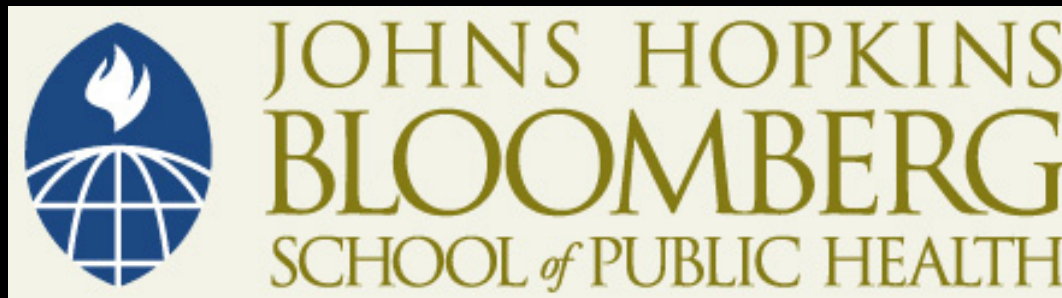


This work is licensed under a [Creative Commons Attribution-NonCommercial-ShareAlike License](https://creativecommons.org/licenses/by-nc-sa/4.0/). Your use of this material constitutes acceptance of that license and the conditions of use of materials on this site.



Copyright 2007, The Johns Hopkins University and Bruce Leff. All rights reserved. Use of these materials permitted only in accordance with license rights granted. Materials provided "AS IS"; no representations or warranties provided. User assumes all responsibility for use, and all liability related thereto, and must independently review all materials for accuracy and efficacy. May contain materials owned by others. User is responsible for obtaining permissions for use from third parties as needed.

# Design a LTC System

- Who gets coverage?
- What will you cover?
- How will you pay for it?

# Health Services for Older Persons - Long Term and Acute Care

Bruce Leff, MD

Associate Professor of Medicine

3 October, 2006

# Let's Think About...

- Community-based long term care
- Who the users are and the services they use
- Medicare home health care
- Various models CBLTC:
- Acute care issues and models

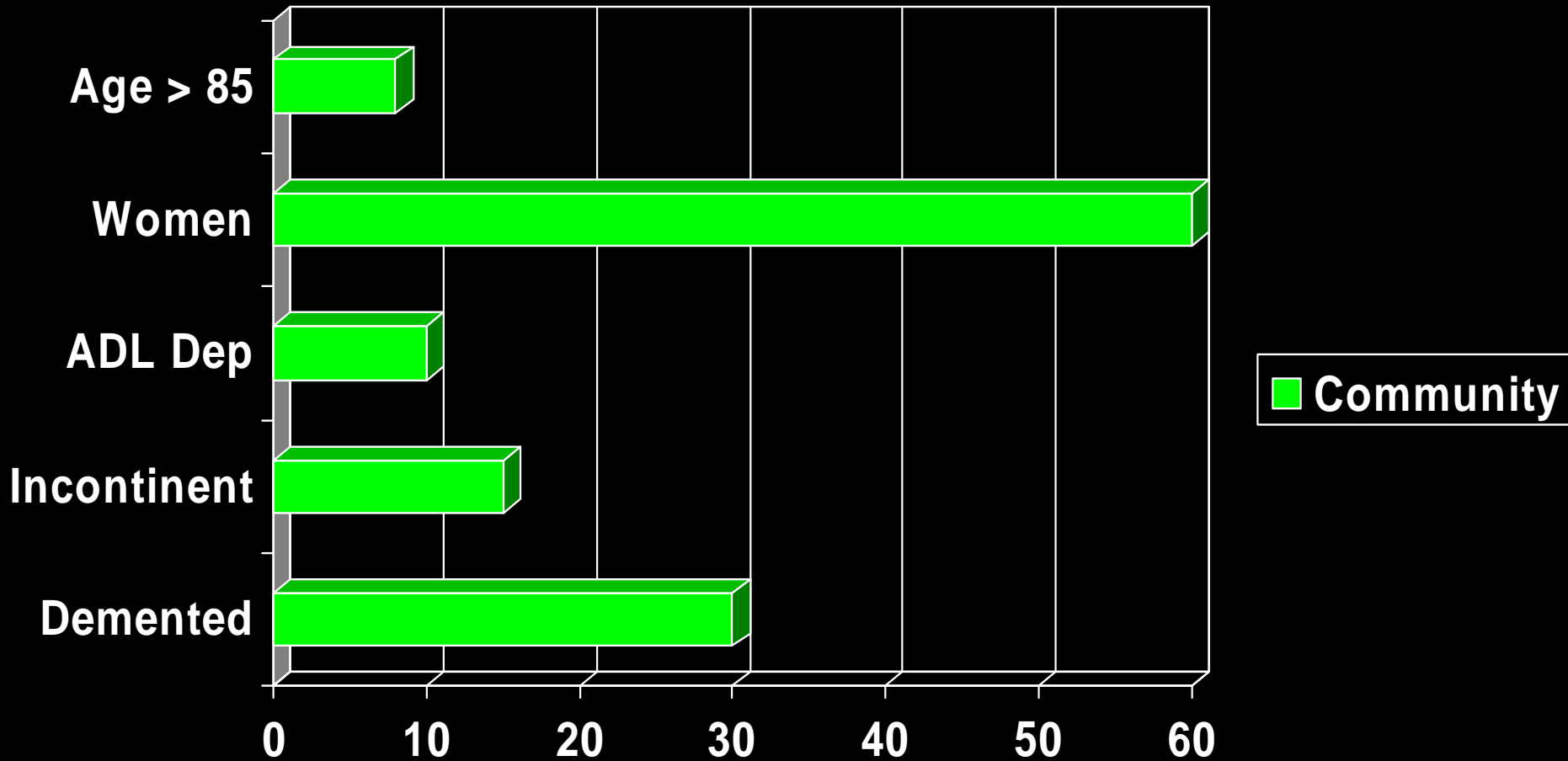
# Where Should / Could These People Live? What Will Determine Where They Live?

- 85 yo F: CHF, OA, vision, 4 ADLs, alone
- 78 yo F: DM, CVA, hemiparesis, bedbound, total ADL dependent, has family

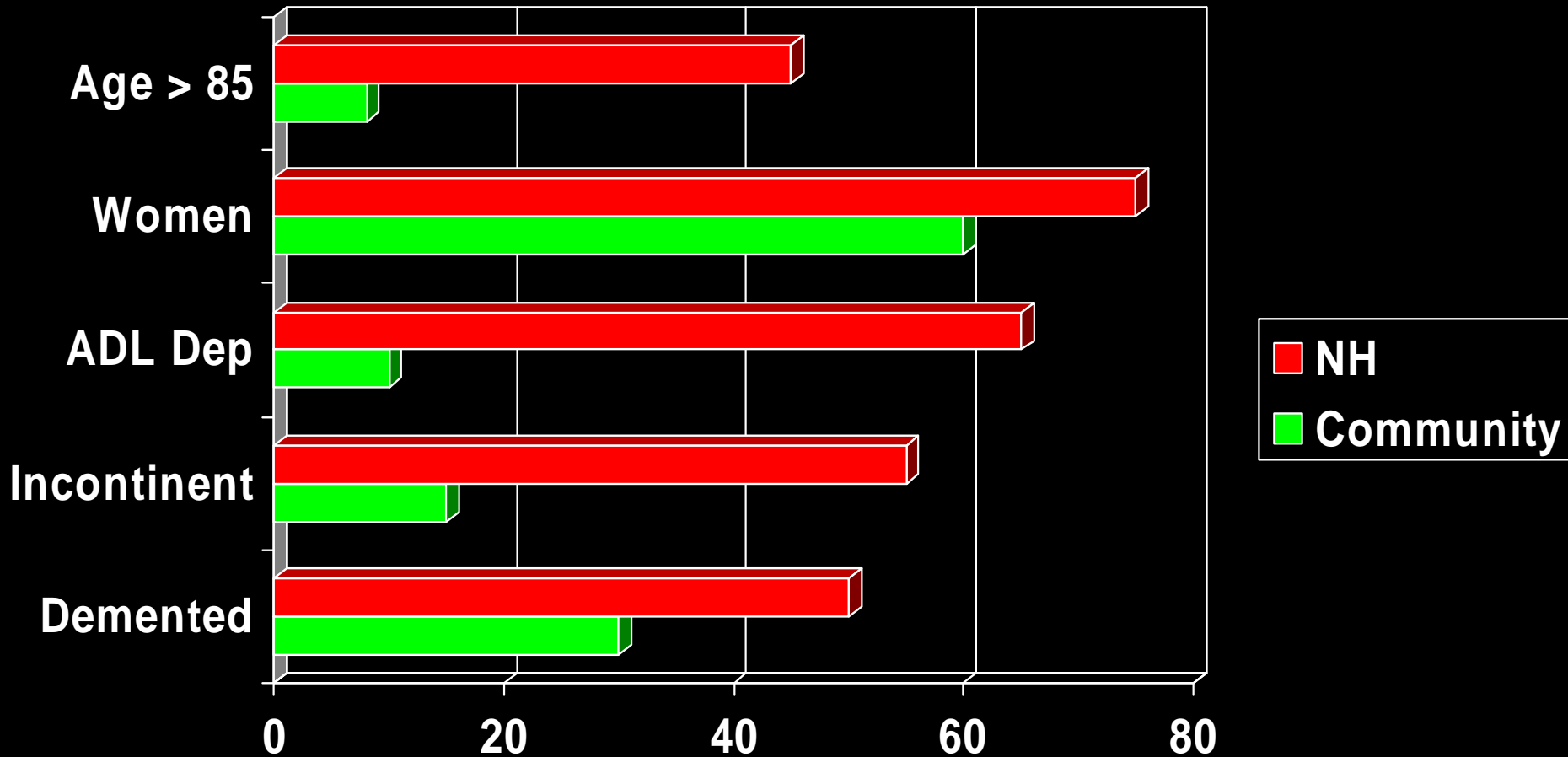
# CBLTC

- ADL or IADL assistance  $\geq$  3 mos / yr
- National Long Term Care Survey
  - ~20% elderly receive LTC in comm or instit
  - ~50% rely entirely on informal care
  - 80% CBLTC provided by informal family caregivers - women

# NH v Community v CBLTC

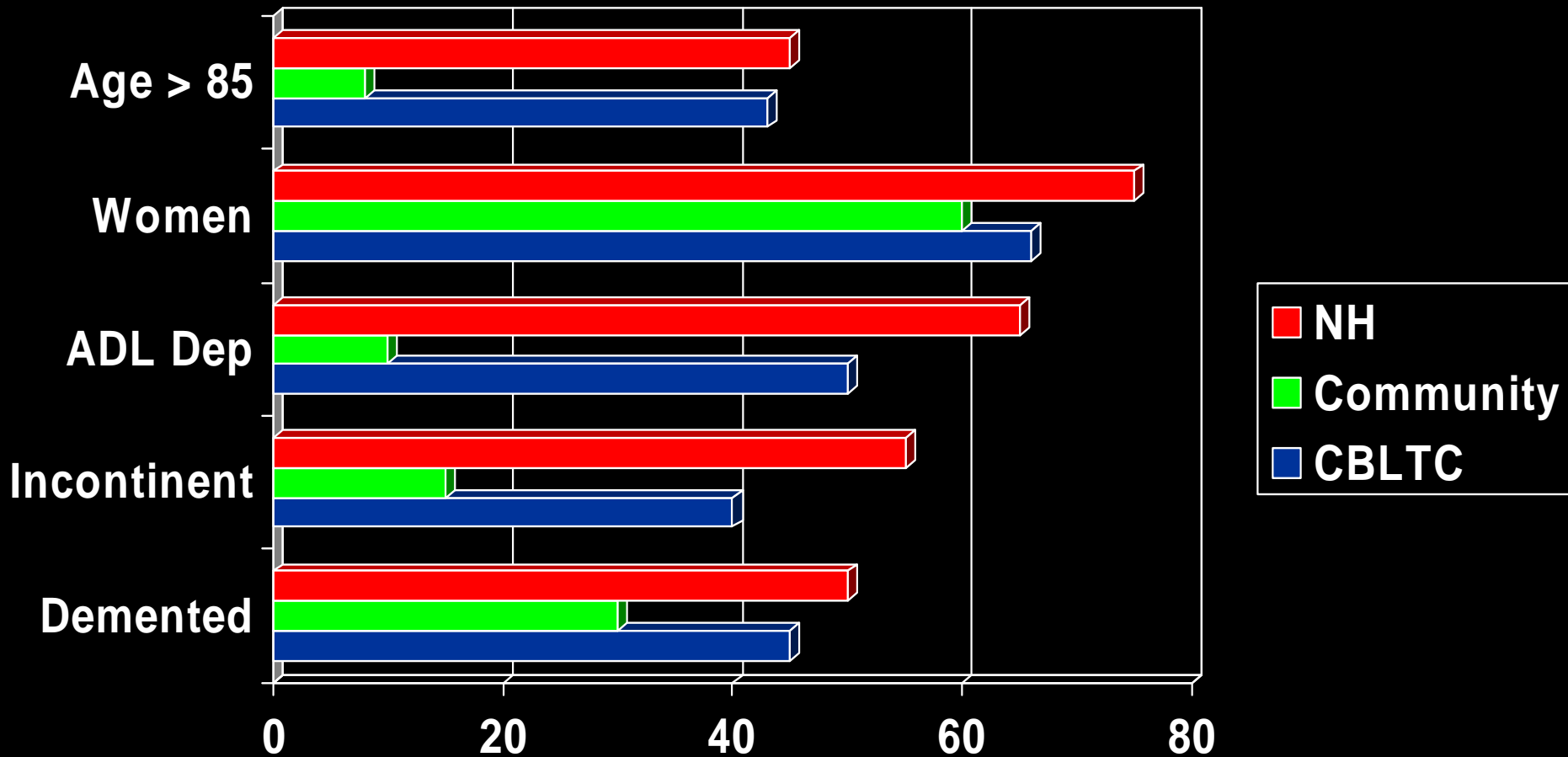


# NH v Community v CBLTC





# NH v Community v CBLTC

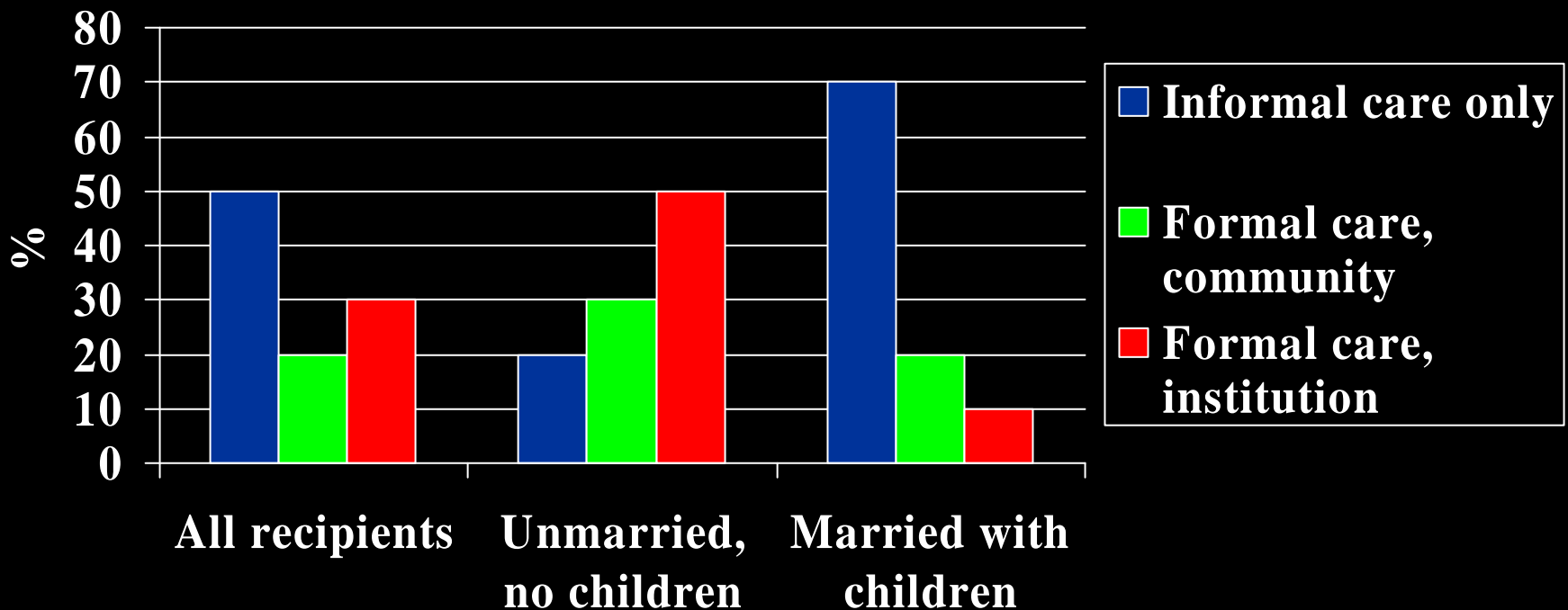


# Another Question

- Which type of community-based long term care services are more commonly provided?
  - A. Formal services
  - B. Informal services

# CBLTC: Formal v Informal

**Distribution of All Elderly LTC Population  
Between Formal and Informal Providers by  
Availability of Immediate Family**



# CBLTC: Formal v Informal

**Distribution of All ELderly LTC Population  
Between Formal and Informal Providers by  
Disability Level**

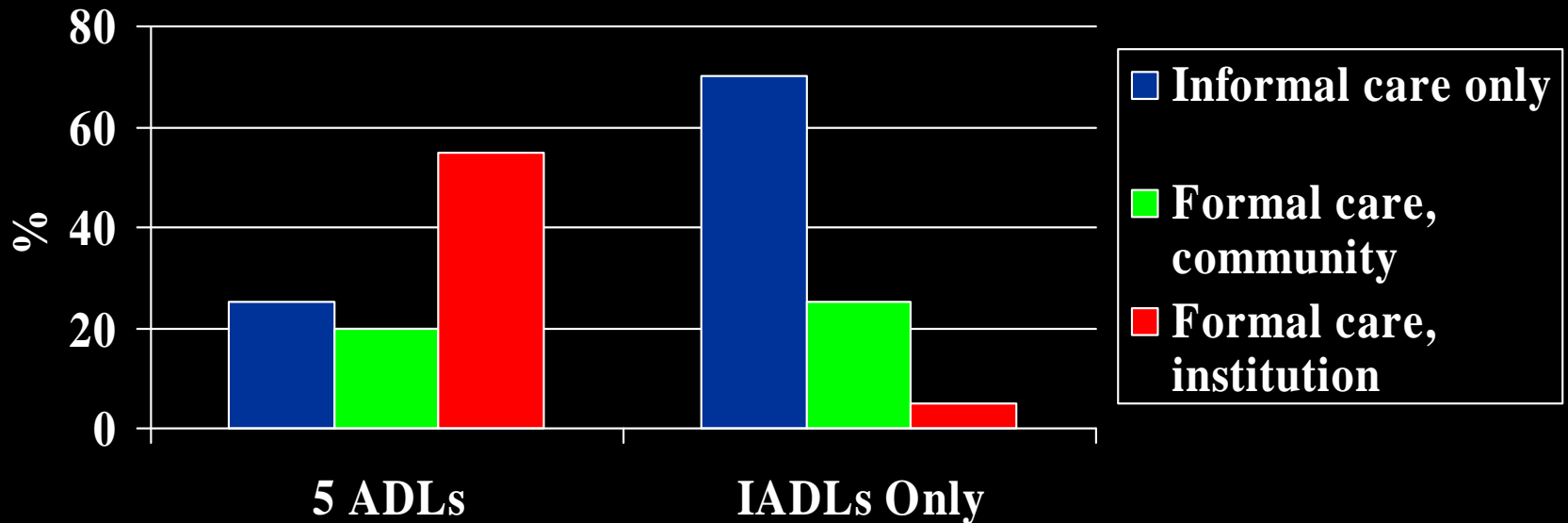
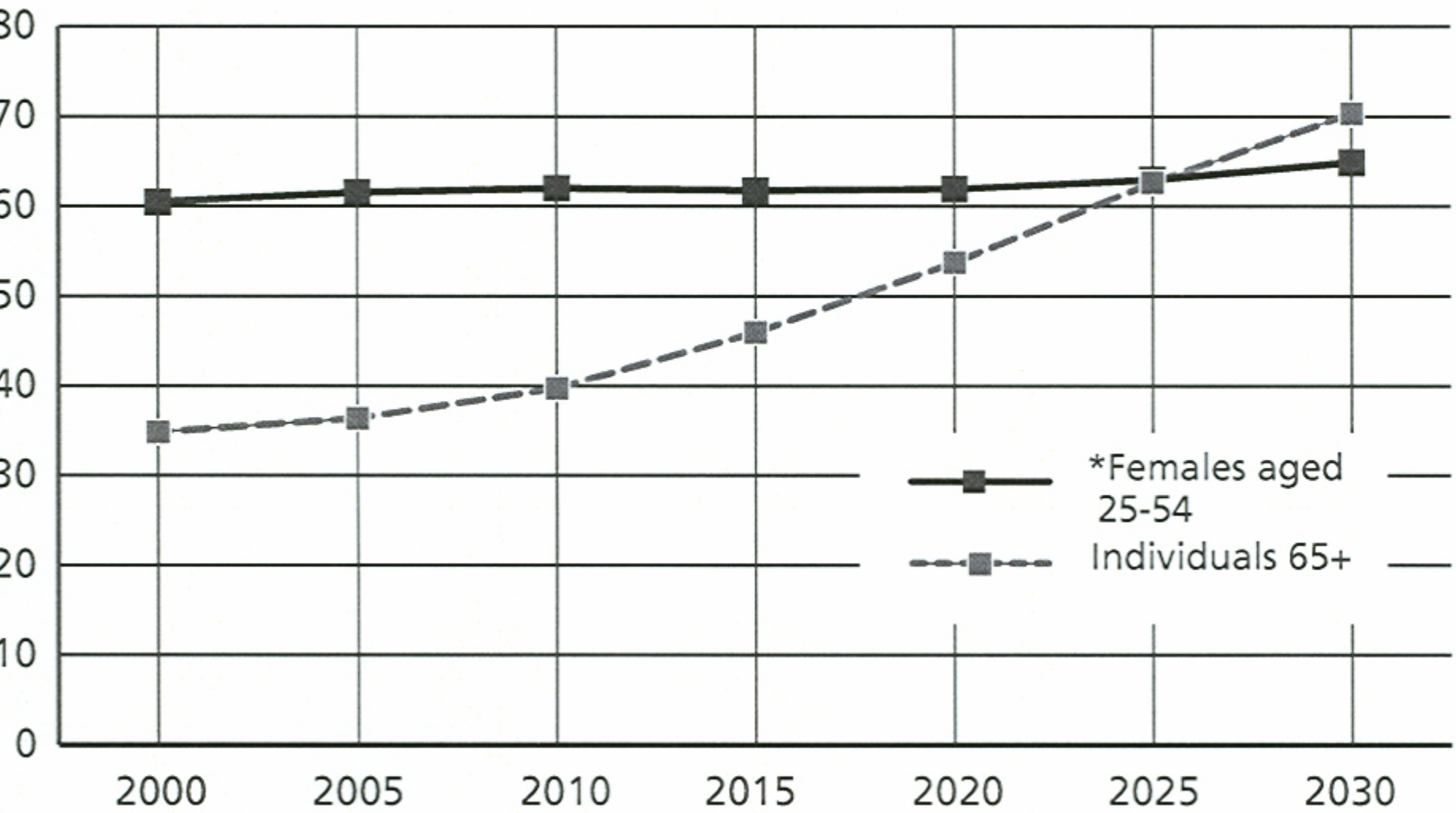


FIGURE 1

Women of Care-Giving Age\* and Individuals 65 and Over  
in the United States, 2000-2030  
(in millions)



Source: U.S. Census Bureau, National Population Projections, Summary Files, "Total Population by Age, Sex, Race, and Hispanic Origin"

# Question– Medicare Home Health Benefit

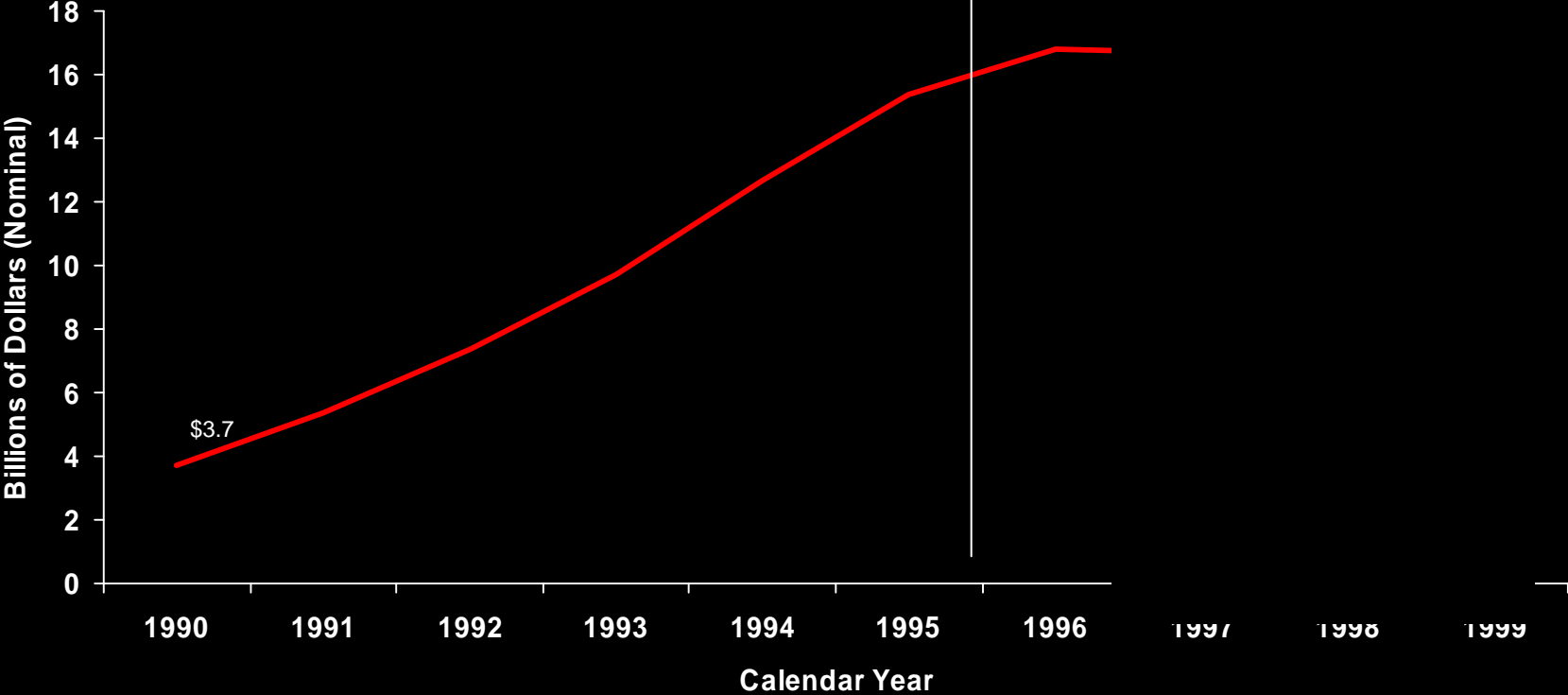
- Your 88 yo spouse has severe Alzheimer's disease, is uncooperative when it comes to bathing and you are too frail to force him/her to do so.
- True or false - your Medicare home health benefit will pay for a home health aide to come to your home to give your spouse a bath?

# Medicare HH Benefit

- Eligible
  - Homebound
  - Under MD care
  - Skilled RN or PT or speech need
- Skilled need
  - Assessment, teaching, or evaluation
    - Physical therapy or skilled nursing opens the door to the Medicare HH benefit
- Coverage
  - Skilled RN, PT, OT, aide, speech, SW / equip

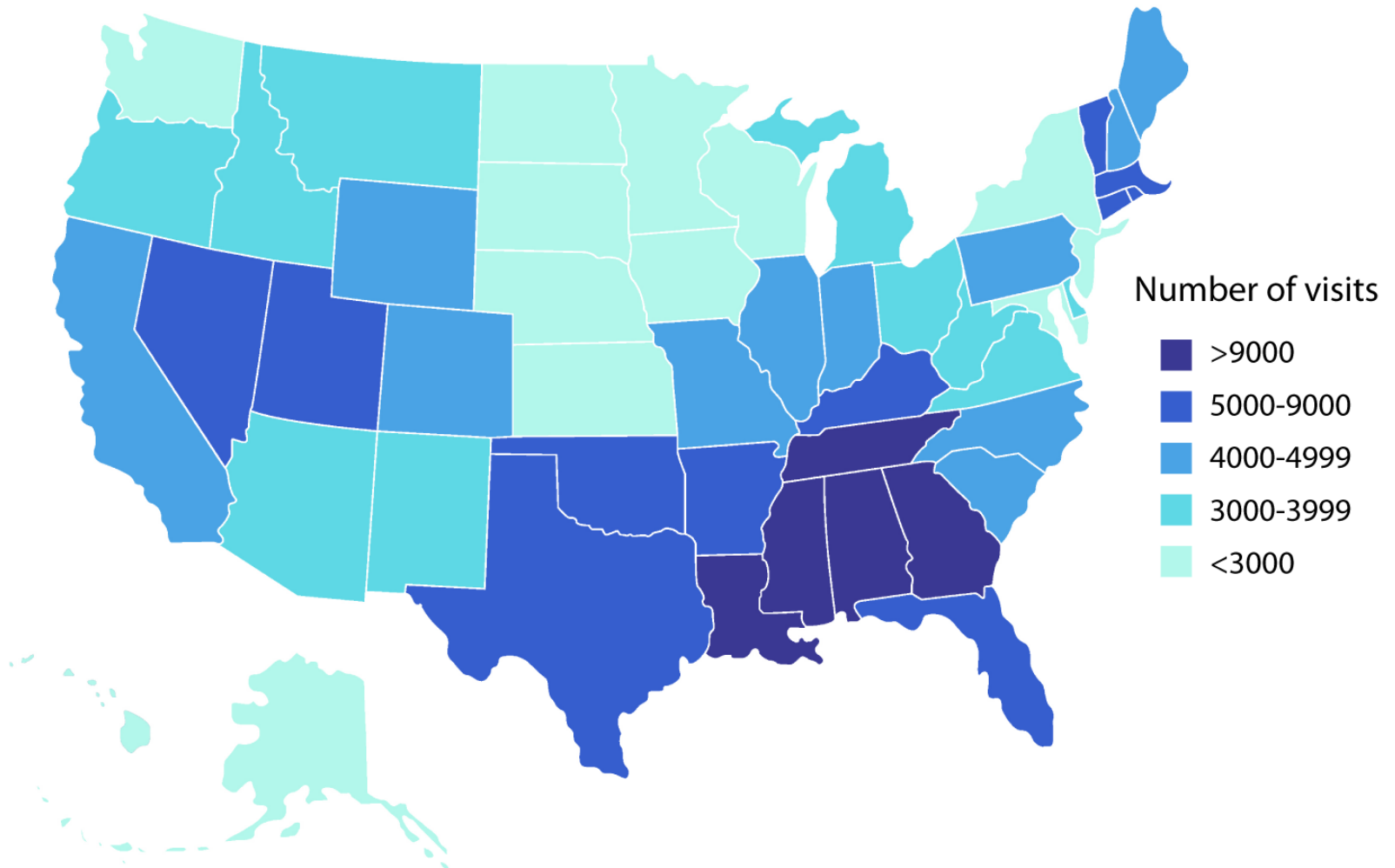


# Medicare Fee-for-Service Home Health Expenditures





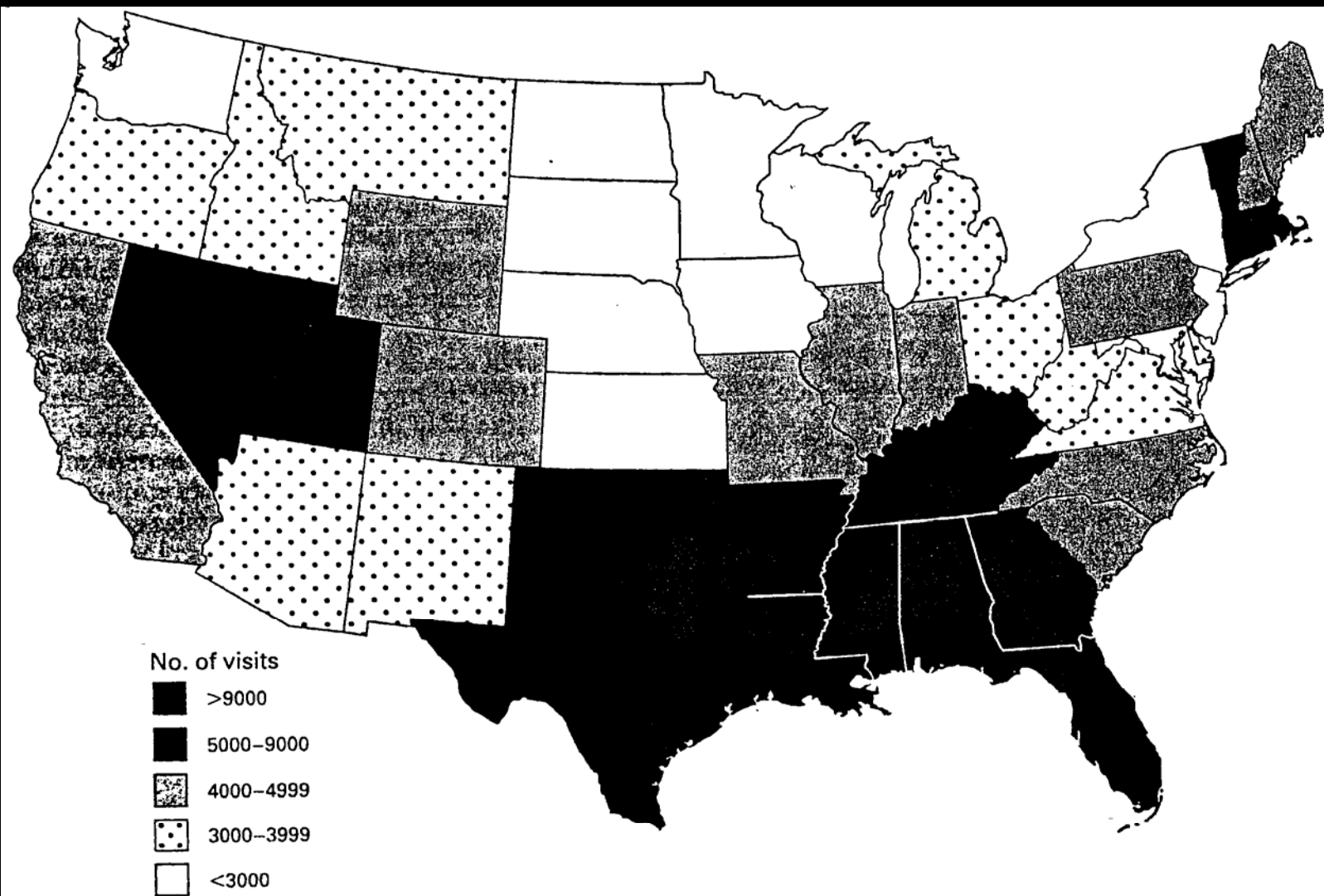
# Number of Home Health Care Visits per 1000 Medicare Enrollees\*, United States, 1993



\*Data have been adjusted for the age and sex of enrollees.

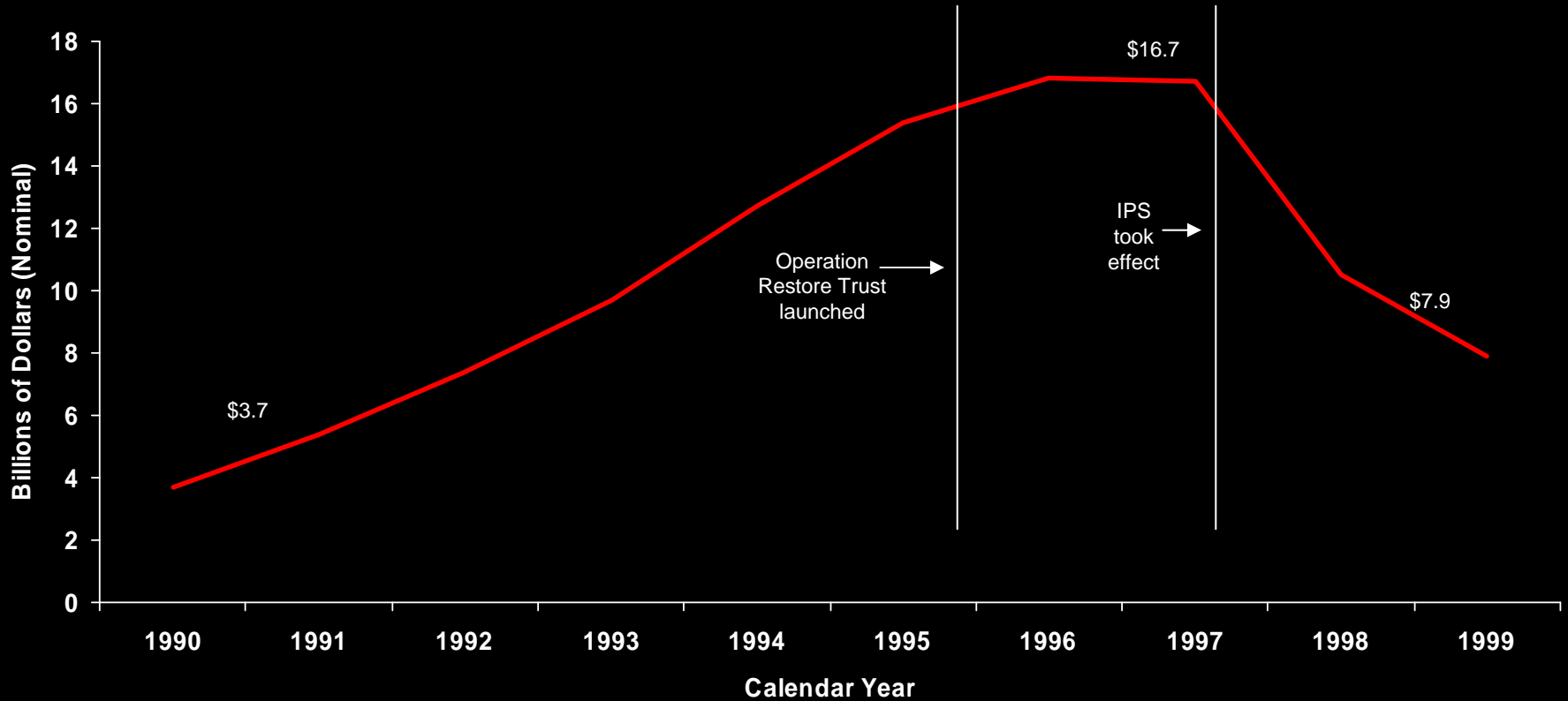


Data Source: Welch HG, et al. The use of Medicare Home Health Services. NEJM 1996;335:324-329



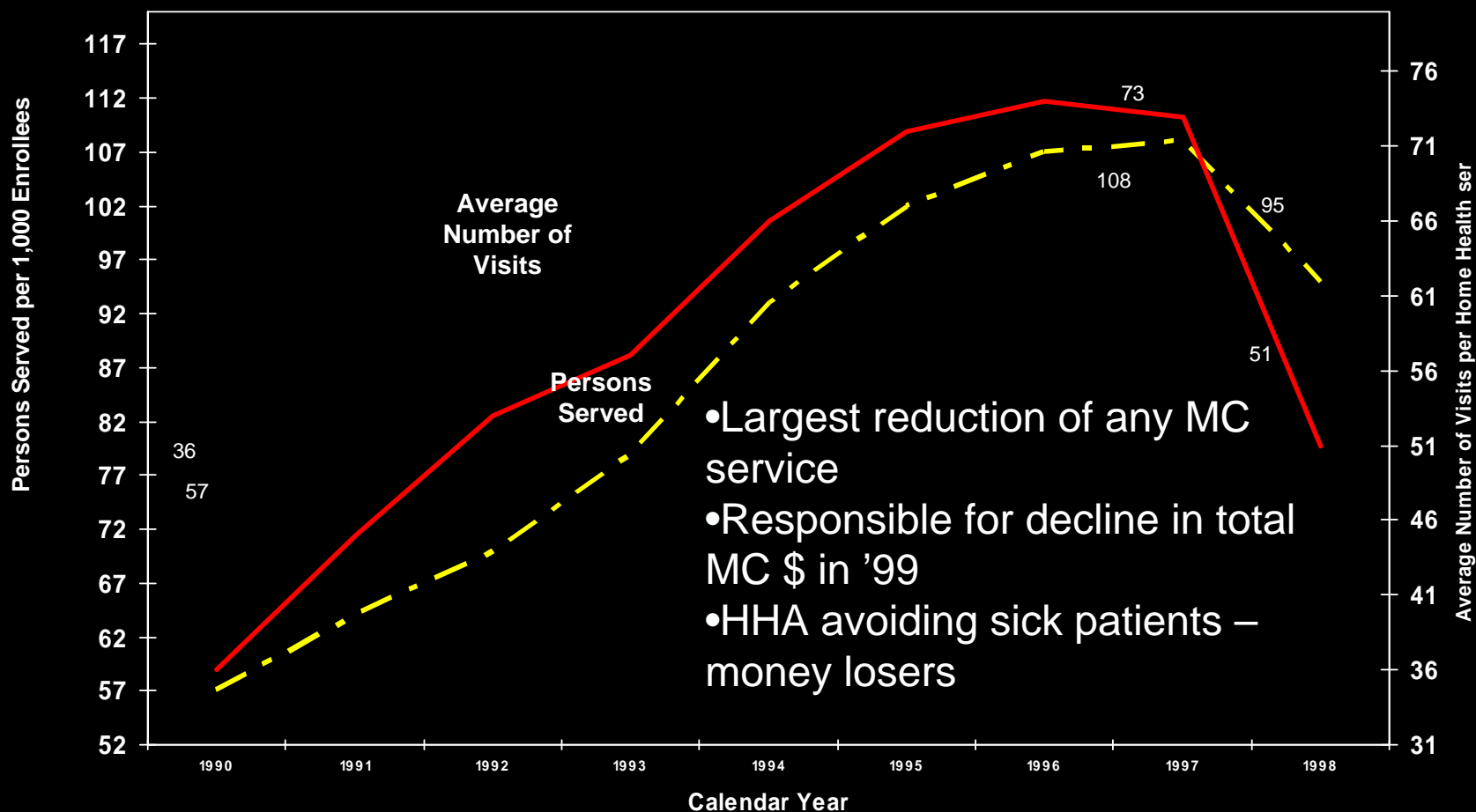
**Figure 3.** Number of Home Health Care Visits per 1000 Medicare Enrollees in the Contiguous United States in 1993. Data have been adjusted for the age and sex of enrollees. Both Alaska and Hawaii were in the lowest category.

# Medicare Fee-for-Service Home Health Expenditures



Note: IPS is the interim payment system created by Congress in the Balanced Budget Act of 1997. Operation Restore Trust was a comprehensive anti-fraud initiative sponsored by HHS.

# Persons Served and Average Number of Visits by Home Health Agencies



# What's the Big Deal?

## Effects of Home Care on:

“Health or personal care services delivered in a person's home”

Function?

Satisfaction?

Hospital use?

NH use?

O/P care use?

Total costs?

Mortality?

# Effects of Home Care

- |                      |                    |
|----------------------|--------------------|
| • Functional ability | None               |
| • Satisfaction       | Small transient ↑↑ |
| • Hospital use       | Slight ↑↑          |
| • NH use             | Slight ↓↓          |
| • O/P care use       | Slight ↑↑          |
| • Total costs        | 15 % ↑↑            |
| • Mortality          | Slight ↓↓          |

**No effects significant @  $p < 0.05$**



# Problems Evaluating CBLTC

- Study design difficulties
  - Allocating resources randomly
  - Severity of illness difficult to control for
  - Treatment and study groups differ
  - Attrition
  - Changes in health care system
  - Varied outcomes measured

# Home Visits to Prevent NHP & Fx Decline

- Preventive in-home visits, > 70 yo
- Screened 1349 abstracts
- 18 trials included
- Assessed trial quality
- 18 trials – 13,447 pts
- Heterogenous interventions, intervention personnel (most w/o MD), # f/u visits (0-12), CGA v non CGA

*Stuck, JAMA 2002;287:1022*



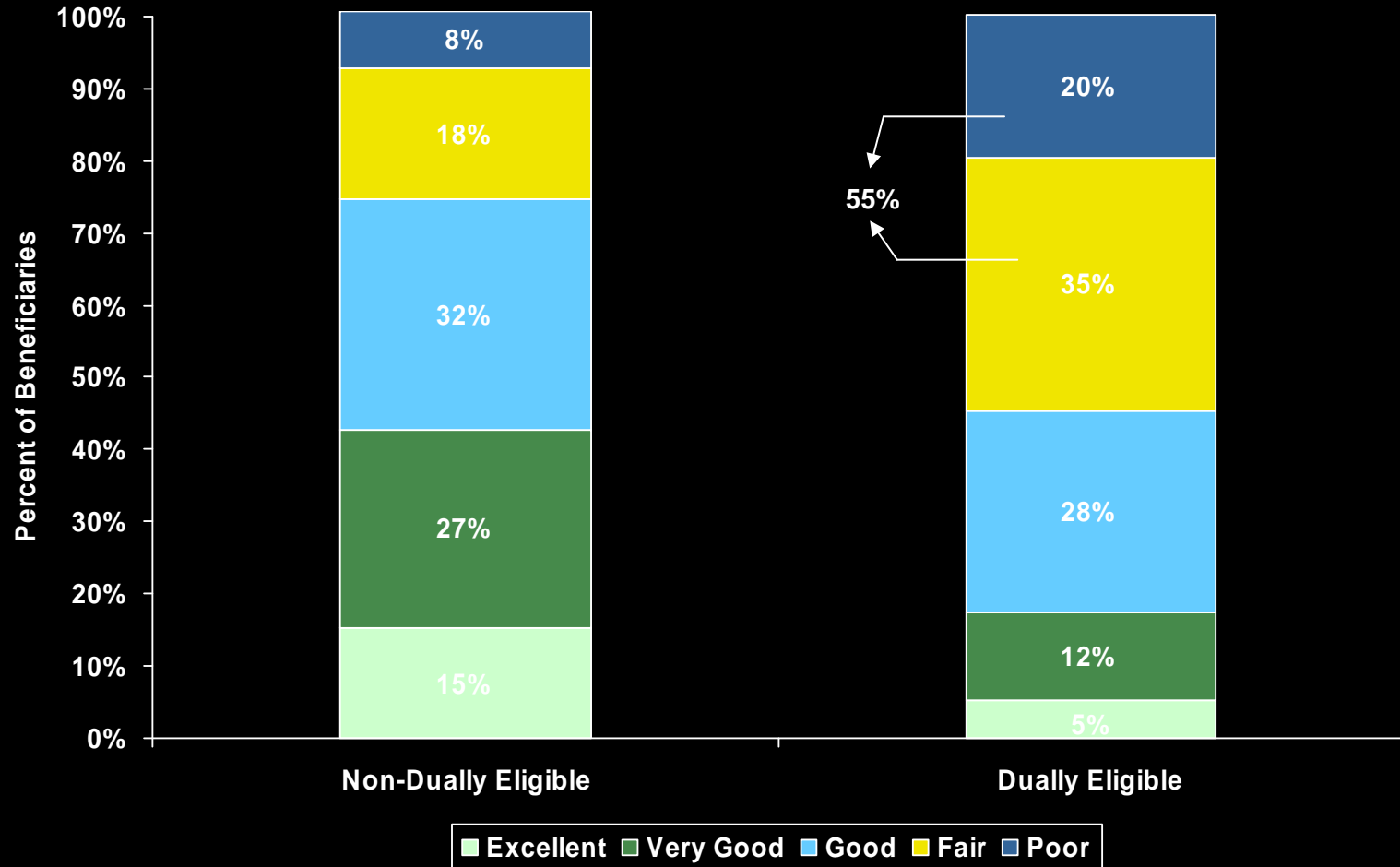
Stuck et al. JAMA 2002;287:1002-8

- **Conclusion:** Preventive home visitation programs appear to be effective, provided the interventions are based on multidimensional geriatric assessment and include multiple follow-up home visits and target persons at lower risk for death. Benefits on survival were seen in young-old rather than old-old populations.

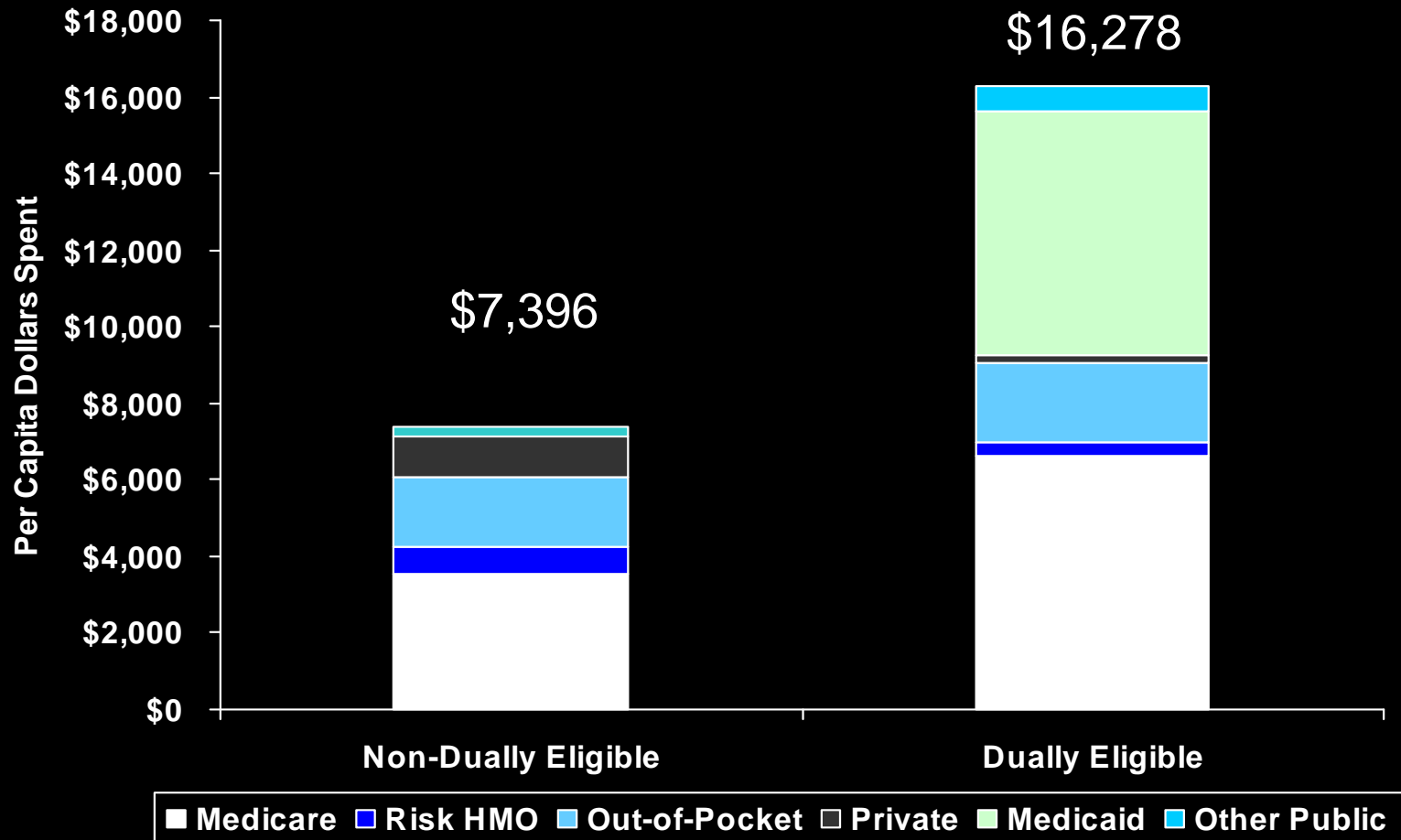
# Program for All-Inclusive Care for Elderly - PACE

- Multidisciplinary day hospital model - On Lok
- Serves dually eligible - MC + MA who are nursing home eligible
- What is special about the dually eligible?

# Self-Reported Health Status of Dually Eligible and Non-Dually Eligible Beneficiaries, 2000



# Total Health Expenditures by Payer for Dually Eligible and Non-Dually Eligible Beneficiaries, 1999



# Integrated Financing – The Key

## **MEDICARE**

2.39 x AAPCC

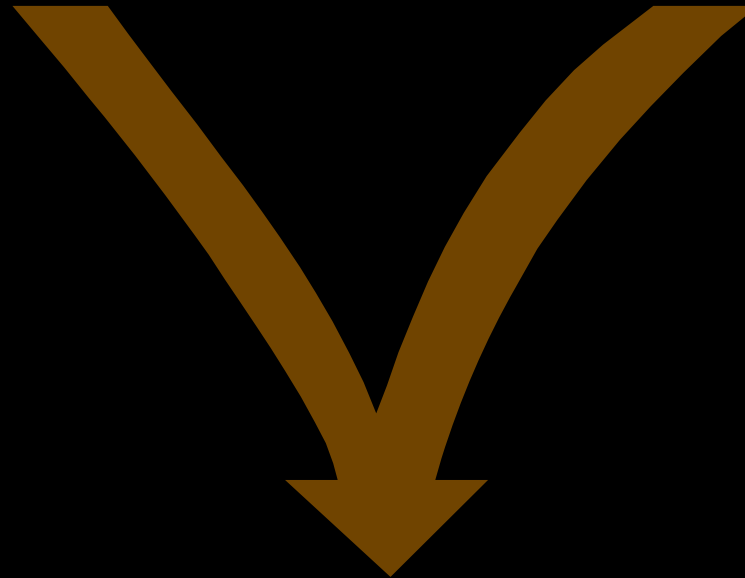
1/3 PACE \$

## **MEDICAID**

and/or **PRIVATE  
PAY**

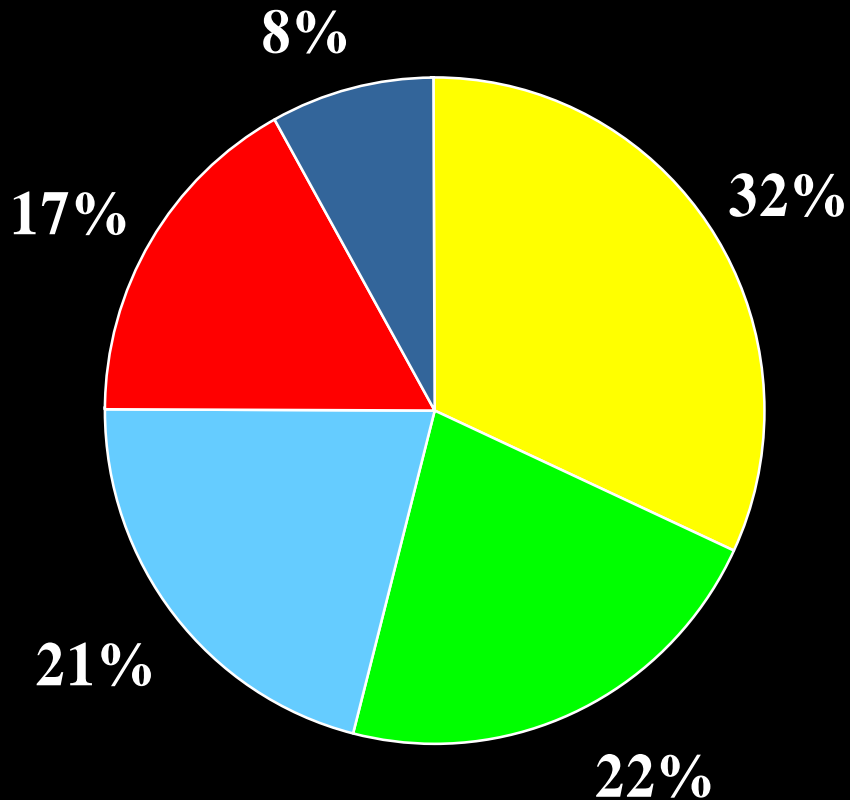
85 - 95% of  
cost of FFS care of  
comparable  
population

2/3 PACE \$



**MONTHLY  
CAPITATION**

# PACE Expenditures



■ **Center-Based Services: 32%**

■ **In-Home Care: 22%**

■ **Admin&Plant: 21%**

■ **Inpatient Services: 17%**

■ **Other Medical Services: 8%**

# PACE

- Outcomes

- Ave pt: 80 yo, 7.8 med conditions, 2.7 ADL
  - 40% live alone
  - 42% demented
- 2500 hospital days / 1000 / yr (480 - 5000)
- 1 MD visit/mo, 6 nurse visit/mo, low subspec use
- 5% PACE days are NH days (~ 4-5% / yr)

# Assisted Living Community

- Not independent, don't need 24 hr skilled nursing
- Usually offer some help with ADL, IADL
- No set definition of services - wide variation
- Monthly: \$1500-3500



# Continuing Care Retirement Communities (CCRC)

- Long term contract: guarantees lifelong shelter and access to specified health services
- Lump sum payment and monthly fee
- If you get sick, needs will be met
- Usually independent on entry

# Consumer Directed CBLTC

- Services usually provided by HH agencies
- New programs allow recipients to independently arrange and supervise personal assistance services at home
- Rationale: advocacy, autonomy, demedicalization, costs, shortage of HHA workers
- Can hire family or friends

# Cash and Counseling for MA Personal Care Services

- Advocates
  - Individuals, not agencies are best suited to make decisions about care and people they hire
  - Reduce NH placement
- Critics
  - Misuse funds intended for care
  - Receive inadequate care
  - Use cash benefit to pay family member to provide care once provided for free
  - Raise total MA costs

# Cash and Counseling

- Treatment group receive fewer hours of unpaid care than controls
- But, majority of hours still provided by unpaid caregivers – c/w easing burden on family
- Long term effect on spending still unknown

# Acute Care for Elderly

# Injuries in Older Patients in Acute Hospital – Harvard Medical Practice Study

	65-74	75-84	≥85	RR ≥65/<65*
Diagnostic mishap	3.7	6.3	7.4	1.7
Therapeutic mishap	4.9	5.6	16.6	4.1
Drug complication	12.8	12.0	9.2	2.4
Falls	1.2	4.2	7.4	10
Operative complications	27.7	30.3	48.1	2.3

# What is an ACE Unit?

- Create physical environment to foster independent function
  - Carpets, clocks, calendars, toilets, lighting, common area
- Multidisciplinary assessment and care
  - Led by primary nurse. Guidelines focus on geriatric syndromes
  - Daily rounds by team – focus on fx, early d/c planning
- Medical review
- Comprehensive discharge planning including home assessment

# ACE Results

- RCT
  - Hypothesis: pts admitted to ACE unit would be more independent in ADLs at discharge
  - N = 661, age  $\geq 70$

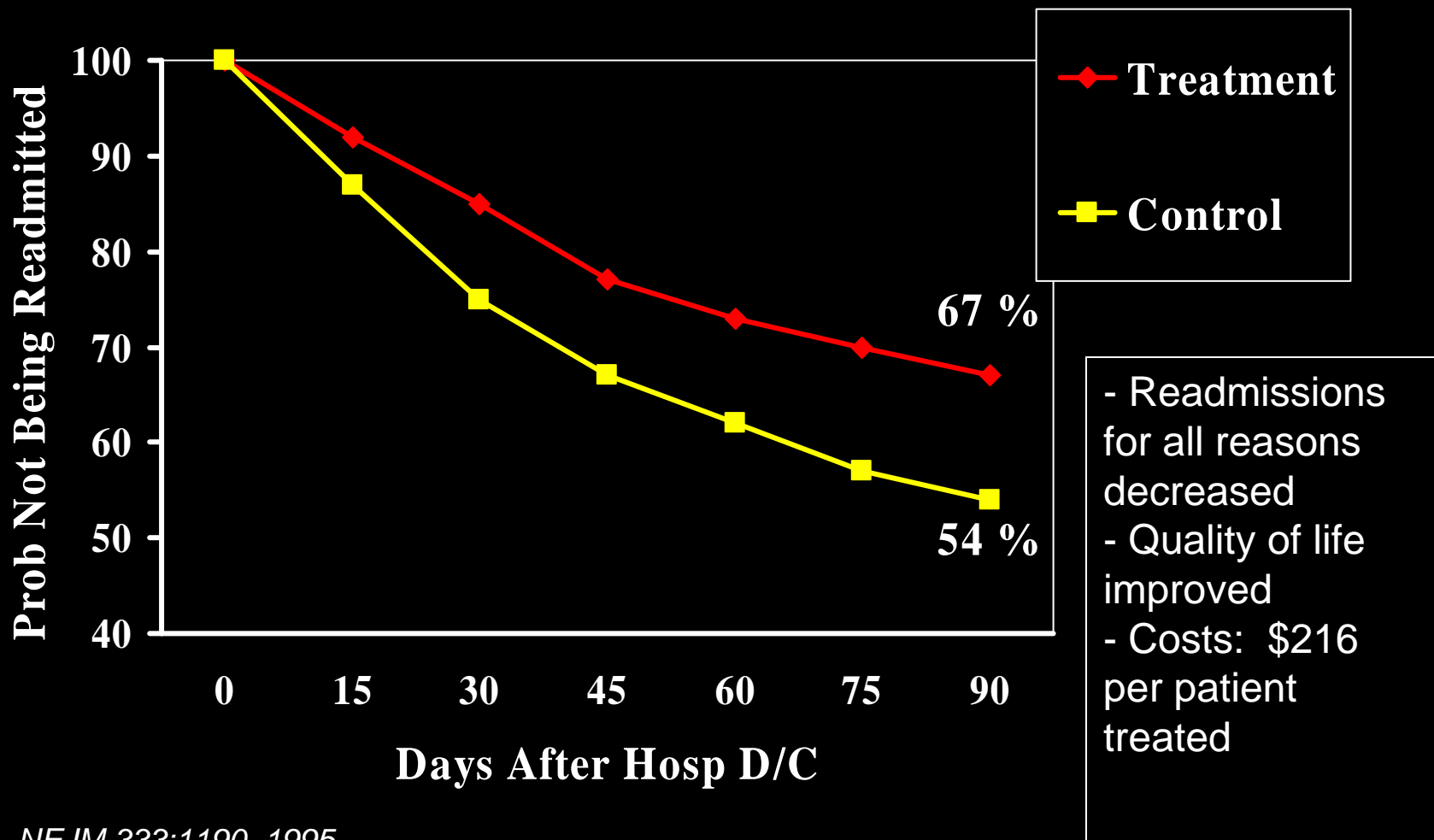
	<u>ACE</u>	<u>Usual Care</u>
ADL improve	34%	24%
ADL same	50%	54%
ADL worse	16%	24%

(p < 0.01)

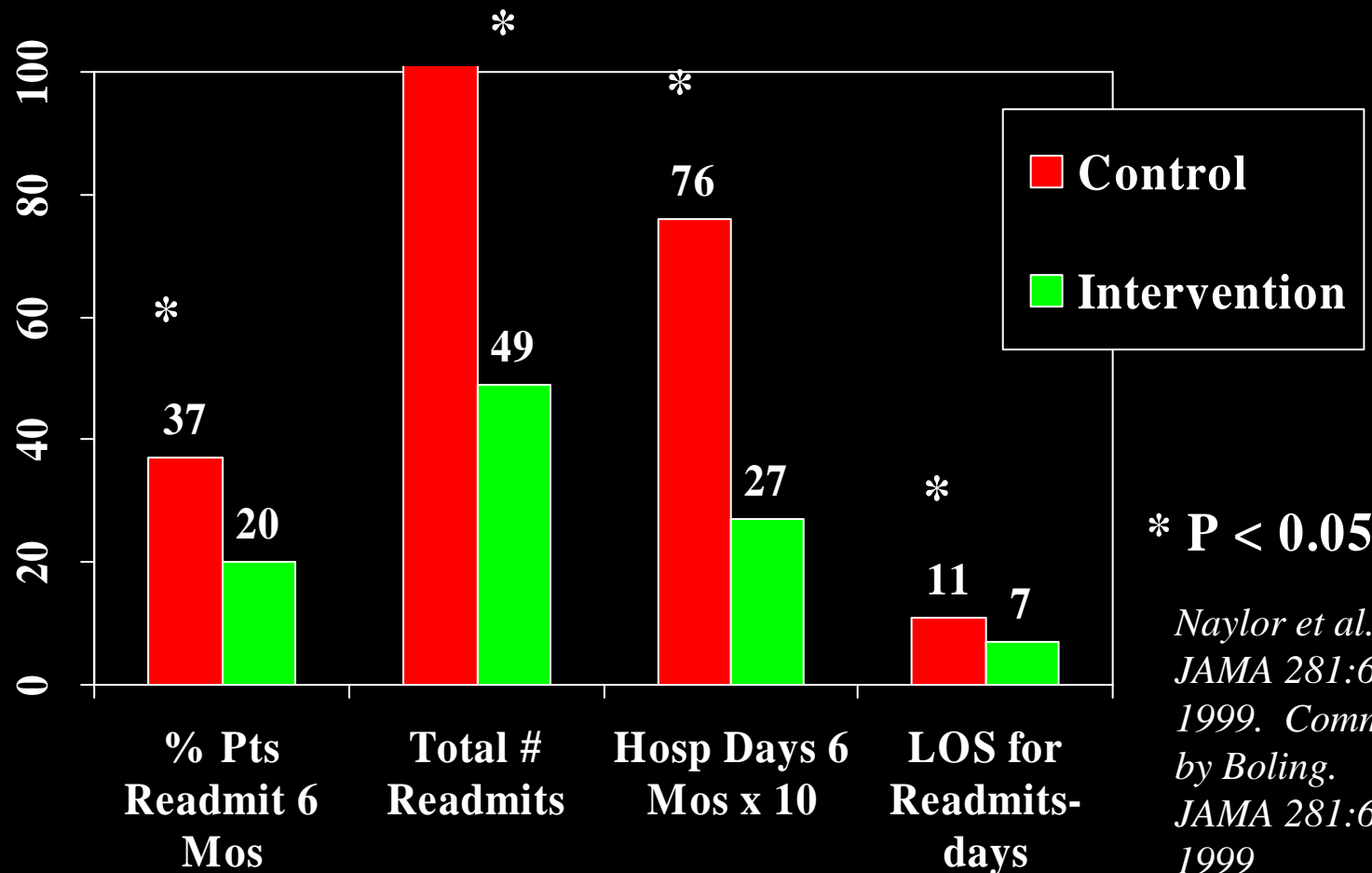
Fewer ACE pts to nursing homes (p = 0.02)



# Post Acute Hospital Care - Disease Focus



# Comprehensive D/C Planning and Home Follow-up





# Hospital at Home

- Australia, United Kingdom and Israel
  - All nursing led interventions, under national medical insurance
- United States
  - National Demonstration Project of physician led model
  - Favorable clinical, quality, satisfaction, cost outcomes

# Summary