



# Fall Prevention: Translating Knowledge Into Action

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# Falls Among Older Californians: What Public Health Surveillance Tells Us

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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 systems 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

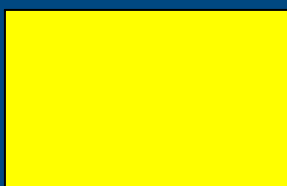
- Only where fall is recent and clearly the cause of death.
- Some information on risk factors (age, sex, race).
- No information on fall history, condition, meds.

# 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

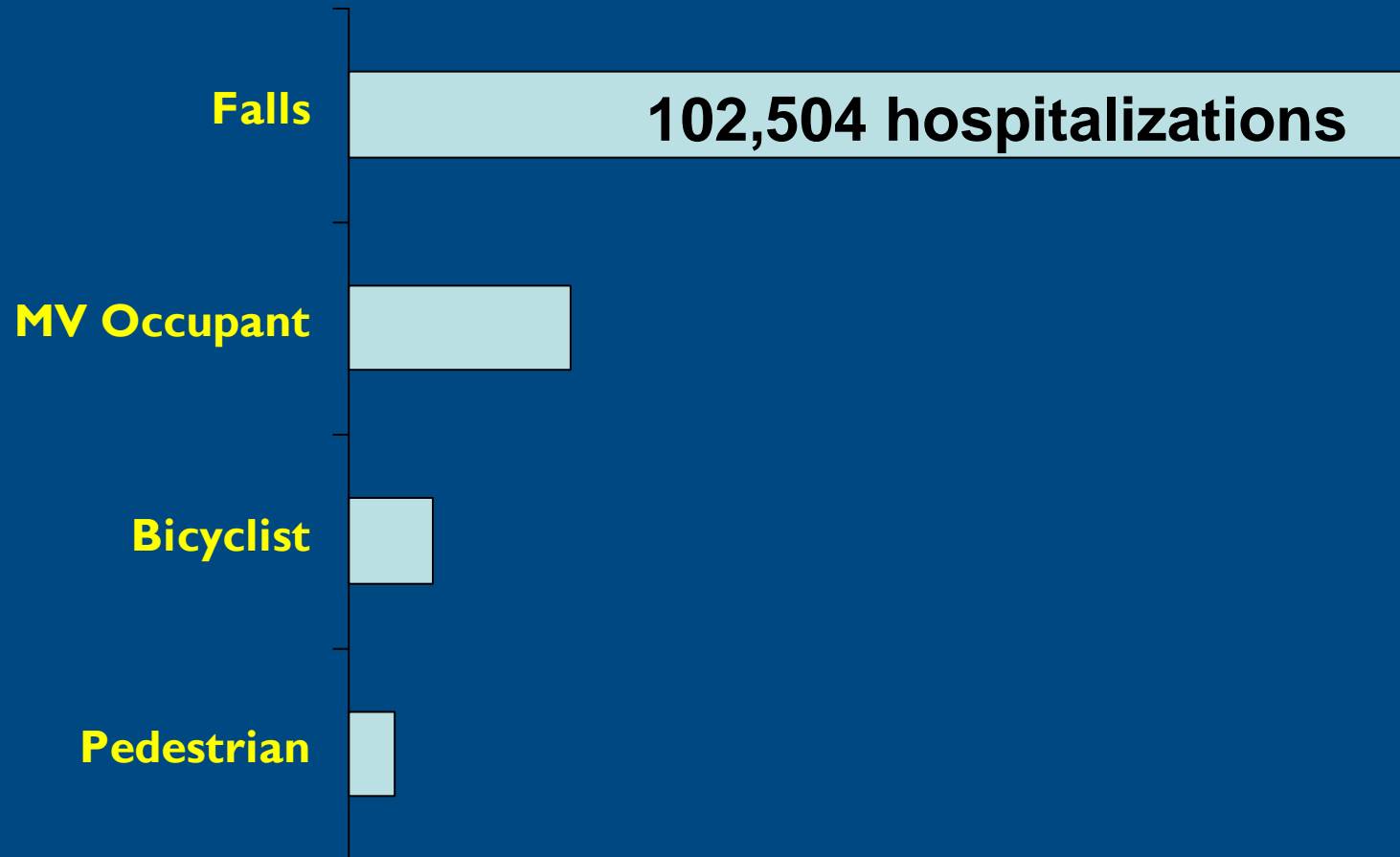


Nonfatal  
Hospitalizations



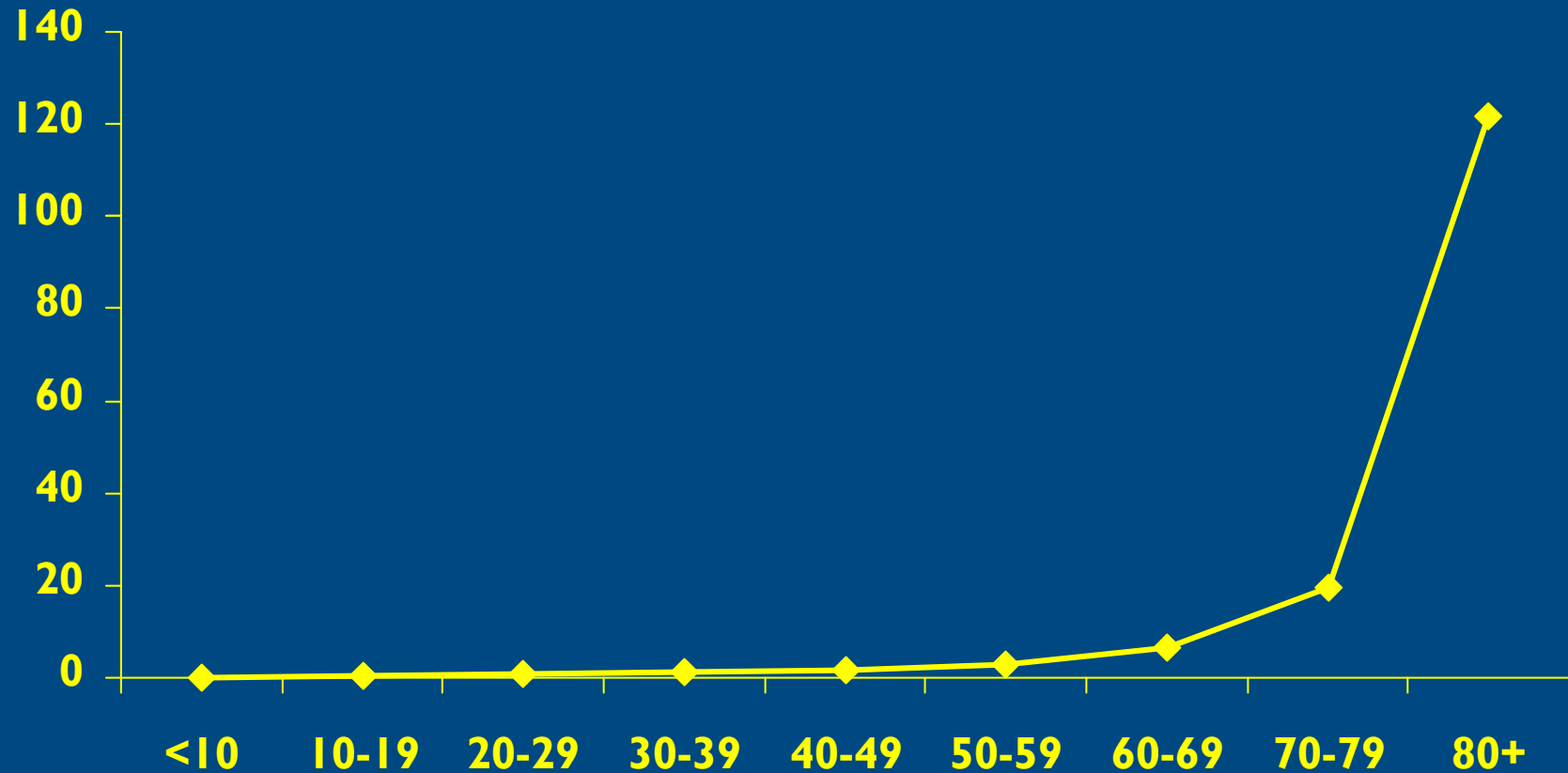
ED Visits

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

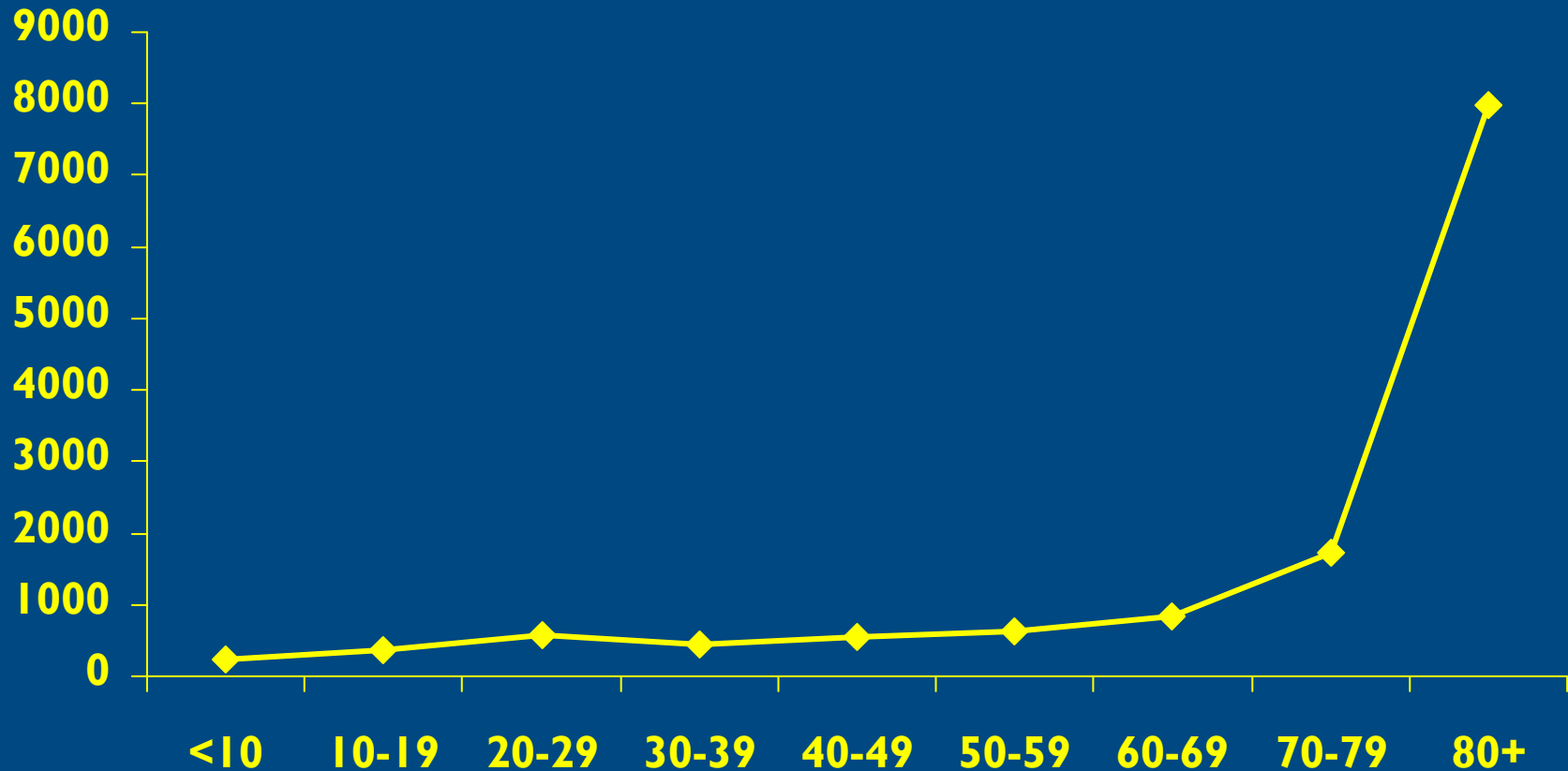




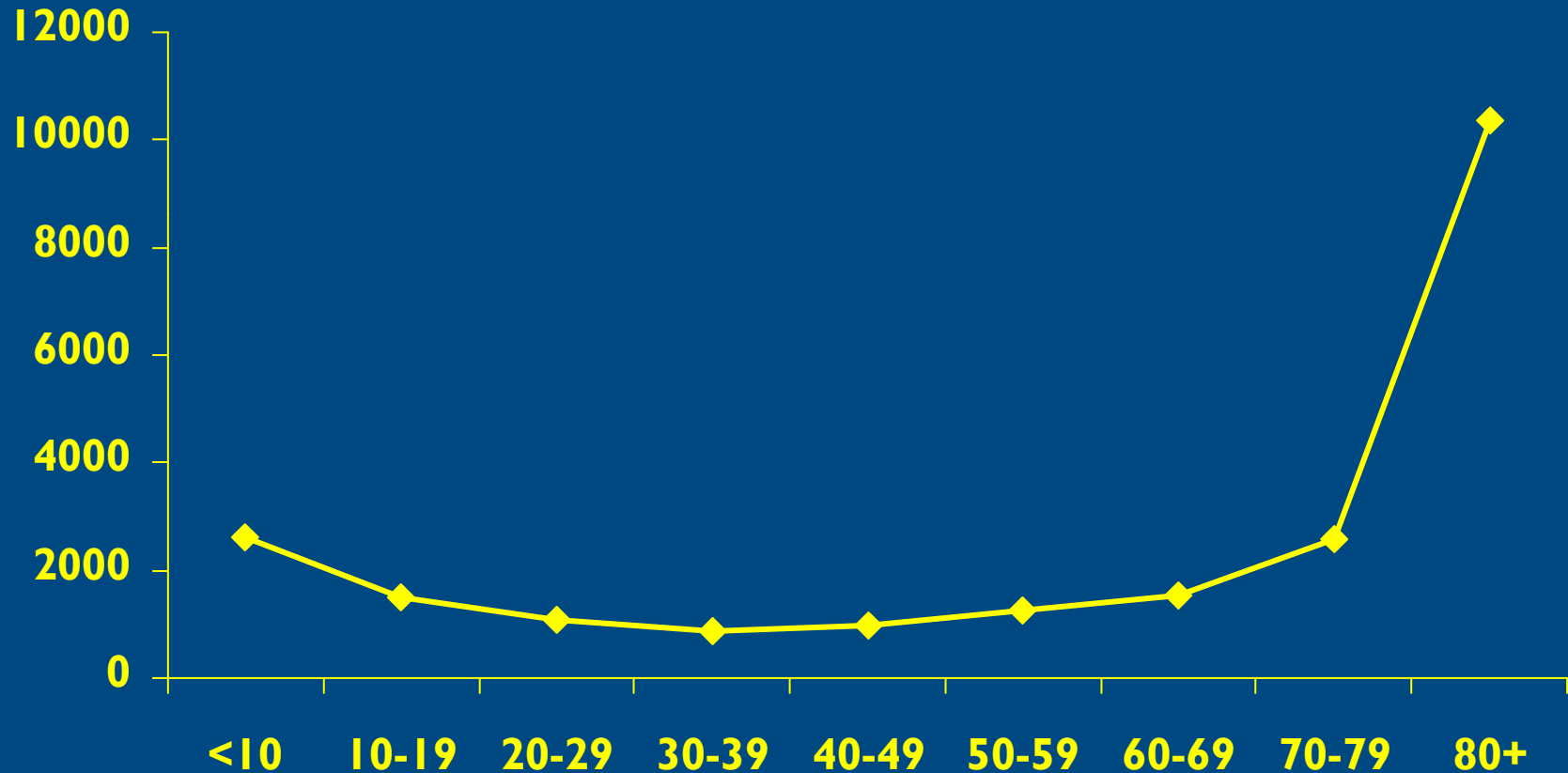
# Fall Death Rates by Age, California 2004



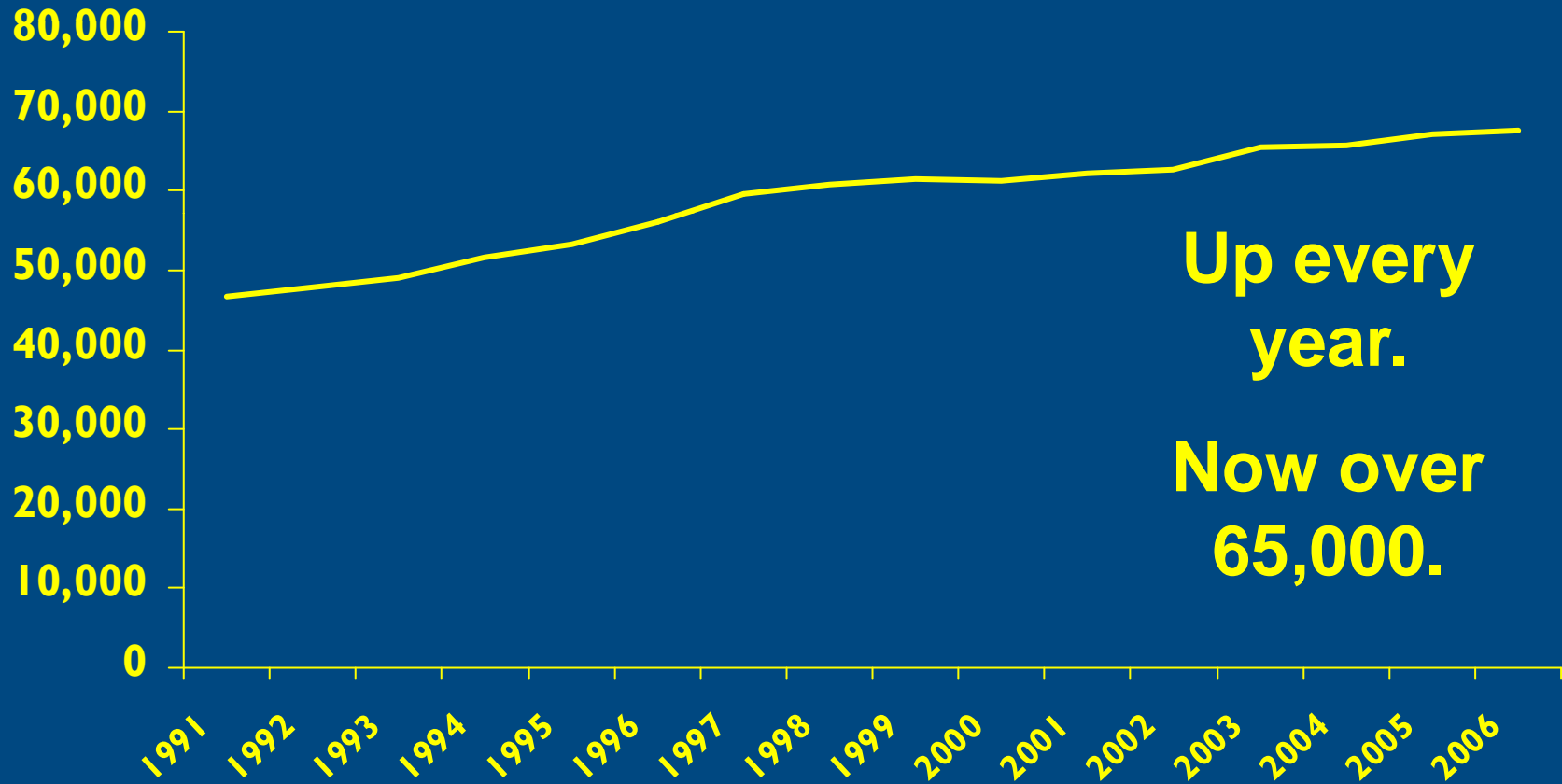
# Fall Nonfatal Hospitalization Rates by Age, California 2005



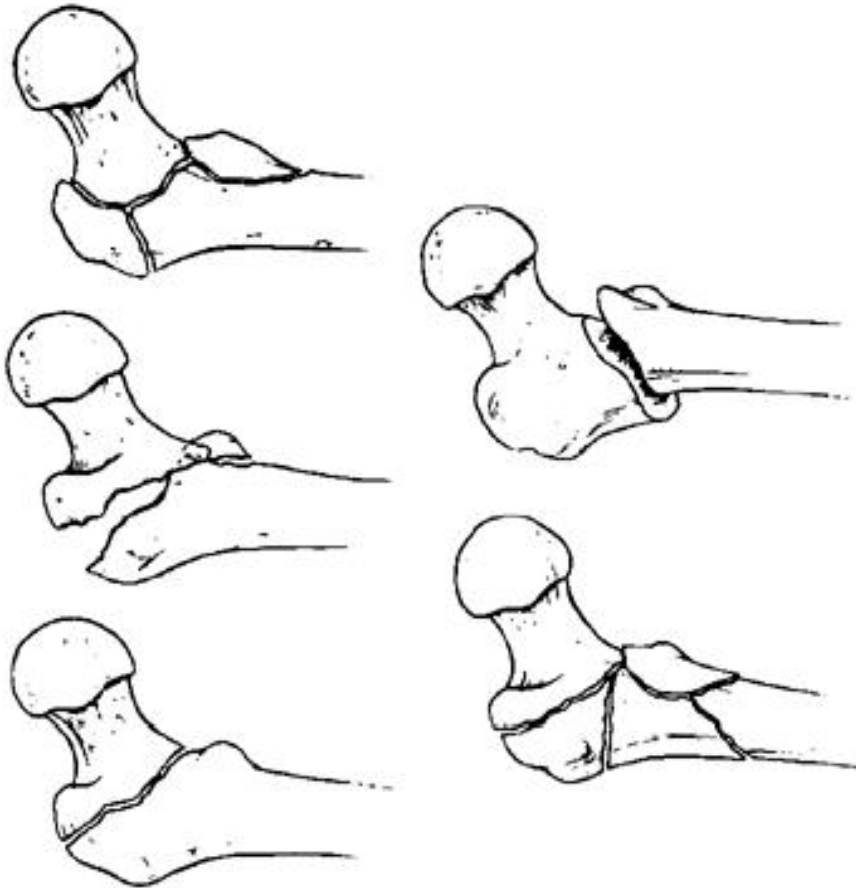
# Fall Nonfatal ED Visit Rates by Age, California 2005



# Nonfatal Fall Hospitalizations, California Age 65+, 1991-2006



# 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

**MMWR**

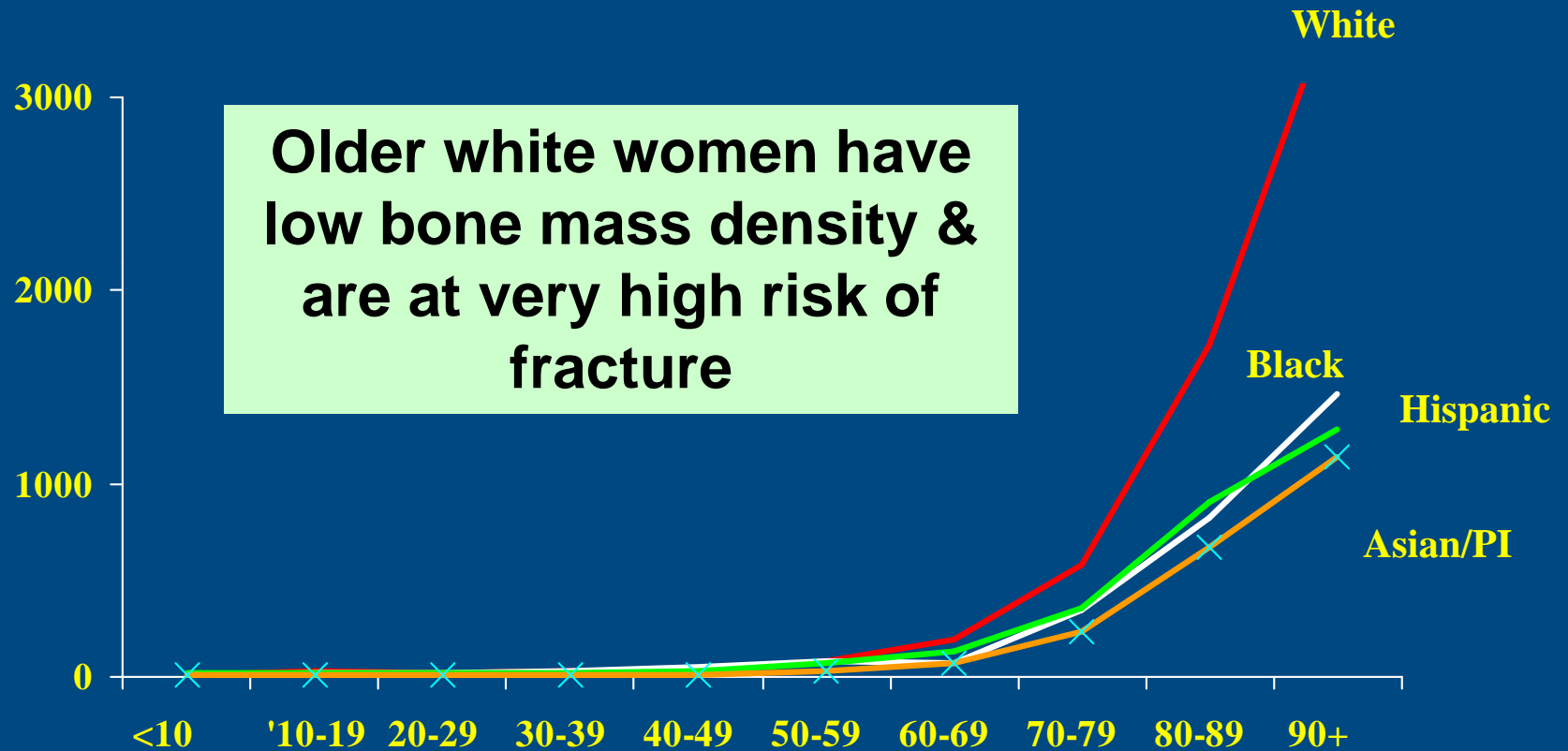
April 4, 2003 /  
52(13);276-278

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

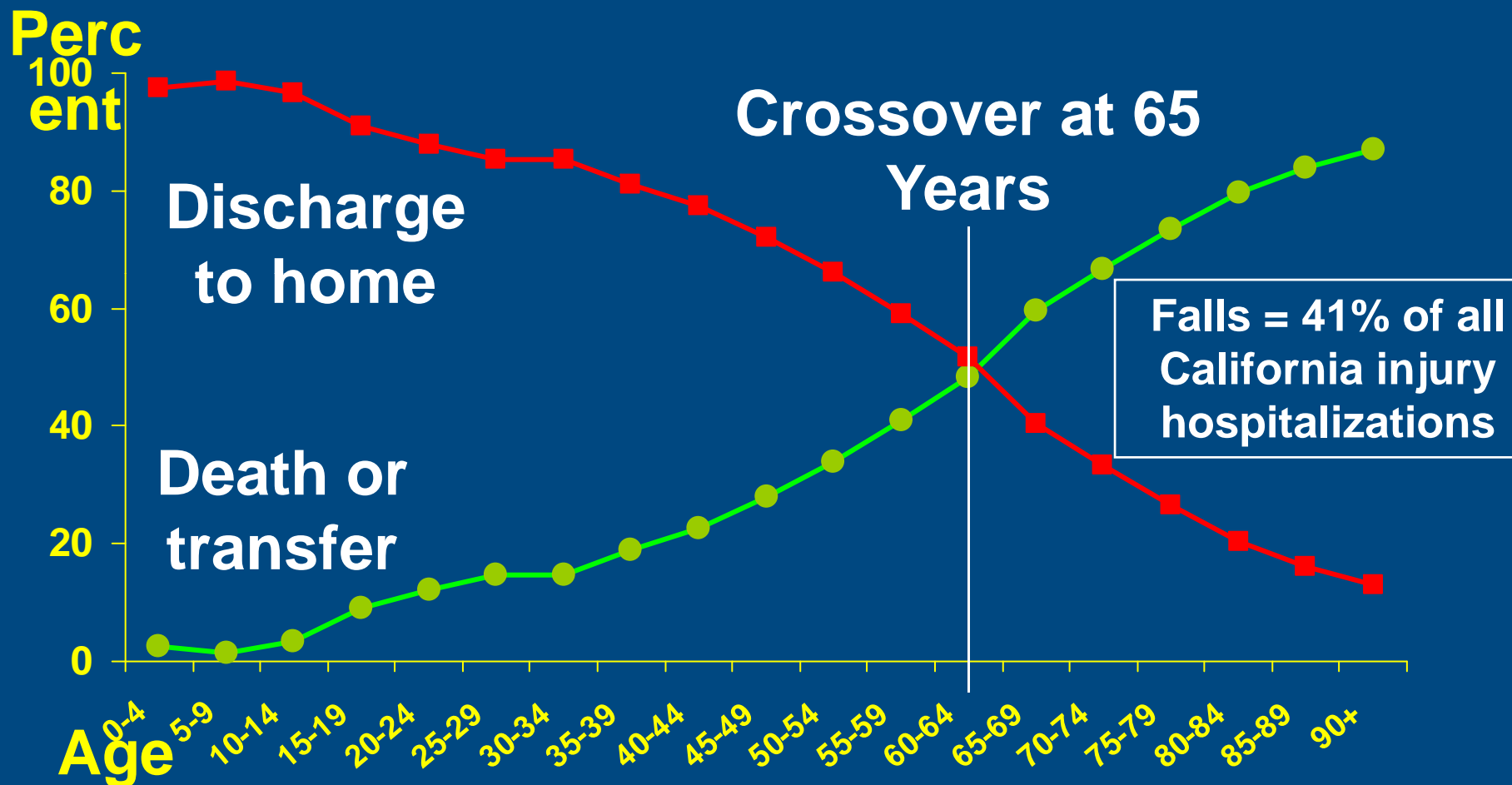
Cross, Trent, Adekoya

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



# Explosion in needs: Fall hospitalization discharge disposition, by age, California 2006





# 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](http://www.dhs.ca.gov/epicenter)
- Better: Google [injury epicenter](https://www.google.com/search?q=injury+epicenter)

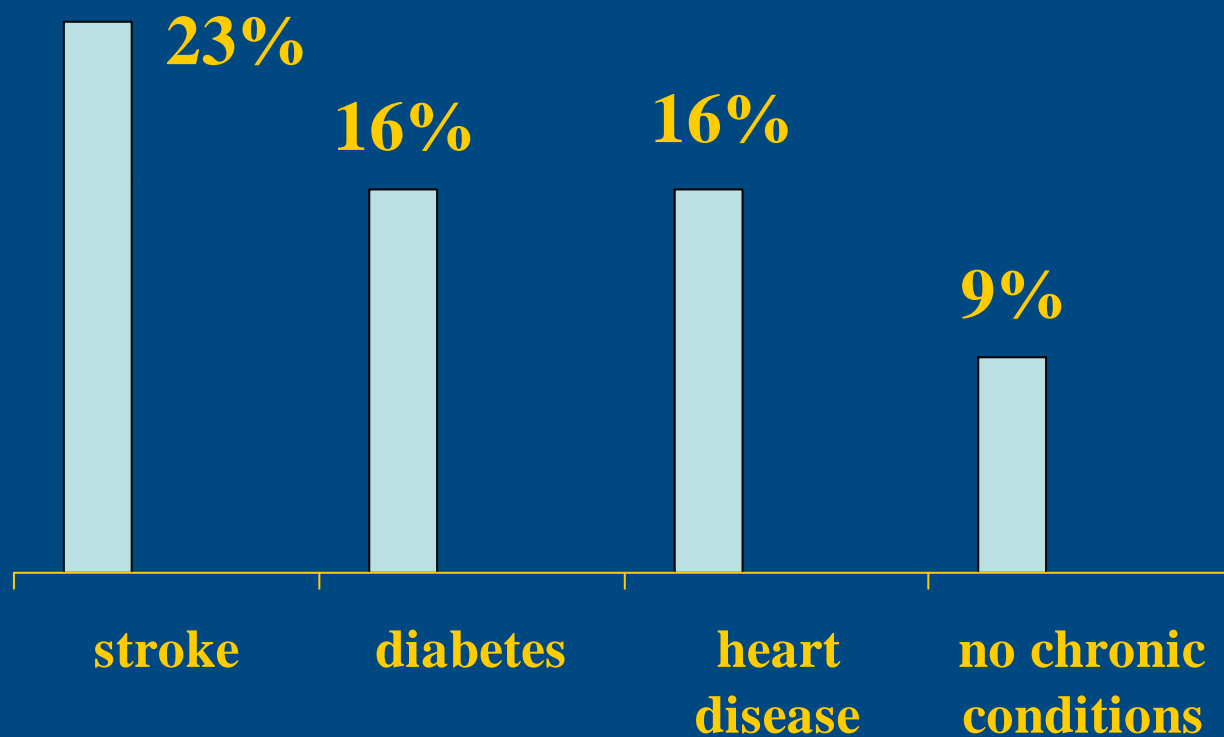
## Missing from these sources?

- 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



Source: 2003 California Health Interview Survey

**Thank You!**

Questions?

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