



Caring for Our Elders and Caring for Ourselves: Invitation to a Community Dialogue

Washington End of Life Consensus Coalition

2010 Annual Meeting

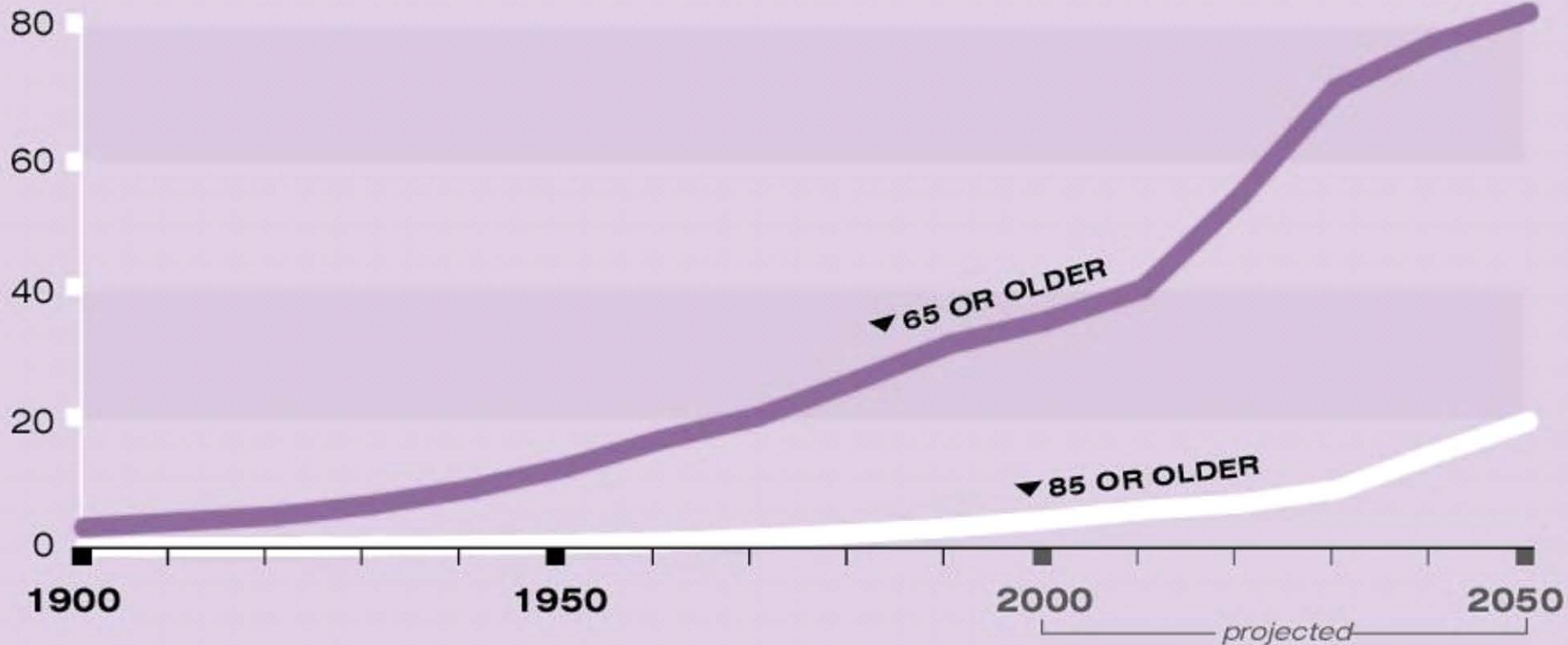
November 12, 2010 | Bruce C. Smith, MD

Chief, Group Health Hospice, Palliative Care
and Nursing Home Services



U.S. Older Adult Population

Total number of persons age 65 or older, by age group, 1900 to 2050, in millions

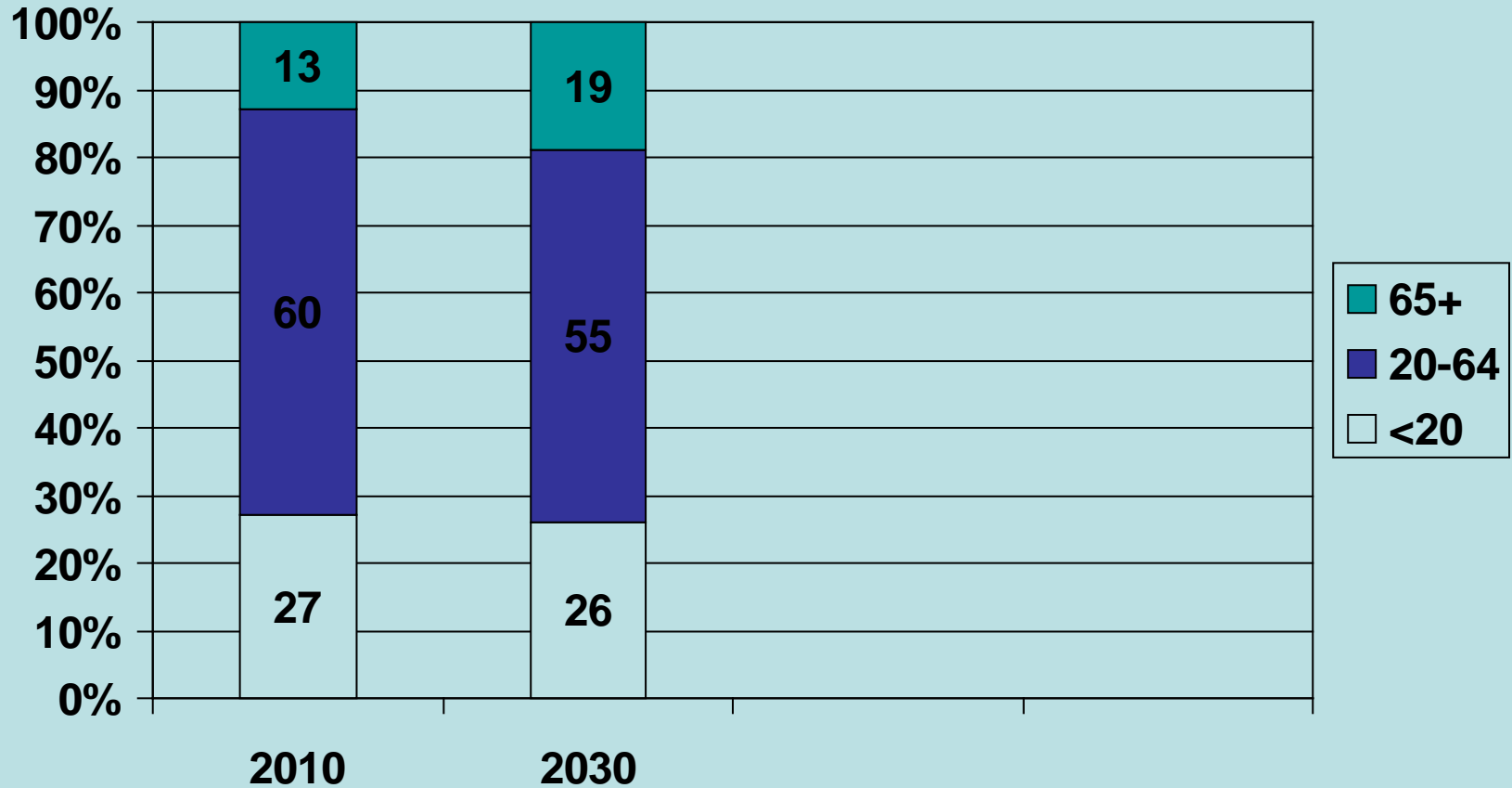


Note: Data for the years 2000 to 2050 are middle-series projections of the population.

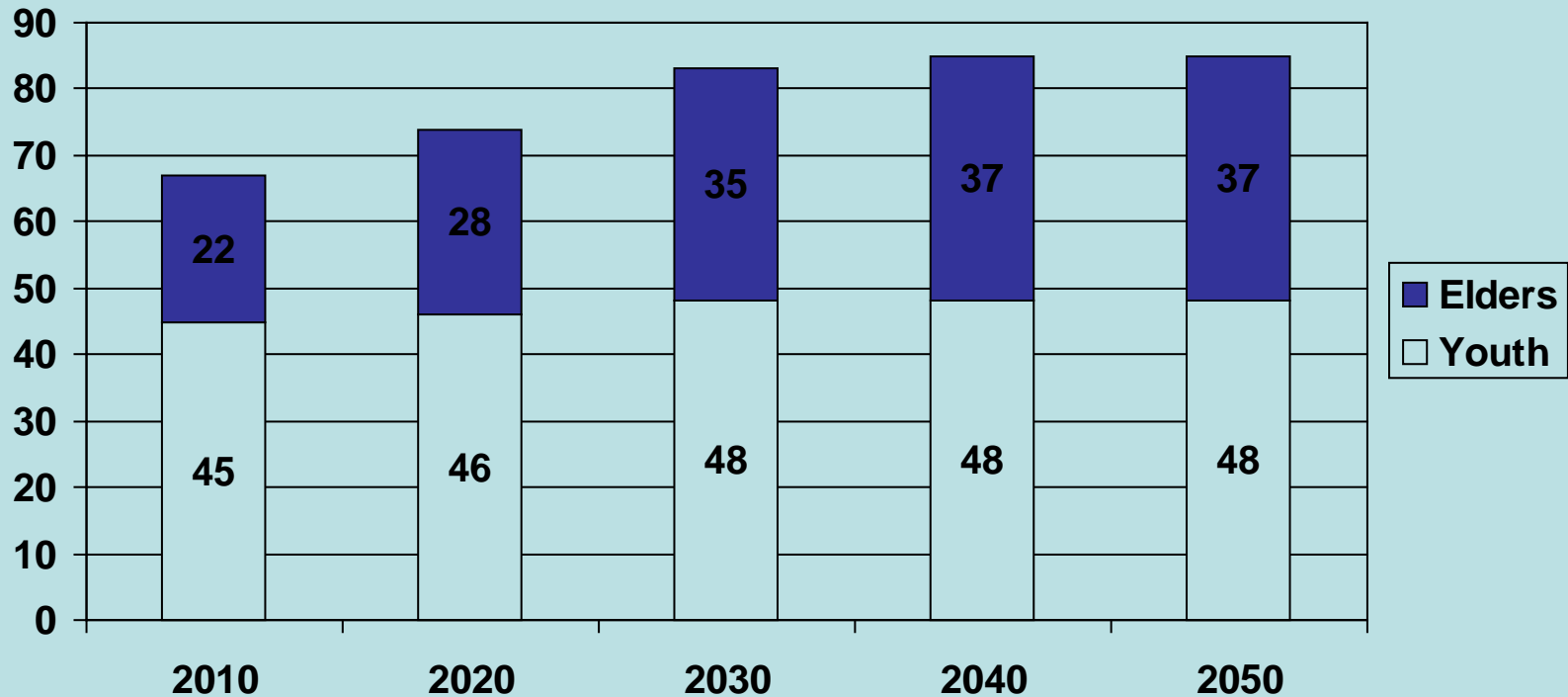
Reference population: These data refer to the resident population.

Source: U.S. Census Bureau, Decennial Census Data and Population Projections.

U.S. Population projection (% of population)



Dependency Ratios for the United States: 2010 to 2050



Dependency Ratio: the % of population under age 20 (youth) or 65 and over (elders) divided by the population aged 20-64.

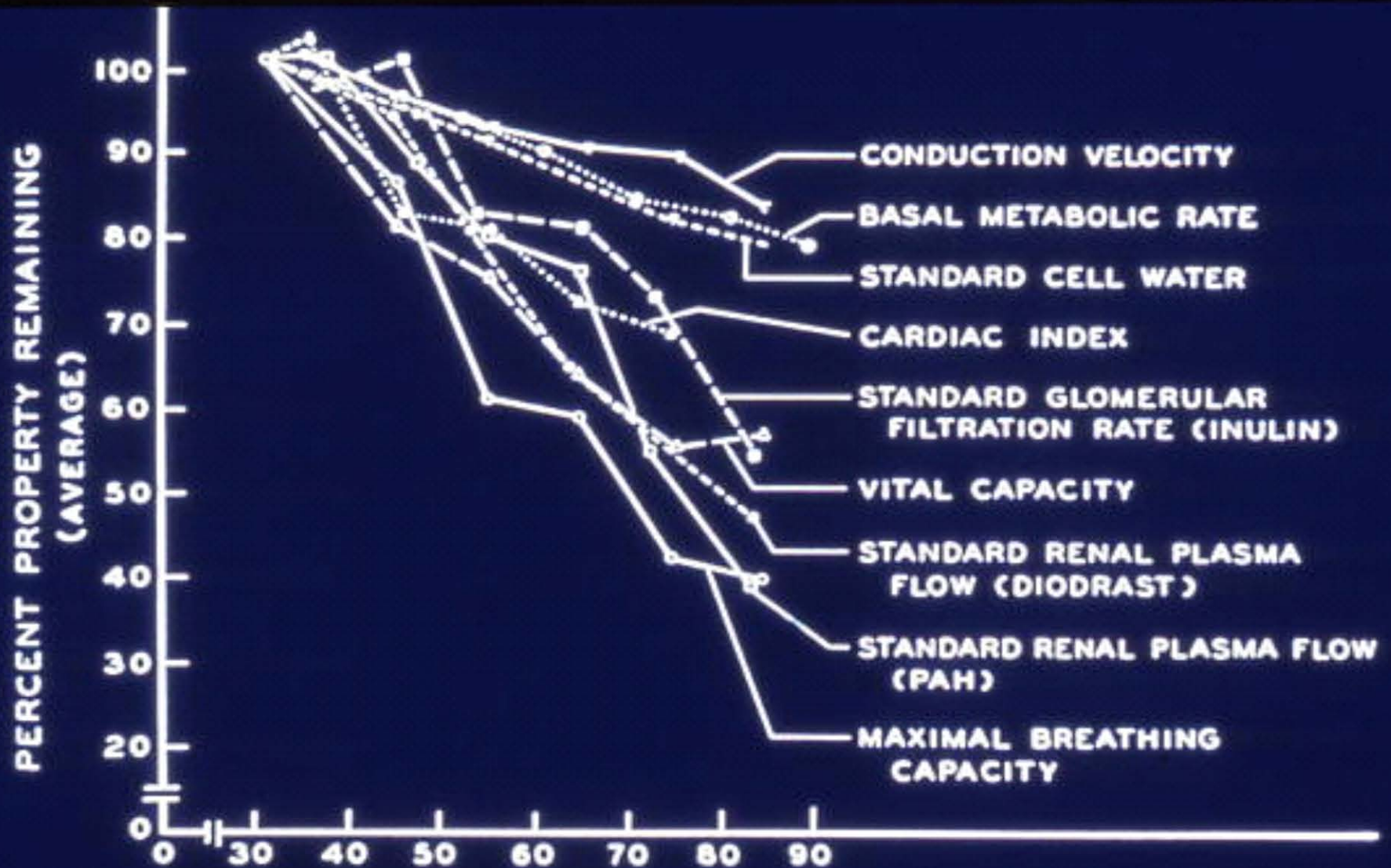
Per U.S. Census Bureau, "The Next Four Decades", May 2010

Life Expectancy at Selected Ages

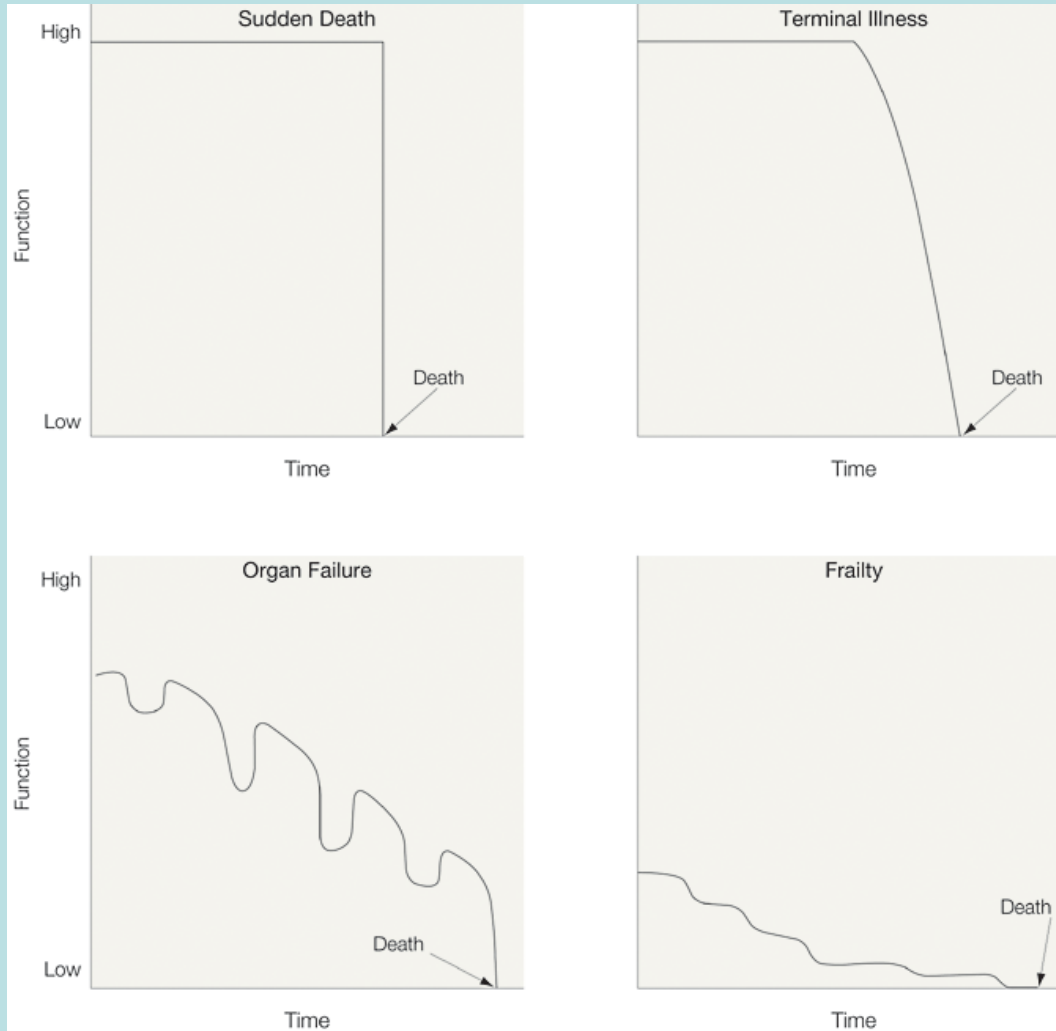
National Vital Statistics Reports 2005

Age	Men	Women
65	16.6	19.5
70	13.1	15.7
75	10.2	12.4
80	7.7	9.4
85	5.7	6.9
90	4.2	5.0
95	3.2	3.7
100	2.5	2.8

Physiology of Aging

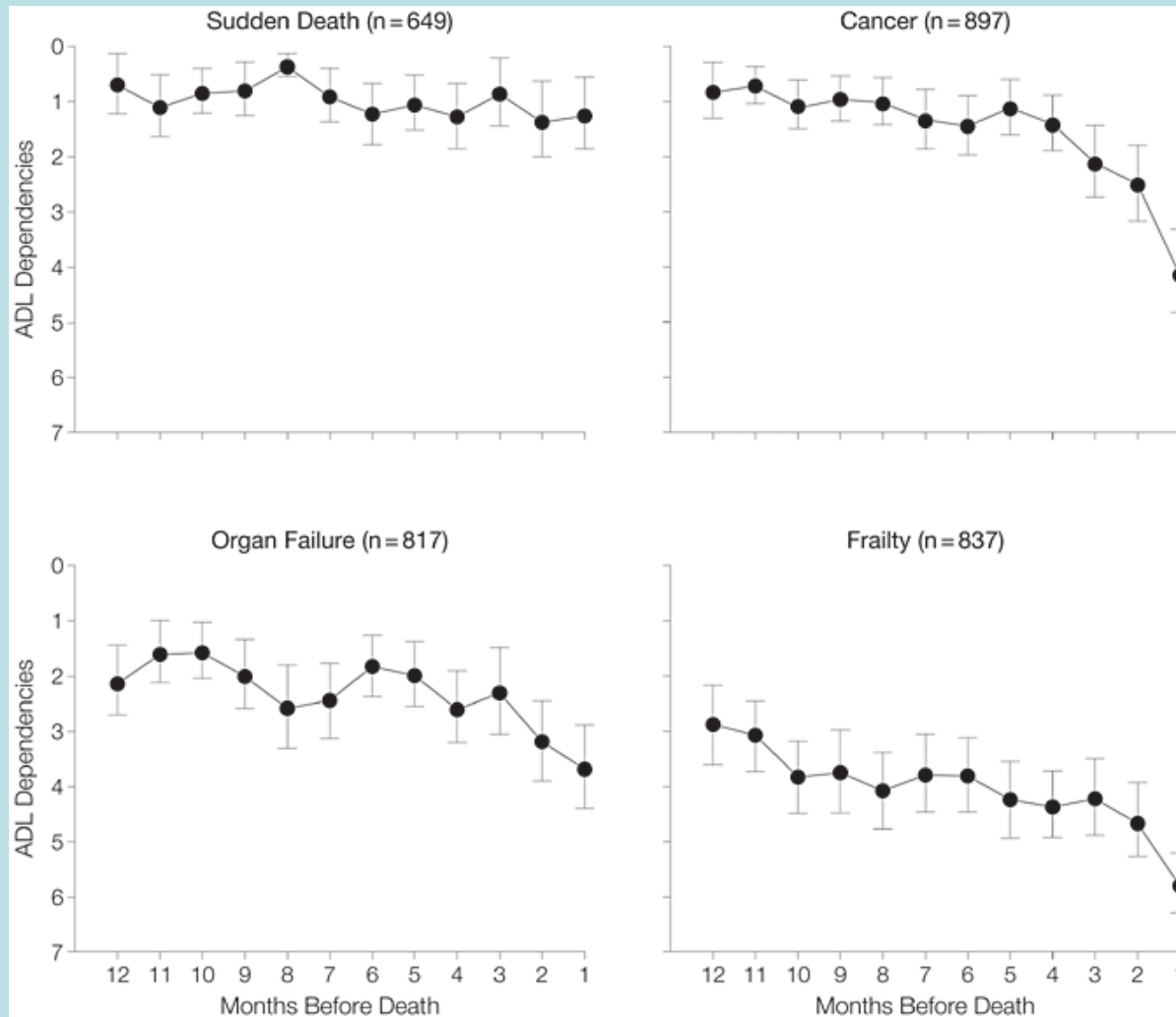


Theoretical Trajectories of Dying



Lunney, J. R. et al. JAMA 2003;289:2387-2392.

Dependent Activities of Daily Living (ADLs) for Each Month Cohort, by Trajectory Group



Lunney, J. R. et al. JAMA 2003;289:2387-2392.

Trajectories of Disability in the Last Year of Life

New England Journal of Medicine, April 1, 2010

Thomas M. Gill, M.D., Evelyne A. Gahbauer, M.D., M.P.H., Ling Han, M.D., Ph.D., and Heather G. Allore, Ph.D.

- **Background:**
- Despite the importance of functional status to older persons and their families, little is known about the course of disability at the end of life.

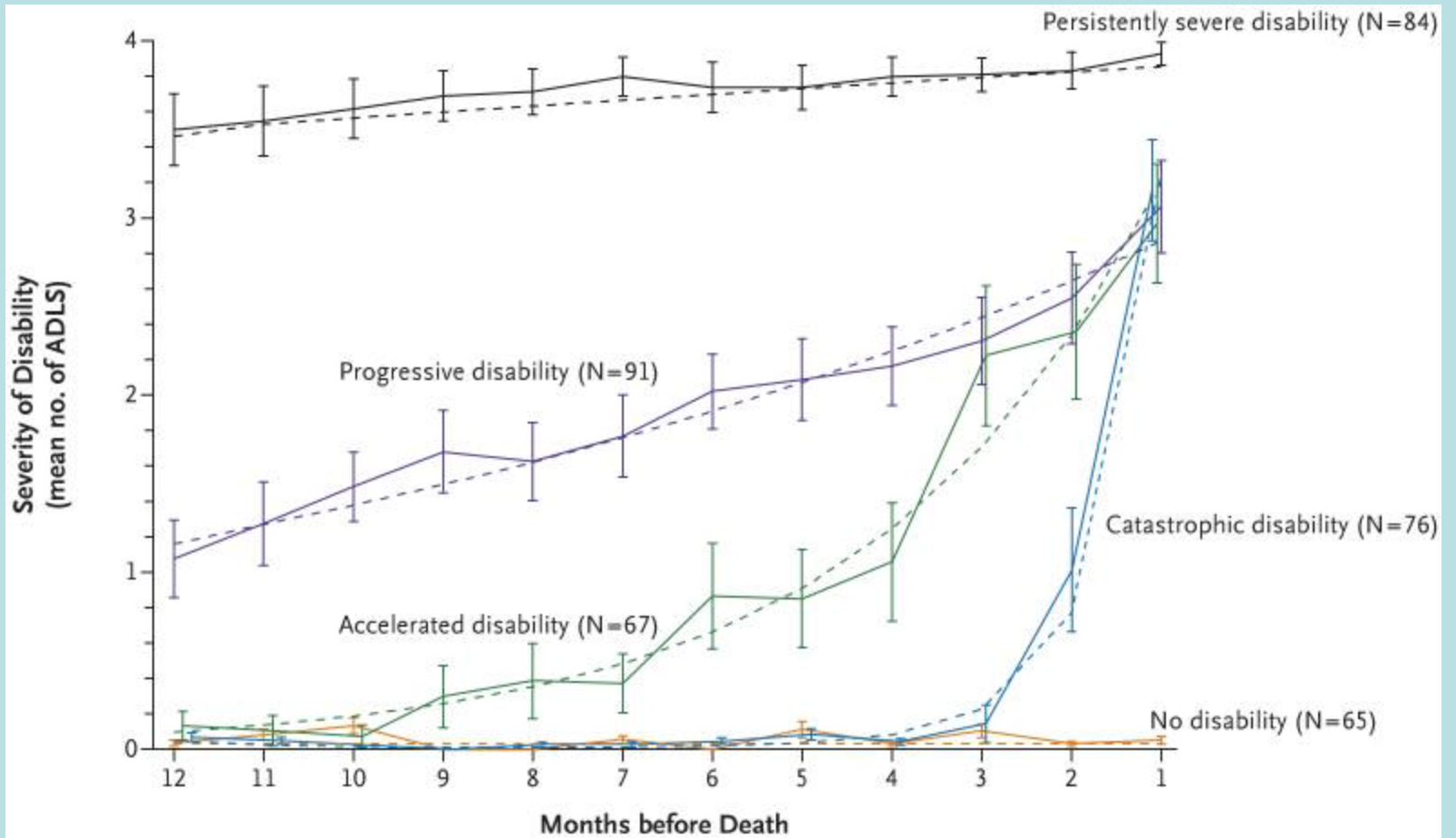
[N Engl J Med. 2010 April 1; 362\(13\): 1173–1180.](#)

Trajectories of Disability in the Last Year of Life

- **Methods:**
- Data from 383 decedents from a longitudinal study involving 754 community-dwelling elders.
- None of the subjects had disability in essential activities of daily living at the beginning of the study, and the level of disability was ascertained during monthly interviews for more than 10 years.
- Information on the conditions leading to death was obtained from death certificates and comprehensive assessments that were completed at 18-month intervals after the baseline assessment.

Trajectories of Disability in the Last Year of Life

- **Results**
- In the last year of life, five distinct disability trajectories were identified, from no disability to the most severe disability:



Trajectories of Disability in the Last Year of Life

- **Results:**

- No disability 65 (17.0%)
- Catastrophic disability 76 (19.8%)
- Accelerated disability 67 (17.5%)
- Progressive disability 91 (23.8%)
- persistently severe disability 84 (21.9%).

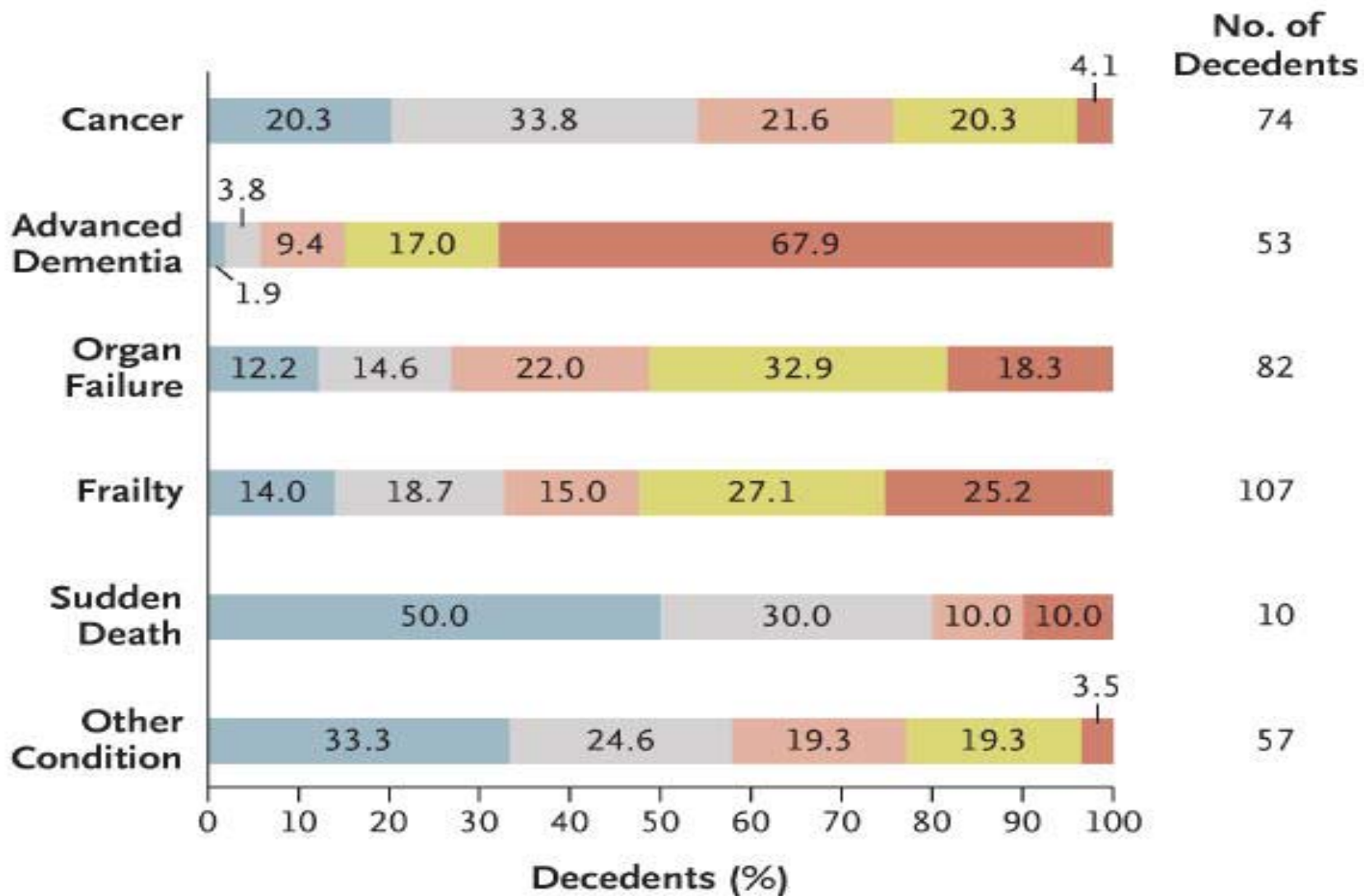
Trajectories of Disability in the Last Year of Life

- When the distribution of the disability trajectories was evaluated according to the conditions leading to death, a predominant trajectory was observed only for subjects who died from advanced dementia (67.9% of these subjects had a trajectory of persistently severe disability) and sudden death (50.0% of these subjects had no disability).

Trajectories of Disability in the Last Year of Life

- For the four other conditions leading to death, no more than 34% of the subjects had any of the disability trajectories. The distribution of disability trajectories was particularly heterogeneous among the subjects with organ failure (from 12.2 to 32.9% of the subjects followed a specific trajectory) and frailty (from 14.0 to 27.1% of the subjects followed a specific trajectory).

■ No disability
 ■ Catastrophic disability
 ■ Accelerated disability
 ■ Progressive disability
 ■ Persistently severe disability



Trajectories of Disability in the Last Year of Life

Causes of Death:

Trajectories of Disability in the Last Year of Life

- **Conclusions**
- In most of the decedents, the course of disability in the last year of life did not follow a predictable pattern based on the condition leading to death.

