Fall Prevention: Translating Knowledge Into Action

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Falls Among Older Californians: What Public Health Surveillance Tells Us

Roger B. Trent, Ph.D.
Chief, Injury Surveillance and Epidemiology Section
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What is Public Health Surveillance?

• Captures health events (such as falls) in a geographically defined population
• Tracks trends via continuous, standard data gathering
• Includes detail to describe risk factors (age, sex, co-morbidities)
• Often based on “administrative data” like hospital discharges data bases
Fall Surveillance Resources in California

- **Death files** are from death certificates. A national system covering all states.
- **Hospital chart files** give the reason for the admission and the care given.
- **ED visit files** are like hospital files.
- **EMS “run sheets”** will tell us about the first medical contact with the patient, including “no transports”. System is being built now.
Fatal Fall Injuries

• Only where fall is recent and clearly the cause of death.
• Some information on risk factors (age, sex, race).
• No information on fall history, condition, meds.
Hospitalized & ED Fall Injuries

• No undercount of serious injuries, because you cannot delay care.
• Some over counts of people who were “found down” but not injured.
• Good medical information (diagnoses, procedures, where discharged to (home, nursing facility, rehab, etc.)
• Not much on risk factors except demographics (age, sex, race)
Falls, All Ages, California 2006

Deaths

Nonfatal Hospitalizations

ED Visits
Falls overshadow hospitalizations for other leading types of injury, all ages, California 2006

- Falls: 102,504 hospitalizations
- MV Occupant
- Bicyclist
- Pedestrian
Fall Death Rates by Age, California 2004

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The graph shows the fall death rates by age group in California for the year 2004. The x-axis represents age groups from <10 to 80+, and the y-axis represents the number of deaths. The data shows a noticeable increase in death rates among older age groups, particularly those aged 70-79 and 80+.
Nonfatal Fall Hospitalizations, California Age 65+, 1991-2006

Up every year.
Now over 65,000.
Hip fractures: 90% due to low energy falls

“a hip fracture is a fragility fracture due to a fall or minor trauma in someone with weakened osteoporotic bone”
Beside hip fractures, brain injuries are a serious, common result of falls.

Public Health and Aging: Nonfatal Fall-Related Traumatic Brain Injury Among Older Adults—California, 1996—1999

Cross, Trent, Adekoya

Showed: Falls cause large numbers of traumatic brain injury in seniors and lead to poor outcomes.
Annualized Rate for Same-Level Falls, by Race/Ethnicity

Older white women have low bone mass density & are at very high risk of fracture.
Explosion in needs: Fall hospitalization discharge disposition, by age, California 2006

- Discharge to home
- Death or transfer

Crossover at 65 Years

Falls = 41% of all California injury hospitalizations
Data Availability

• EPICenter web site lets you build your own tables.
• Fatal and hospitalized nonfatal injuries. ED data to be added soon.
• www.dhs.ca.gov\epicenter
• Better: Google injury epicenter
Missing from these sources?

- Ability to track individual persons through these systems to describe “patient path”
- Specific information on important other factors such as fall history, adaptations, physical condition, environment, medications.
- No comparison information on people who do NOT fall. How are they different?
Surveys ask about recent falls, with or without injuries

- National Health Interview Survey
- California Health Interview Survey
- Behavioral Risk Factor Surveillance Survey
- California Women’s Health Survey
CHIS example: people who report multiple falls also report chronic health conditions

- Stroke: 23%
- Diabetes: 16%
- Heart disease: 16%
- No chronic conditions: 9%

Source: 2003 California Health Interview Survey
Thank You!

Questions?
Roger.Trent@cdph.ca.gov