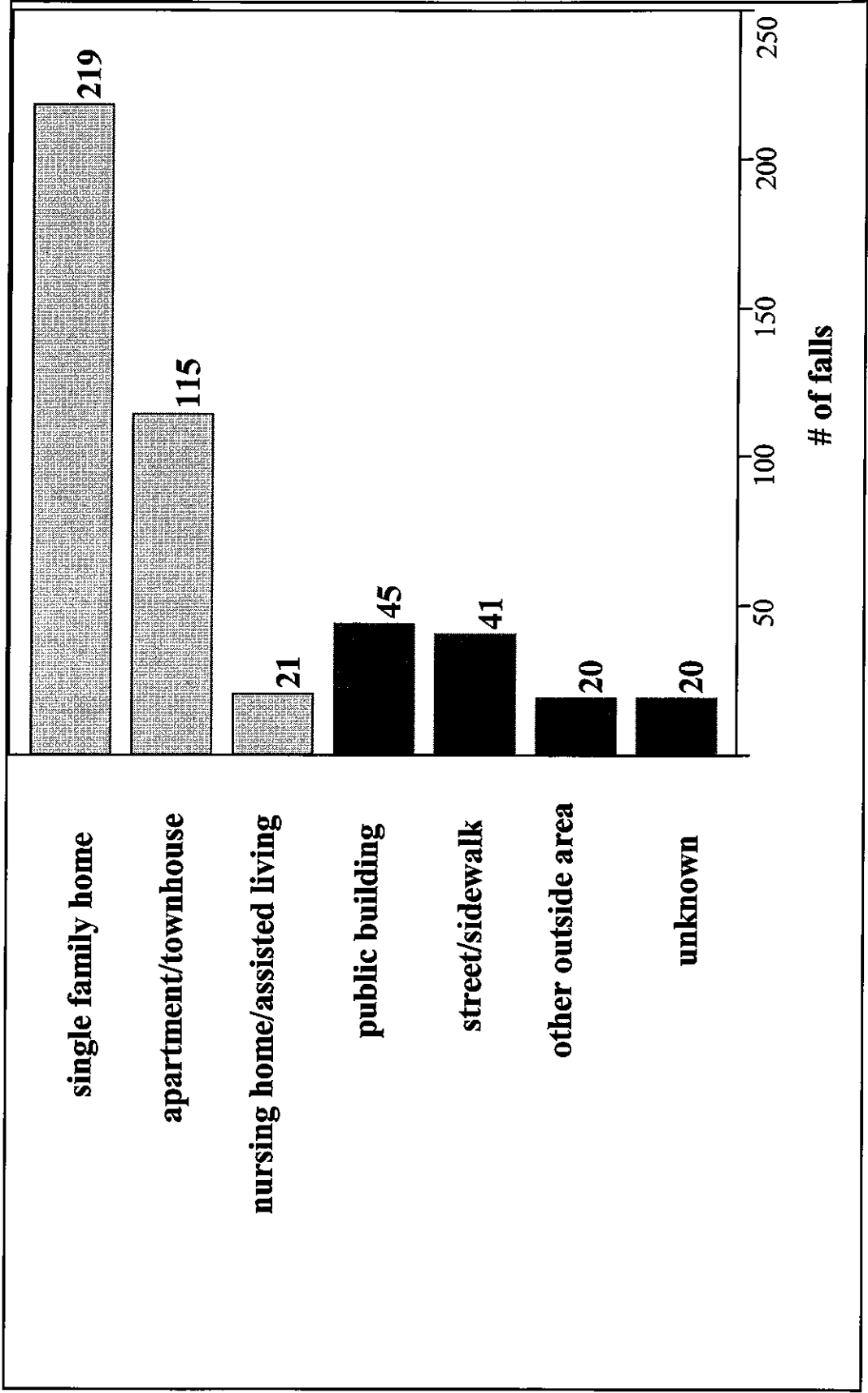
- Extrinsic (or environmental)

- 1. Trips over objects
- 2. Slips on surfaces
- 3. Collisions/carrying weight

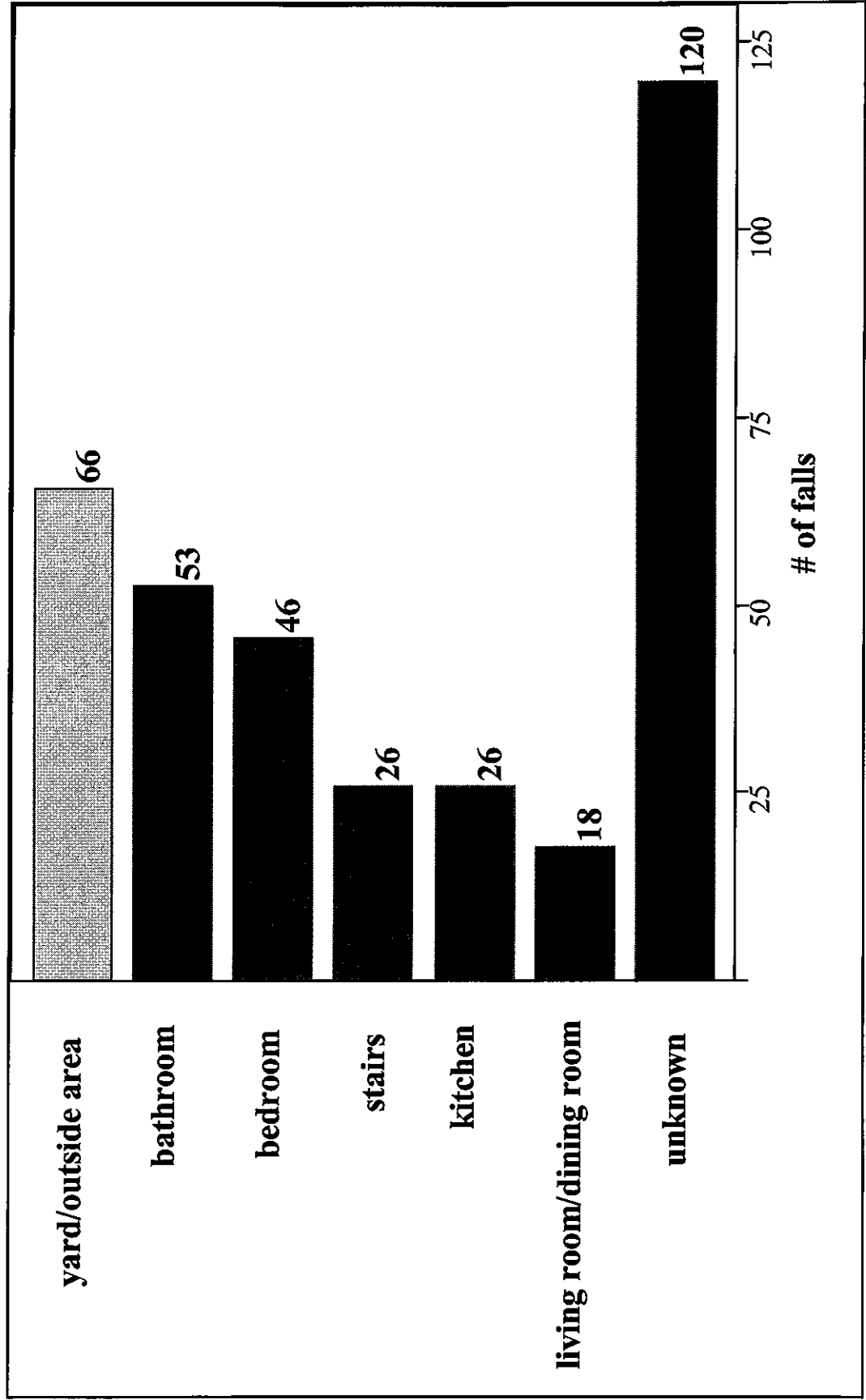
- Intrinsic (or personal)

- 1. Loss of balance
- 2. Transfers (chairs & beds)
- 3. Mobility/health failure (“legs gave out”)
- 4. Loss of consciousness

Falls in the elderly: location.



Falls in the elderly: area of house



Data summary

Who? Risk increases with age

Men: higher death rates, women hospitalizations

Where? Deaths: no significant county differences

**Hospitalizations (femur fractures):
generally higher rates in urban Honolulu**

When? Mostly daylight hours; esp. mid-day

Why? Poor information for fatalities and hospitalizations.

**EMS data: Most probably multi-factorial causes;
importance of intrinsic and extrinsic factors**