The Impact of CalPERS Long-Term Care Program on End-of-Life Medical Care Costs

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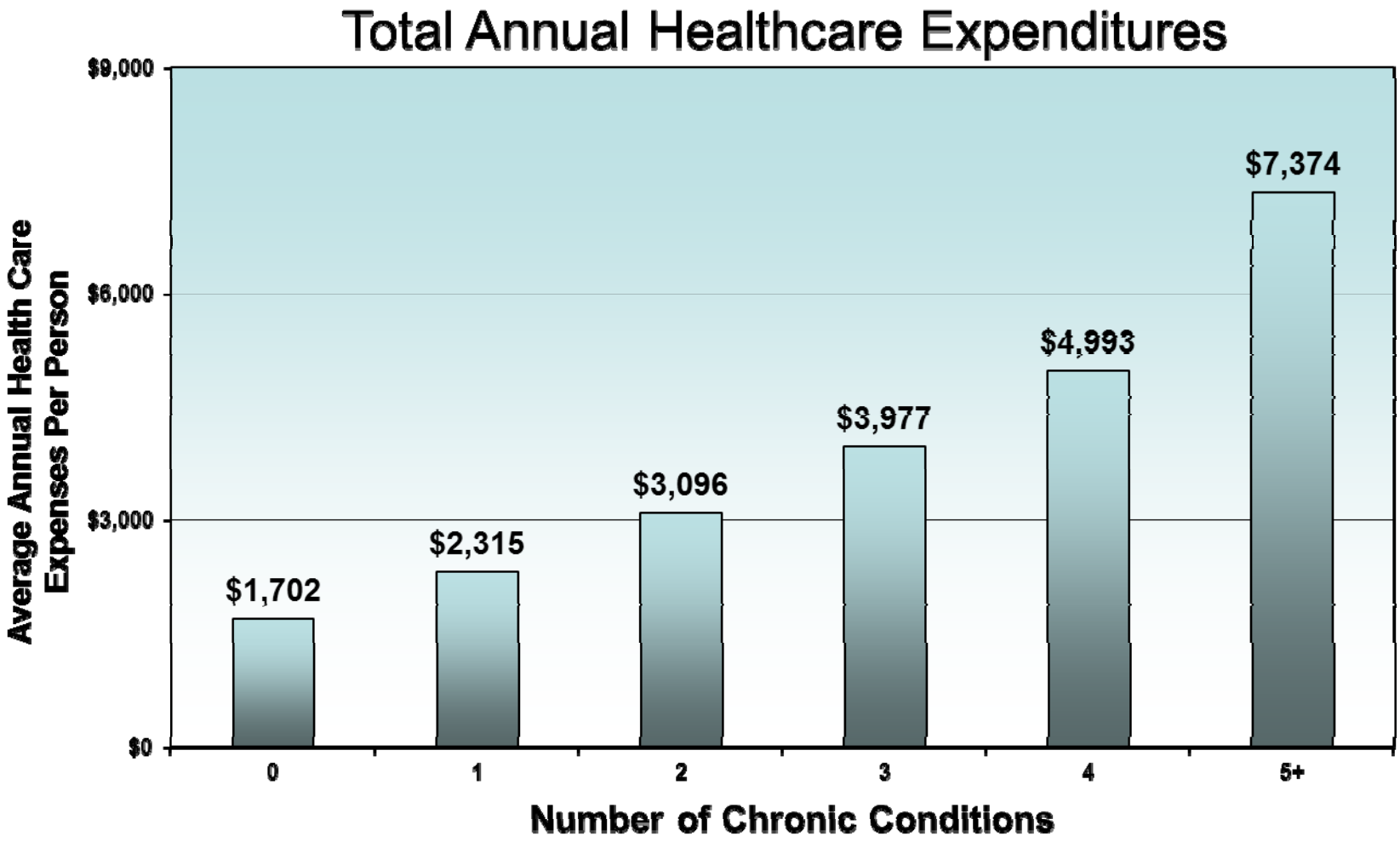
Agenda

- Background
- Study Hypothesis
- Study Design
- Sampling methodology
- Results
- Significant Findings
- Implications

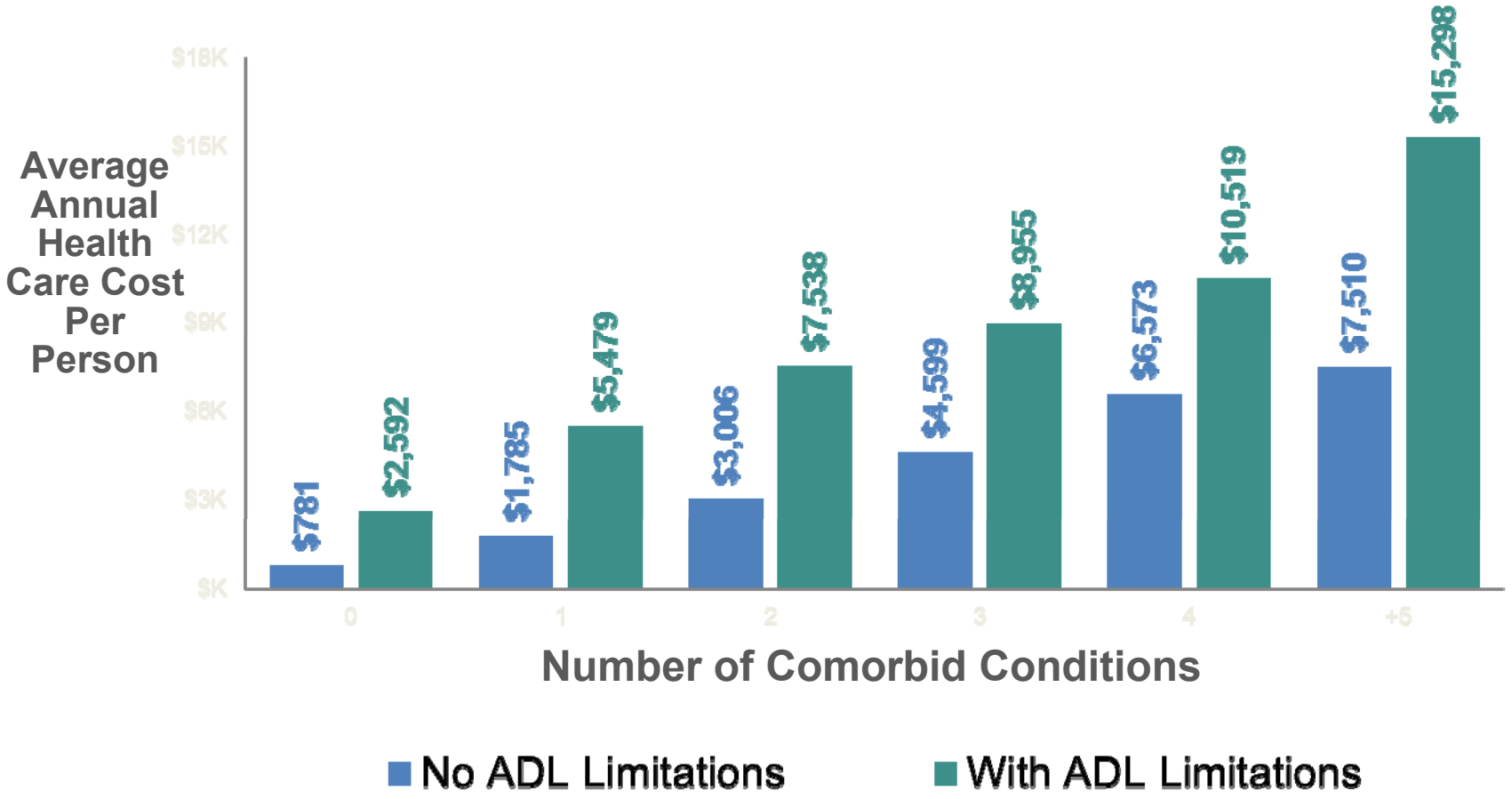
Chronic Conditions Drive Cost and Utilization



Source: Medical Expenditure Panel Survey, 2004 in
G. Anderson, Chronic Conditions Sourcebook, 11-2007

Increasing Complexity Drives Utilization/Cost

Impact of Functional Disability and Comorbidity on Health Care Costs



End of Life Studies

- Significant medical costs at the end of life
  - In 1978: 28.3% of total Medicare expenditures incurred by 5% in last year of life
  - Despite advanced directives, hospice and palliative care, end of life expenditures between 1978-06 have remained stable and substantial
  - Recent studies have shown that hospice has an impact on end of life costs
- Today, a significant share of health care resources consumed in the last months of life
  - End of Life: 10-20% of overall health expenditures and 27-30% of Medicare Expenditures
  - More than 30% of Medicare resources are consumed by 5% of beneficiaries who die each year.

End of Life Studies

- Disability versus Compression of Morbidity
  - Significant compression occurs – e.g., cancer and heart disease
  - Prolonged periods of disability are still possible in the diseases of older age such as Parkinson's, dementia, arthritis, organ failure, debility (and MS)
- Little is known about the impact of long term personal care at end of life
  - Instrumental activities of daily living (ADL) and activities of daily living (ADL) assistance, supervision for cognitive impairment
  - Socialization, medication management
  - Increasing need for paid and unpaid care as chronic diseases such as prevalence of Parkinson's, Alzheimer's dementia and MS increases

Yet Another End of Life Study

Impact of Paid Personal Care at the End of Life

The CalPERS Outcome Study

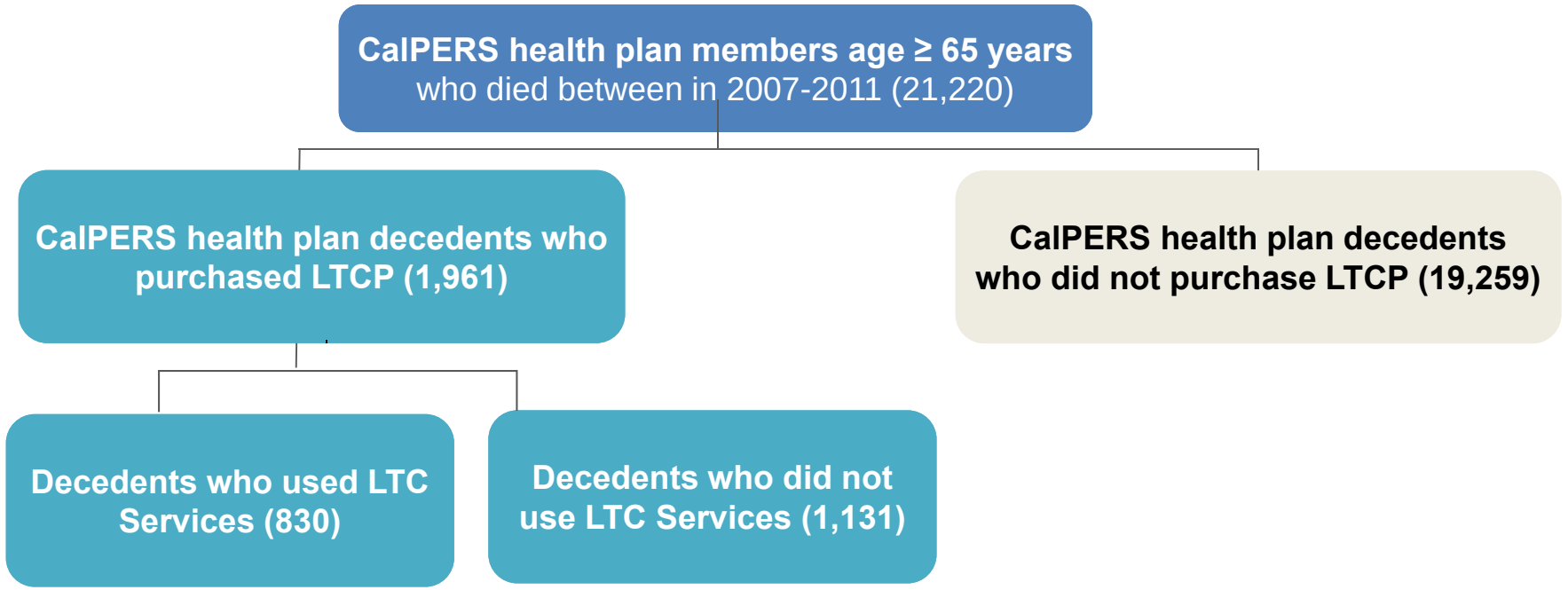
Study Hypothesis

Availability of CalPERS LTCP paid Long-Term Care services and Care Management
at the end of life will have a
positive impact on health care utilization and cost of care as compared to those without access to reimbursed personal care services.

Study Design and Methodology

- Select a common event: last year of life
- Draw study participants from CalPERS self-insured health plan
- Select high frequency conditions causing dependency
  - Dementia, Stroke, Parkinson's disease, etc.
- Identify CalPERS LTCP members using LTC benefits during their last year of life (treatment group)
- Develop Propensity Model based upon patient characteristics and utilization at 13-24 months prior to death
- Identify *similar* CalPERS self-insured health plan members without CalPERS LTCP coverage (control group)
- Adjust for differences & compare healthcare utilization & costs

Sample Selection



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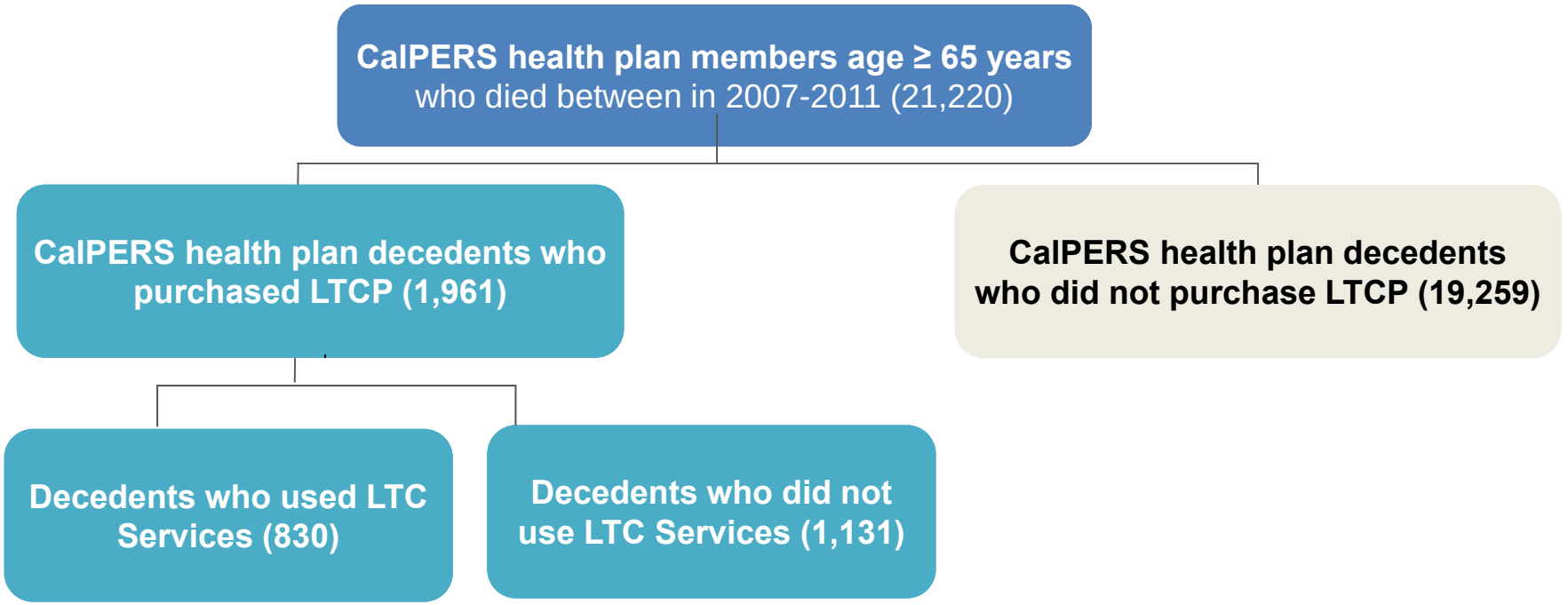
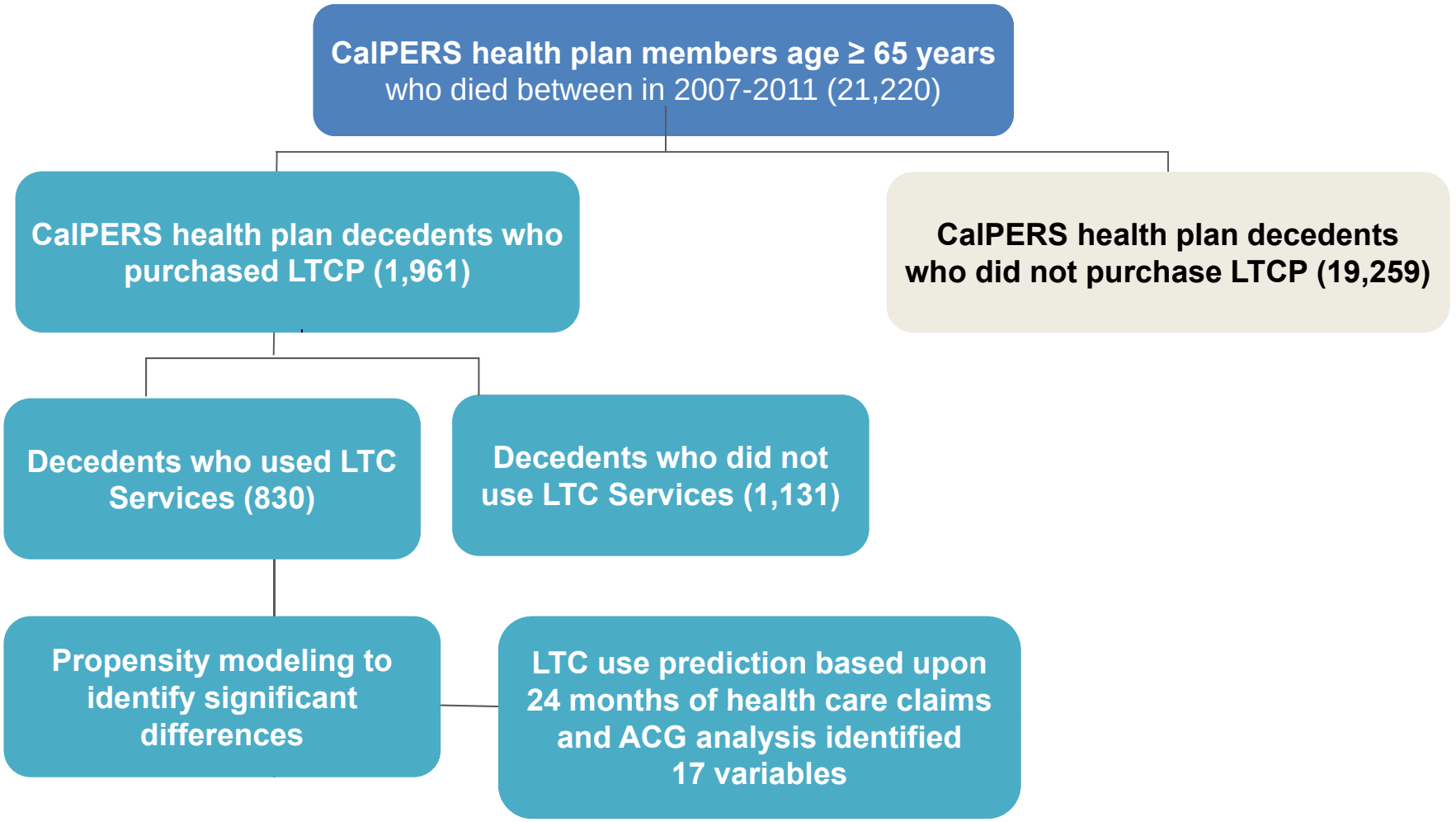


Compare Groups on over 70 variables using the ACG® System

- Age
- Gender
- Diagnosis, diagnoses directly related to use
- Frailty Burden
- Number of medications
- Probability of inpatient admission, both due to injury (short) and extended LOS
- Etc.

Sample Selection



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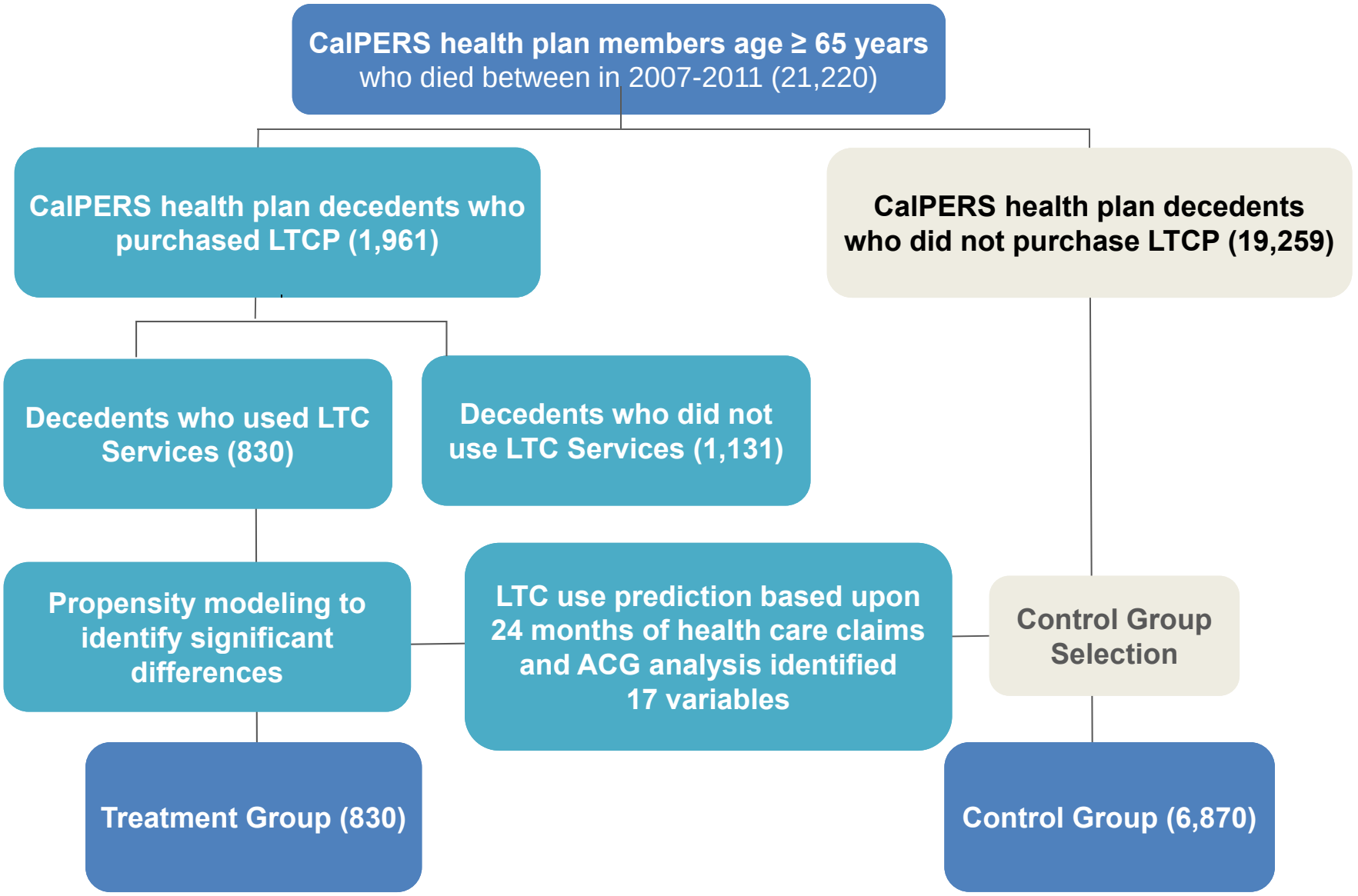

Sample Characteristics: Last Year of Life

	Total Study Population
Total Healthcare Payments	**$33,238/patient**
Inpatient Admits	64/1000
Inpatient Payments	$22,975/patient
Home Care Visits	4,863/1000
Home Care Payments	$665/patient
Skilled Nursing Facility Admits	227/1000
Skilled Nursing Facility Days of Care	829/1000
Skilled Nursing Facility Payments	$922/patient
Emergency department Visits	1,078/1000
Emergency Department Payments	$477/patient
Hospice Admits	19/1000
Hospice Days of Care (Average LOS)	8,335/1000 (19.4 days)
Hospice Payments	$81/patient

Subject Characteristics

	Treatment	Control
Number of Subjects	830	6,870
Age (years)	83.2	83.9
Gender (percentage female)	50%	54%
Frailty Burden*	44%	42%
Dementia	46%	45%
Depression	49%	48%
Count of conditions directly related to use (mean)	4.8	4.9
Diagnoses used (mean)	31.5	31.4
Major procedures performed	16%	17%
Nursing Services received	37%	34%
Medication counts (13-24 months, mean)	11.8	11.6
Probability of injury-related hospitalization (mean)	0.04	0.04
Probability of extended hospitalizations (mean)	0.14	0.14
Probability of using LTC services (propensity score, mean)	0.62	0.62

Frailty burden is extremely high for these groups (typical Medicare cohort :~4%)

Utilization and Cost Comparisons

Relative percent difference between comparison and treatment groups for each outcome

	Percent Difference*	Significance
Total medical costs	-13.8%	0.006
Total pharmacy costs	-13.2%	0.014
Inpatient admission costs	-34.0%	0.000
Emergency department costs	-0.1%	NS
Outpatient visit costs	-16.2%	0.005
Skilled nursing facility bed days	11.3%	0.046
Skilled nursing facility costs	16.0%	NS

**A negative value means the treatment group utilized fewer services or had lower costs*

Note: A linear regression model adjusted for 17 covariates was ran for each outcome variable.

Utilization and Cost Comparisons

Final regression results for comparison and treatment groups after adjusting for 17 Covariates

	Beta*	Significance
Inpatient admission count (sq rt)	-0.06	0.001
Inpatient bed day count (sq rt)	-0.10	0.003
Outpatient visit count (sq rt)	-0.04	NS
Skilled nursing facility admission counts (sq rt)	0.04	NS

**A negative beta coefficient means the treatment group utilized fewer services*

Note: A linear regression model adjusted for 17 covariates was ran for each outcome variable.

Analytic Results

- In the last year of life, individuals using LTC insurance benefits for personal care and care management differed **significantly** from those without reimbursable LTC services
  - 13.8% lower overall total healthcare costs
  - 34% lower inpatient costs
  - Significantly fewer inpatient admissions and days of care
  - 13.2% lower pharmacy costs
  - 16.2% lower outpatient visit costs

Analytic Results

- Subgroup analysis looked end of life medical costs and utilization for those with dementia and those without dementia
  - For those without dementia
    - Significantly lower overall total medical costs, lower total pharmacy costs, lower inpatient admissions and inpatient costs, lower outpatient costs and lower skilled nursing facility admissions and days of care.
  - For those with dementia
    - Significantly fewer inpatient days of care.

Conclusions

- Evidence from this study suggests that the use of CalPERS LTCP reimbursed services and care management have a **significant favorable impact on a number of health care utilization and expenditures** during the last year of life
- The **positive impact was across a number of key components of utilization and costs** including a number of measures of inpatient utilization and cost as well as pharmacy costs and outpatient costs.

Caveats

- This is a retrospective claims based study
- Unable to truly match on level of functional and cognitive disability
- True cost of personal care is unknown
- Unable to quantify out-of-pocket costs from both groups
- Unable quantify the amount of voluntary care provided

Implications

- This study provides evidence that the addition of paid, formal Long Term Care services and Care Management have a positive impact by reducing both health care utilization and costs for complex, chronically ill individuals at the end of their lives.
- The combination of long term care services with acute care services in dual eligible populations is a sound strategy to control costs and utilization.
- Broad promotion of long term care insurance is an important strategy in national efforts to control healthcare utilization and cost for complex, chronically ill individuals.

Questions?

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Hospice and Palliative Medicine Considerations in Chronic Illness

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Disclosures

- I am not receiving remuneration from any pharmaceutical company or health care provider, aside from my employer UnitedHealthcare.
- Any opinions expressed are my own and do not necessarily reflect the opinions, policies or recommendations of my employers.

Objectives

- By the end of this lecture, participants will be able to…
  - Compare and contrast hospice and palliative medicine.
  - Discuss the risks, benefits and alternatives to a palliative care plan.
  - Develop strategies to address interdisciplinary care planning for clients with chronic illness.

2013 US Death Rate

2013 US Death Rate

1 per person

Chronic Illness

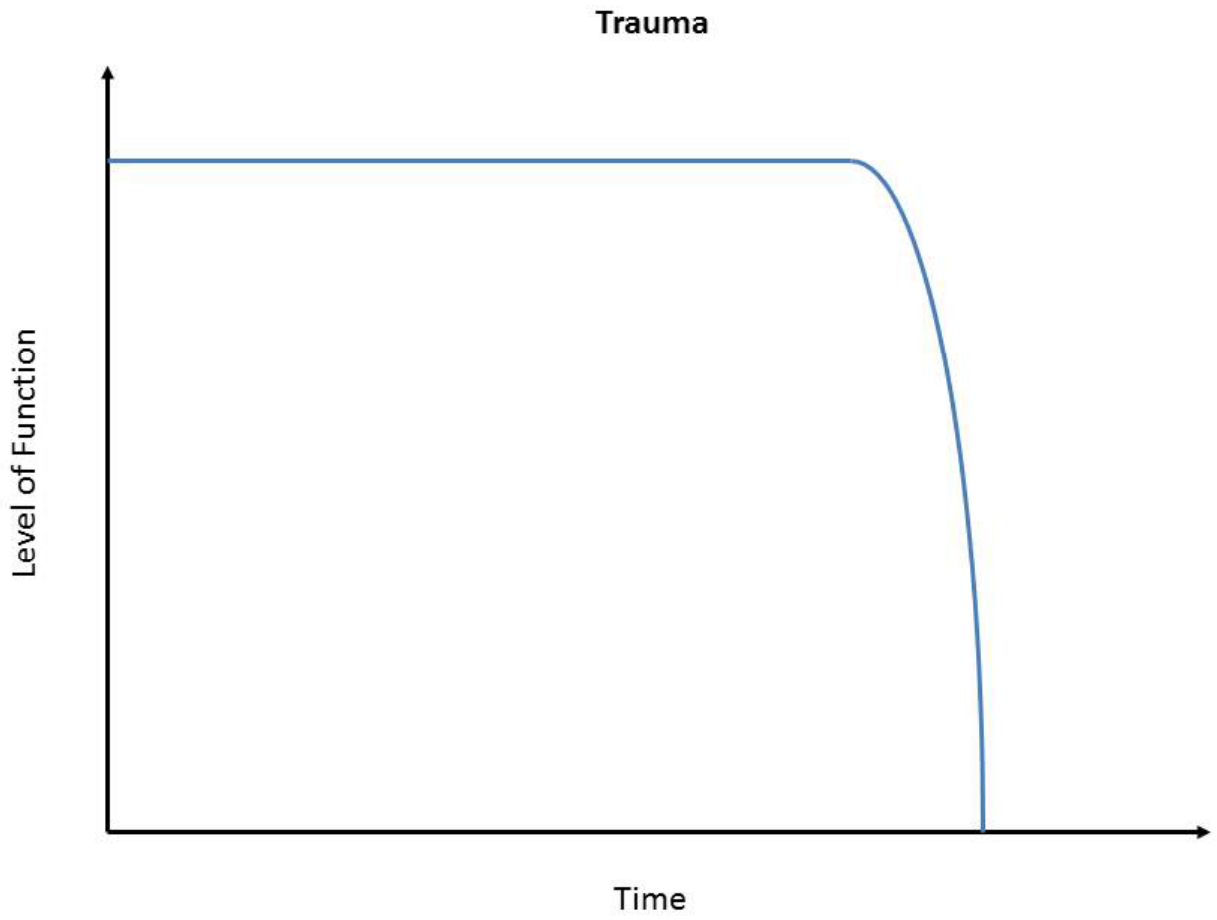
- Defined by long duration and slow progression.
- Leading cause of death worldwide (63% of all deaths)
- Examples:
  - Heart disease
  - Stroke
  - Cancer
  - Lung disease
  - Diabetes

Prognostication

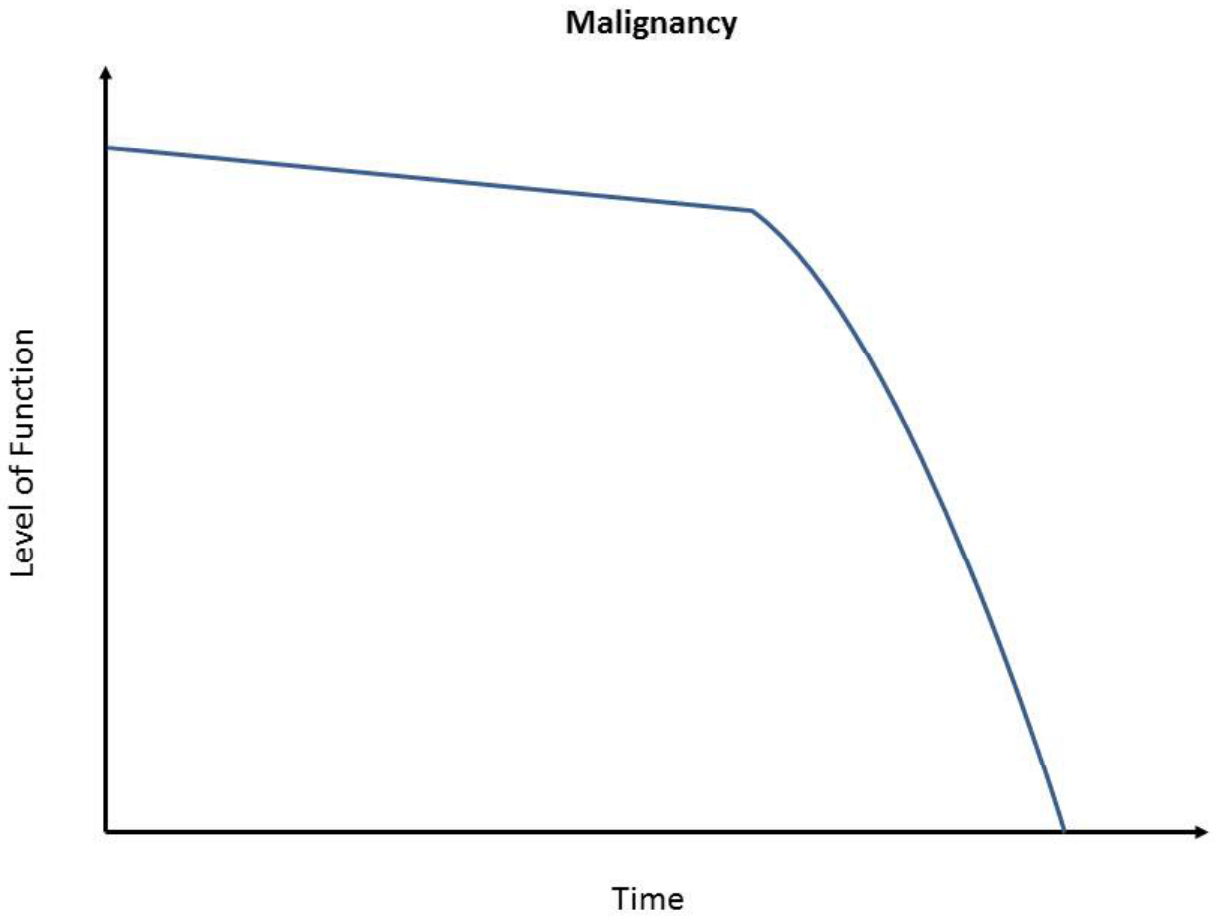
- The single greatest predictor of death in chronic illness is functional deterioration.

- The are four patterns of functional deterioration leading to death.

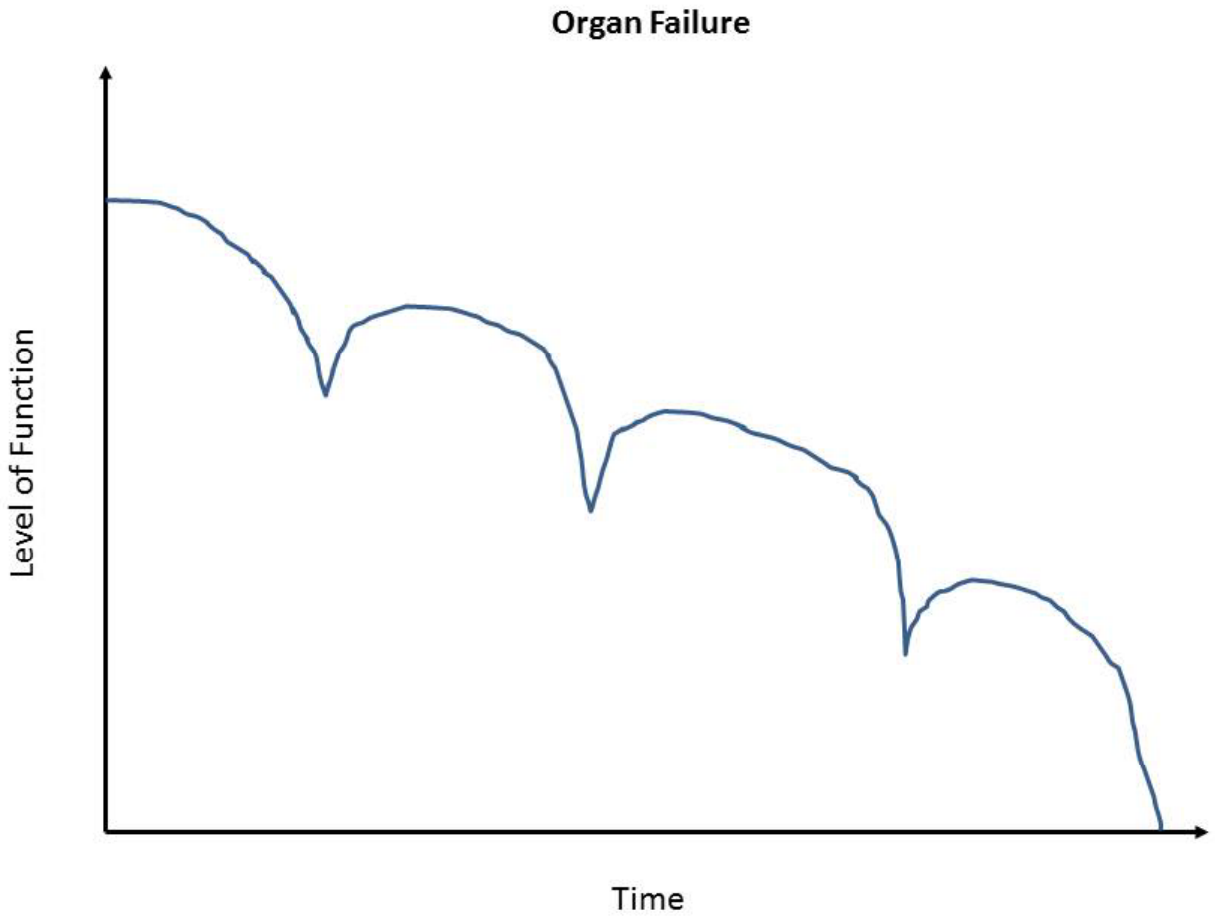
Trauma



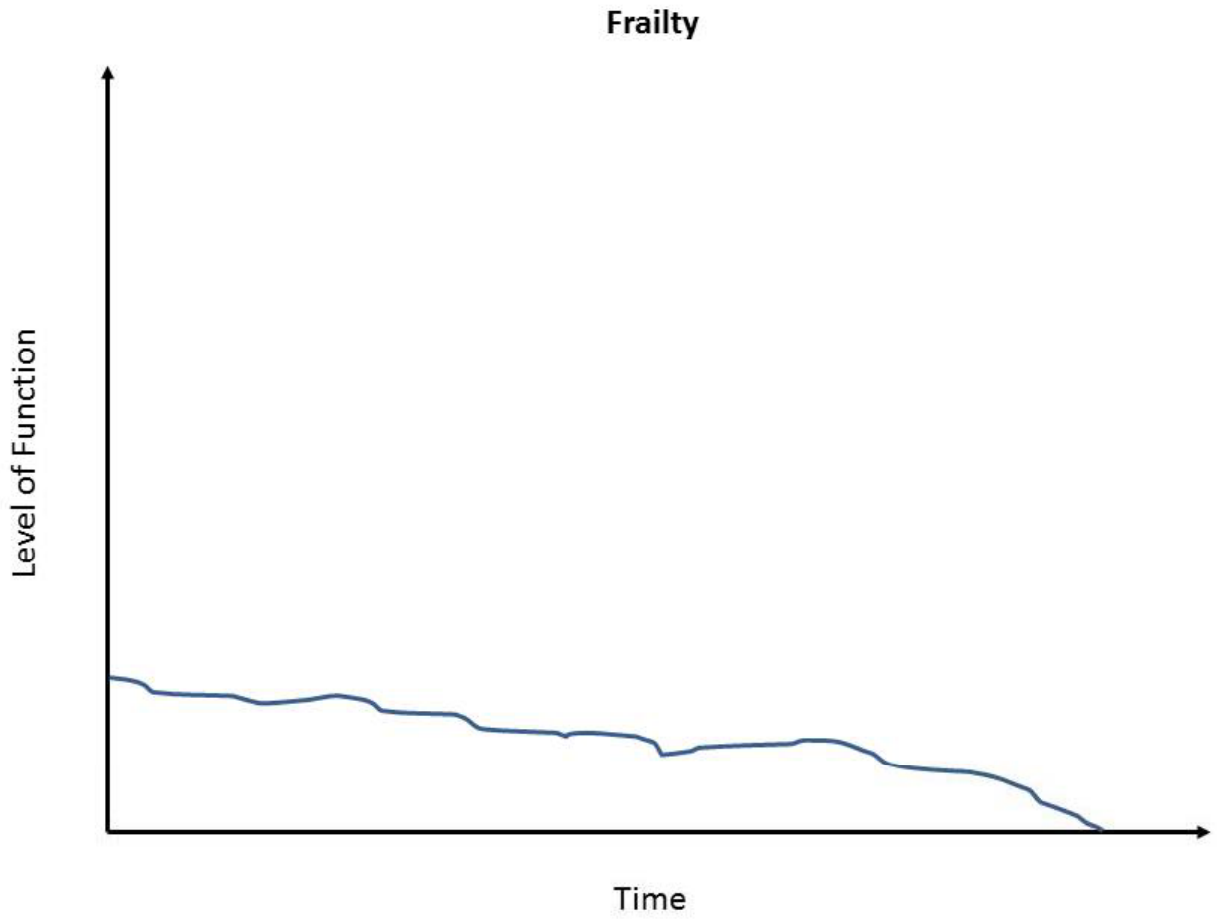
Cancer Related Death



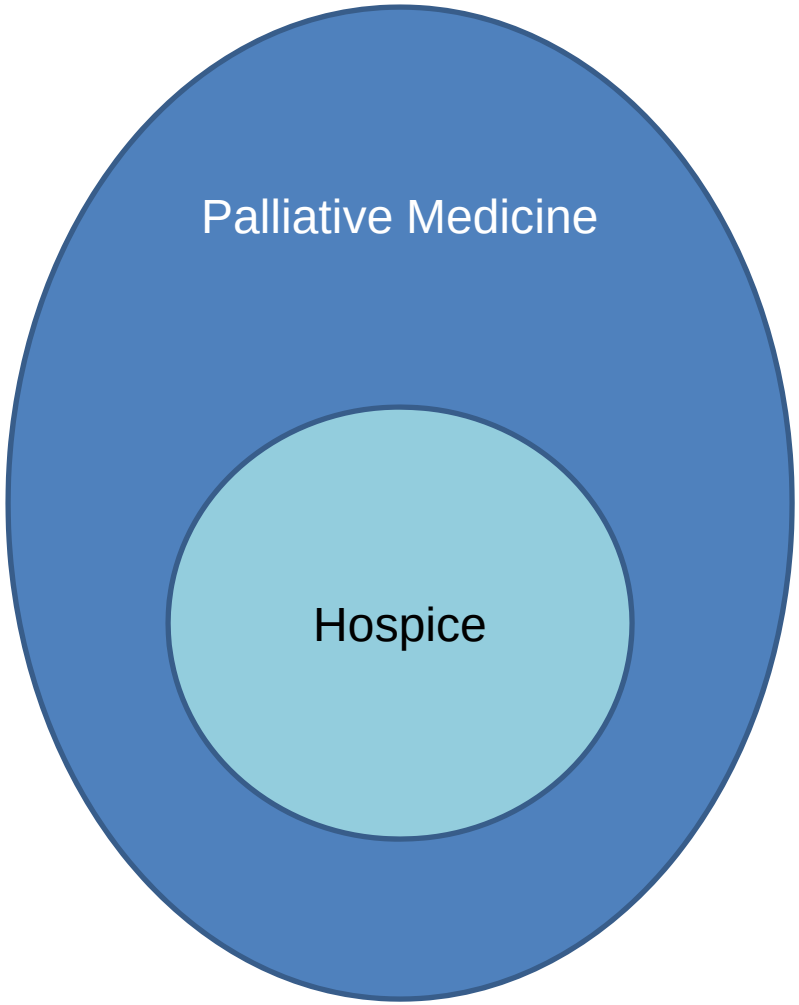
Organ Failure (CHF, COPD, CKD, ESLD)



Frailty (Neurodegenerative)

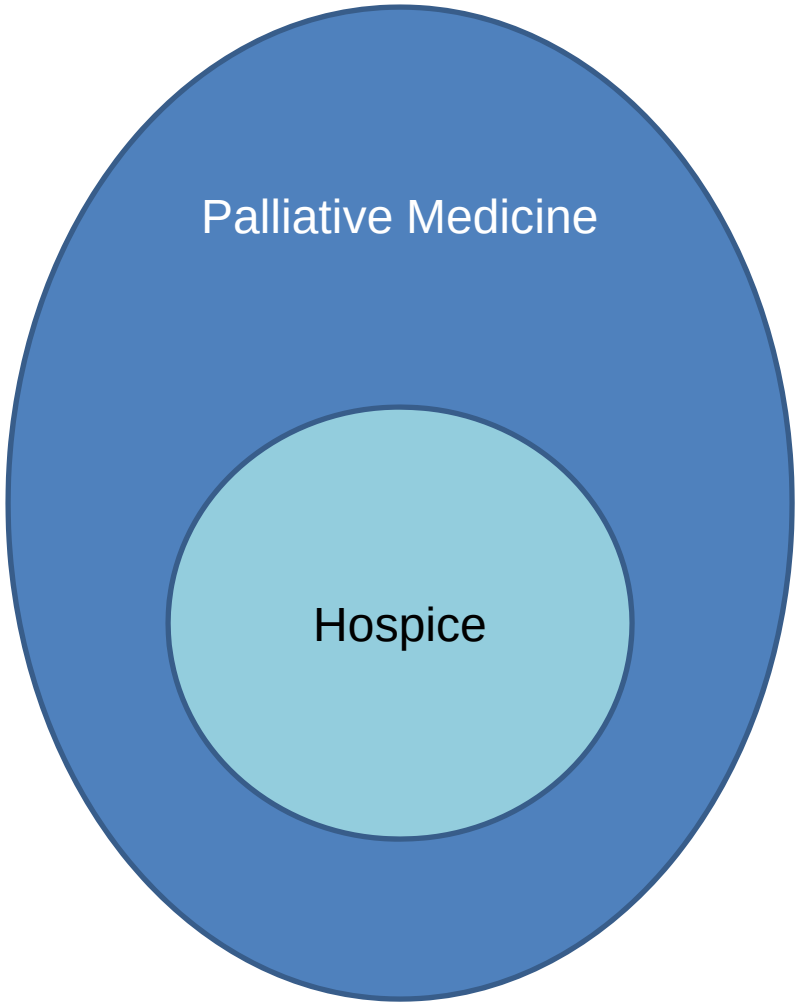


Hospice vs. Palliative Medicine



- Hospice
  - Since early 1980s
  - Symptom based management ONLY
  - For terminally ill ONLY (6 months or less)
  - Medicare Part A / Many insurers

Hospice vs. Palliative Medicine



- Palliative Medicine
  - Since 2008
  - Symptom based management in tandem with usual management
  - For all life limiting illness
  - Private FFS or through a Hospital

Palliative Care Plan

- Addresses the patient's needs
  - Symptom management
    - Total Pain
    - Other symptoms
  - Psychosocial / Spiritual management
  - Support in decision making
- Patient-centric not disease-centric

- Feel better vs. Get better

Barriers to Palliative Care

- Up to 85% of patients appropriate for hospice care express interest in a palliative care model.
- Between 63% and 83% of patients presented with hospice as an alternative by their physician will elect hospice care.
- Less than 50% of Medicare decedents die in hospice care, although 90% of these patients suffer from predictable, chronic illness.

McGorty, EK and Borenstein, BH. (2003). Barriers to physicians' decisions to discuss hospice: Insights gained from the United States hospice model. *Journal of Evaluation in Clinical Practice, 9*(3). 363-372.

Patient Barriers

- Denial (It's not just a river in Egypt!)
- Desire to continue life prolonging treatment (spiritual, religious or other reason).

McGorty, EK and Borenstein, BH. (2003). Barriers to physicians' decisions to discuss hospice: Insights gained from the United States hospice model. *Journal of Evaluation in Clinical Practice, 9*(3). 363-372.

Physician Barriers

- Concern for depriving hope.
- Patient's wish that the physician make the decisions.

McGorty, EK and Borenstein, BH. (2003). Barriers to physicians' decisions to discuss hospice: Insights gained from the United States hospice model. *Journal of Evaluation in Clinical Practice, 9*(3). 363-372.

“Mechanical” Barriers

- Hospice care is limited to terminally ill patients.
- Rural coverage is less comprehensive.
- Palliative Medicine specialists are in short supply.
- Coverage for Palliative Medicine is not universal.
- Physicians may not understand the role and benefit of palliative medicine.

Hospice Truths

- Comparison of hospice and non-hospice patients who died in a 3 year period (4493 Medicare beneficiaries).
  - CHF patients on hospice lived average of 81 days longer.
  - Longer life (1-2 months) seen in pancreatic cancer, lung cancer, colon cancer*.
  - No difference in prostate cancer, breast cancer.

Connor, S.R., Pyenson, B., Fitch, K., Spence, C., and Iwasaki, K. (2007). Comparing hospice and non-hospice patient survival among patients who die within a three-year window. *Journal of Pain and Symptom Management. 33*(3), 238-246.

Palliative Care Truths

- Large trial of early palliative care intervention at diagnosis of metastatic non-small cell lung cancer
  - Of 151 enrolled 27 died prior to completing the 12 week study.
  - Early palliative care led to:
    - Better quality of life scores
    - Less depression
    - Better documentation of EOL preferences
    - Life expectancy of 11.6 months vs 8.9 months.

Temel, J.S., Greer, J.A., Muzikansky, A., Gallaher, E.R., Adame, S., Jackson, V.A., et. al. (2010) Early palliative care for patients with metastatic non-small-cell lung cancer. *New England Journal of Medicine. 363*, 733-742.

Lasting Benefits

- Retrospective study of 30,838 elderly couples who used hospice vs. 30,838 who did not.
  - Widows who had a husband on hospice are less likely to die by one year.

Christakis, N.A., Iwashyna, T.J. (2003) The health impact of health care on families: A matched cohort study of hospice use by decedents and mortality outcomes in surviving, widowed spouses. *Social Science & Medicine.* *57*(3), 465-475.

Having the conversation

- In 1997, the Commission on Aging and Dignity, under the support of the Robert Wood Johnson Foundation constructed a document called Five Wishes.
- When completed, meets legal requirements for a living will in 42 states.
  - Who you want to make healthcare decisions for you when you can no longer make them.
  - The kind of medical treatment you want or don't want.
  - How comfortable you want to be.
  - How you want people to treat you.
  - What you want your loved ones to know.

Take Home Points

- Hospice and Palliative Care serve distinct populations.
- The utilization of hospice or palliative care does not hasten death.
  - In some cases it may actually have a life expectancy benefit.
- The benefits of palliative care planning extend beyond the life of the patient.

Take Home Points

- Given the nature of chronic illness many patients are reluctant to consider palliative care planning.
- Many physicians are hesitant as well, often for personal reasons.
- Timely palliative medical intervention has many benefits for most patients.

Incorporating into LTC Planning

- Encouraging patients to begin comprehensive care planning early in a diagnosis is helpful.
- Self guided tools may be useful, either in the completion of advanced directives or in the early conversations of end-of-life planning.

Questions?

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