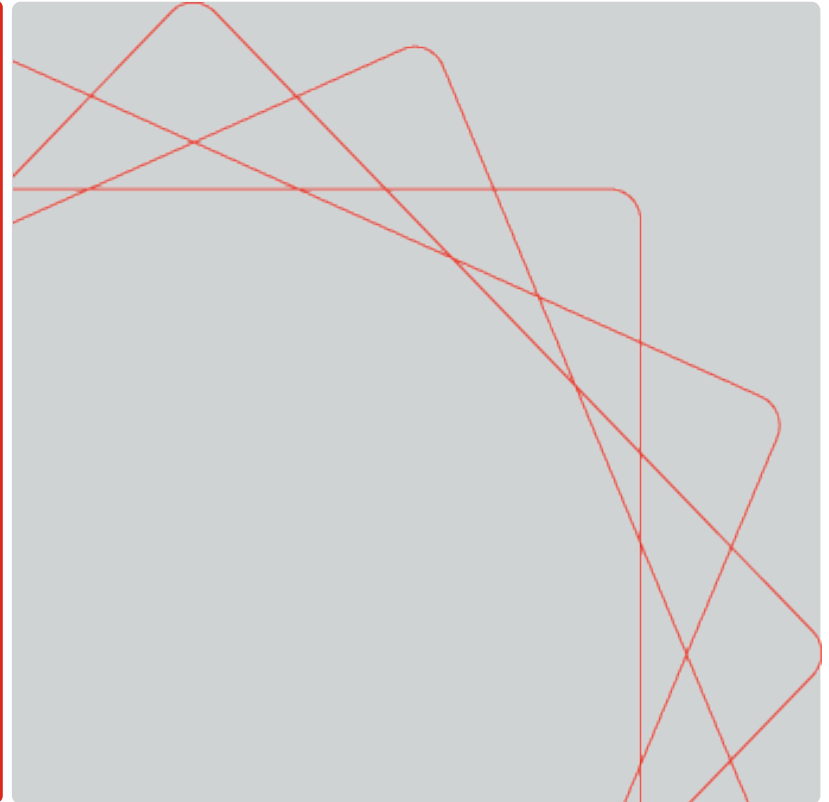




# Analysis of Medicare Pre-Hospice Spending and Hospice Utilization

T.J. Christian, Ph.D.

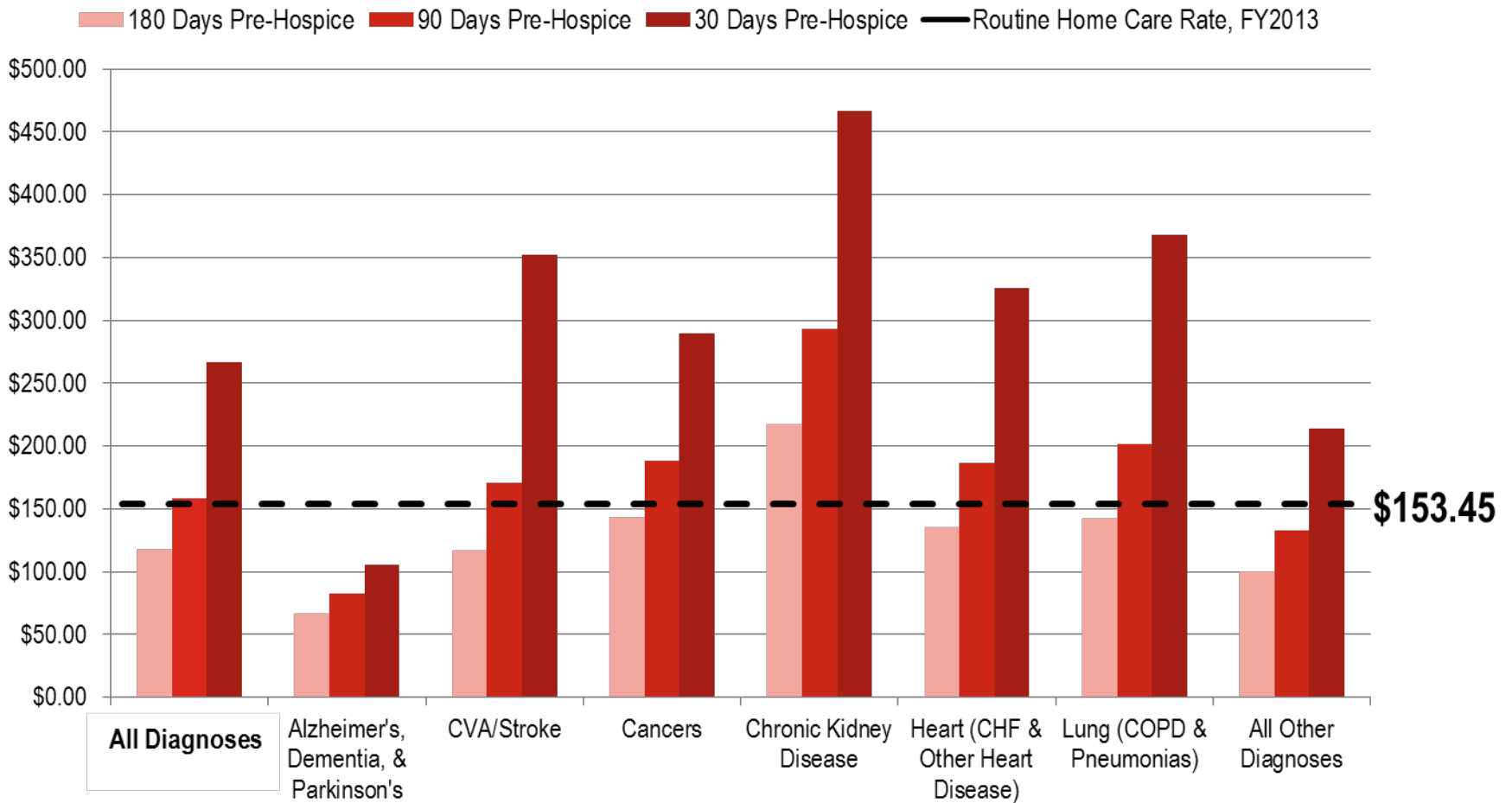


# Research Funders

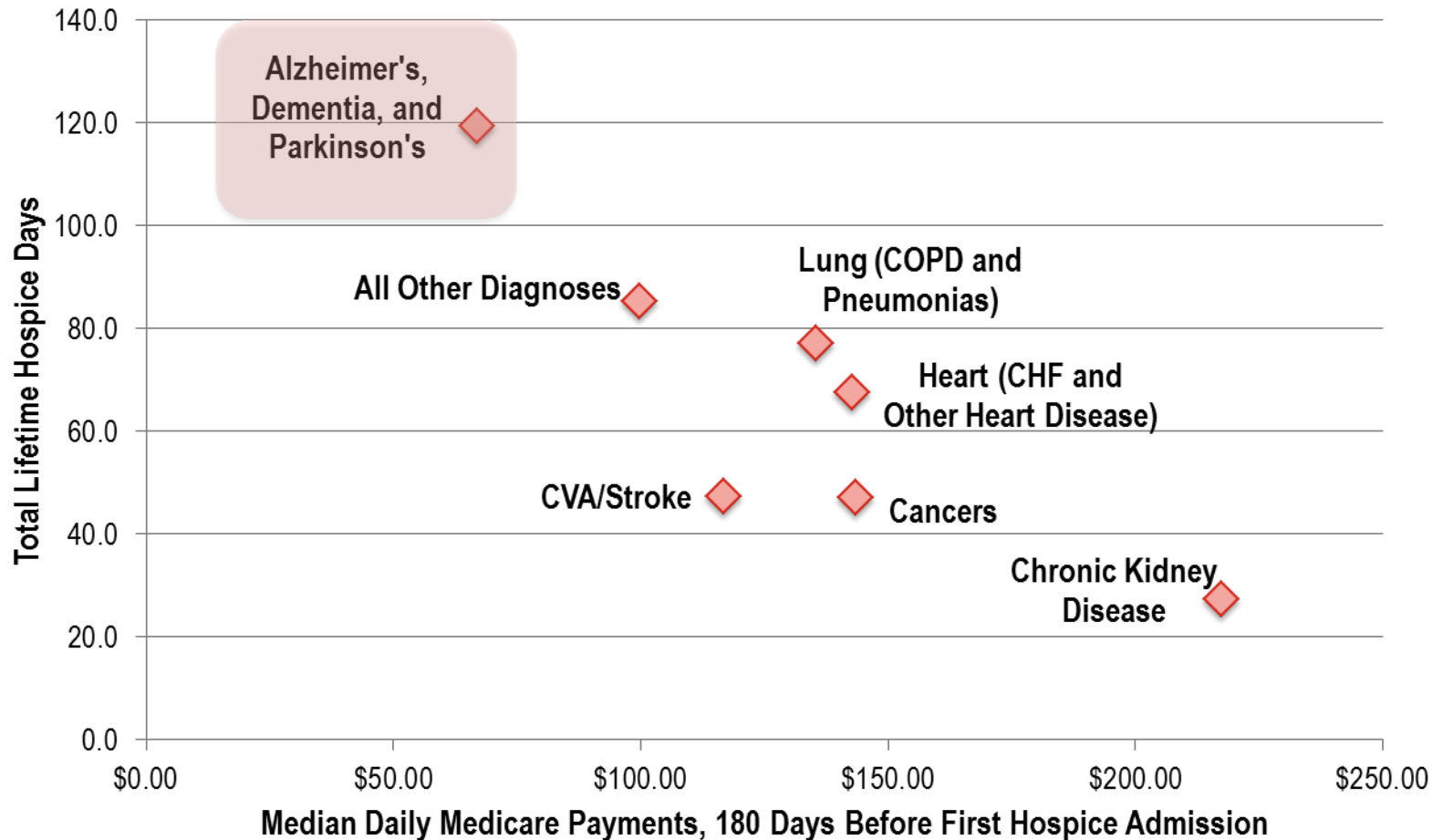


*The analyses upon which this publication is based were performed under Contract HHSM-500-2005-00018I, entitled, “Hospice Study and Report,” funded by the Centers for Medicare & Medicaid Services, Department of Health and Human Services. The content of this presentation does not necessarily reflect the views or policies of the Department of Health and Human Services, nor does the mention of trade names, commercial products, or organizations imply endorsement by the U.S. Government. The author assumes full responsibility for the accuracy and completeness of the ideas presented*

# Median Daily Medicare Spending Pre-Hospice Admission, 2013



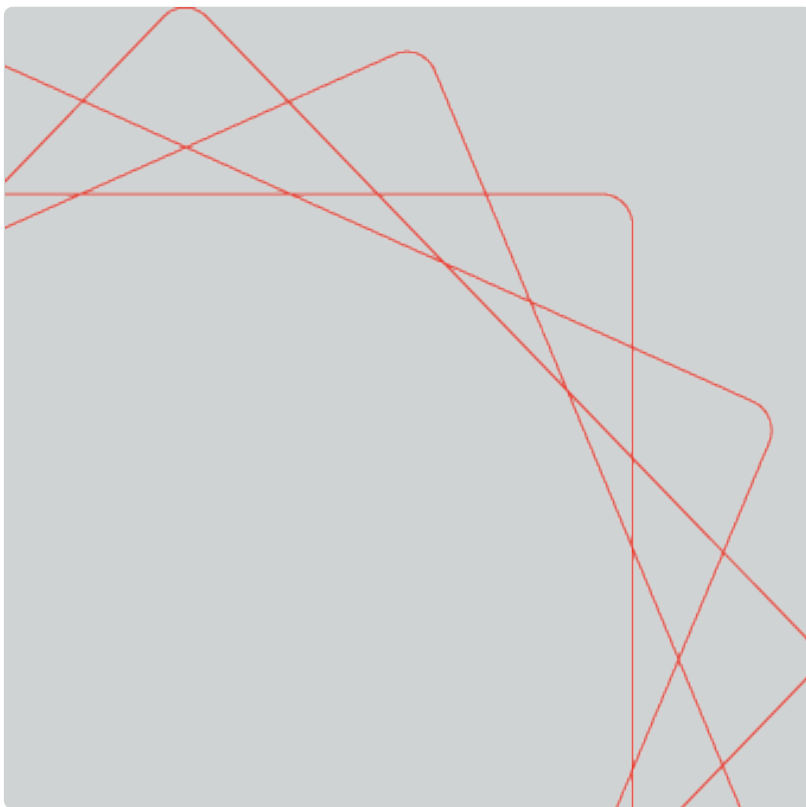
# Association between Medicare Pre-Hospice Spending and Total Lifetime Hospice Utilization





# Trends in Hospices Exceeding the Aggregate Annual Medicare Reimbursement Cap

T.J. Christian, Ph.D.



# Original Intent of the Aggregate Annual Medicare Reimbursement Cap

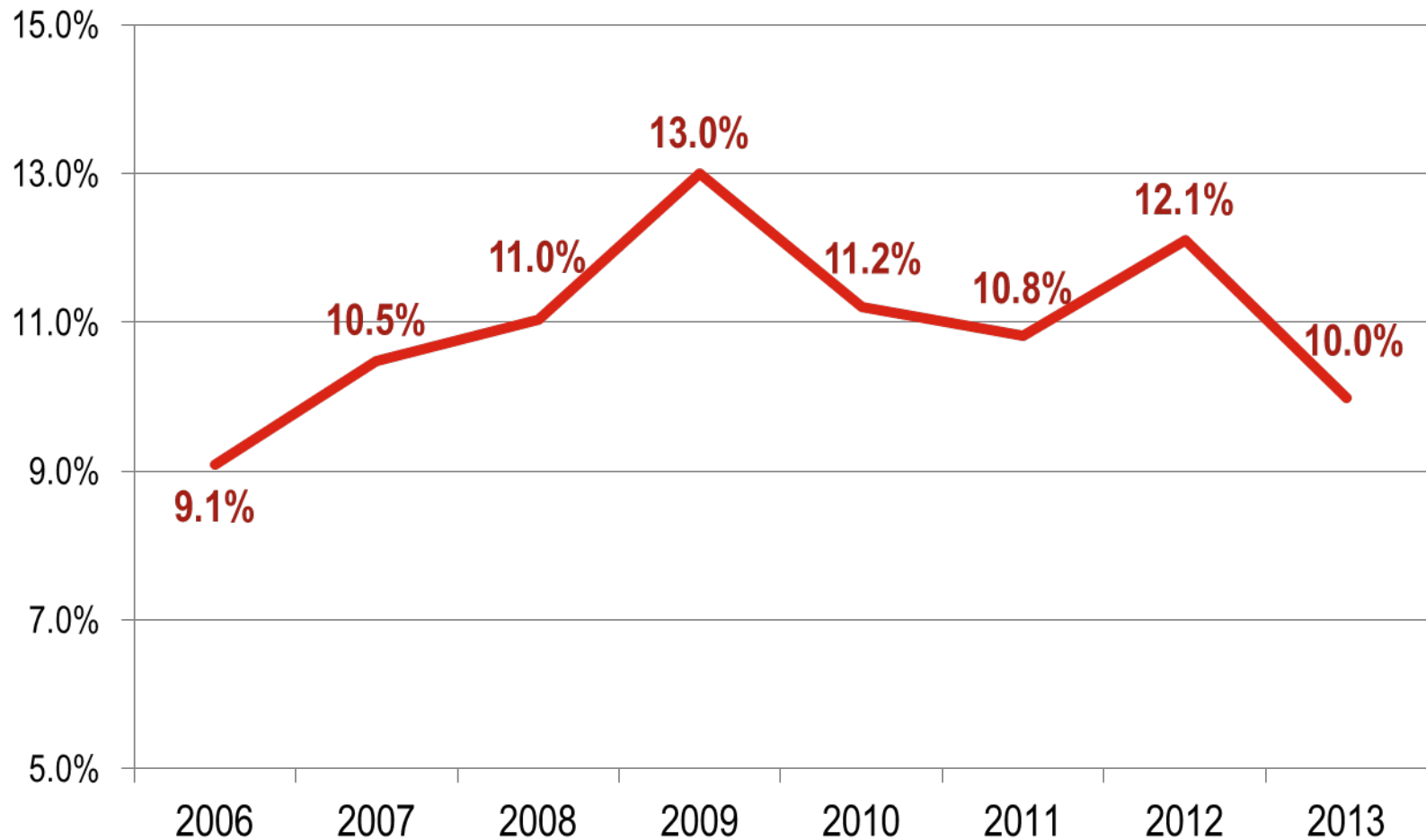


- The original hospice rule specified that payments made to a hospice in a year are subject to a “cap” amount

$$\text{Aggregate Cap} = \text{Cap Amount} * \text{Number of Beneficiaries}$$

- The cap was intended to ensure that hospice payments would not exceed Medicare expenditures in a conventional setting
- The rate of hospices exceeding the cap has quadrupled since 2002 (2.6% hospices above-cap)

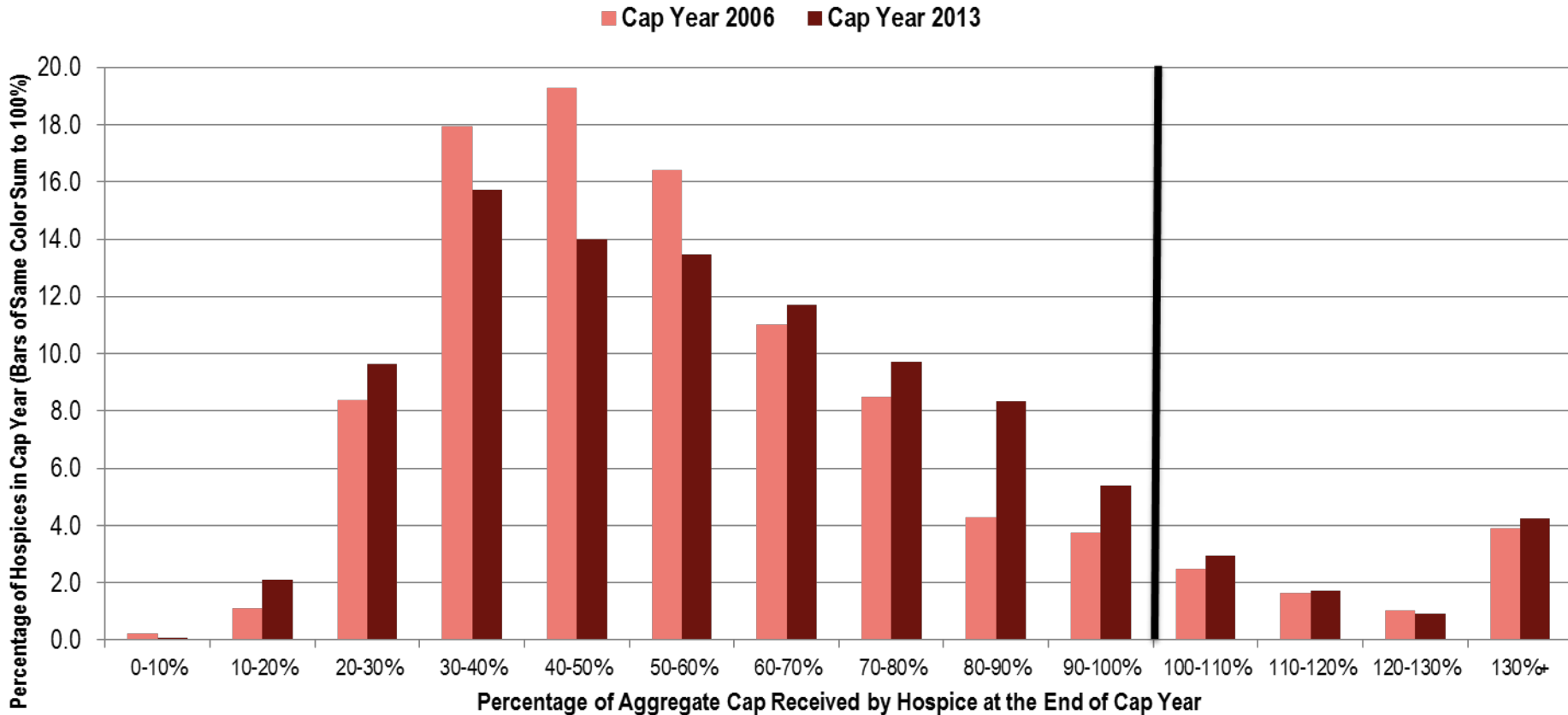
# Percentage of Hospices Exceeding the Cap, 2006-2013



# Percentage of Allowable Reimbursements Received by Hospices in Cap Years 2006 & 2013

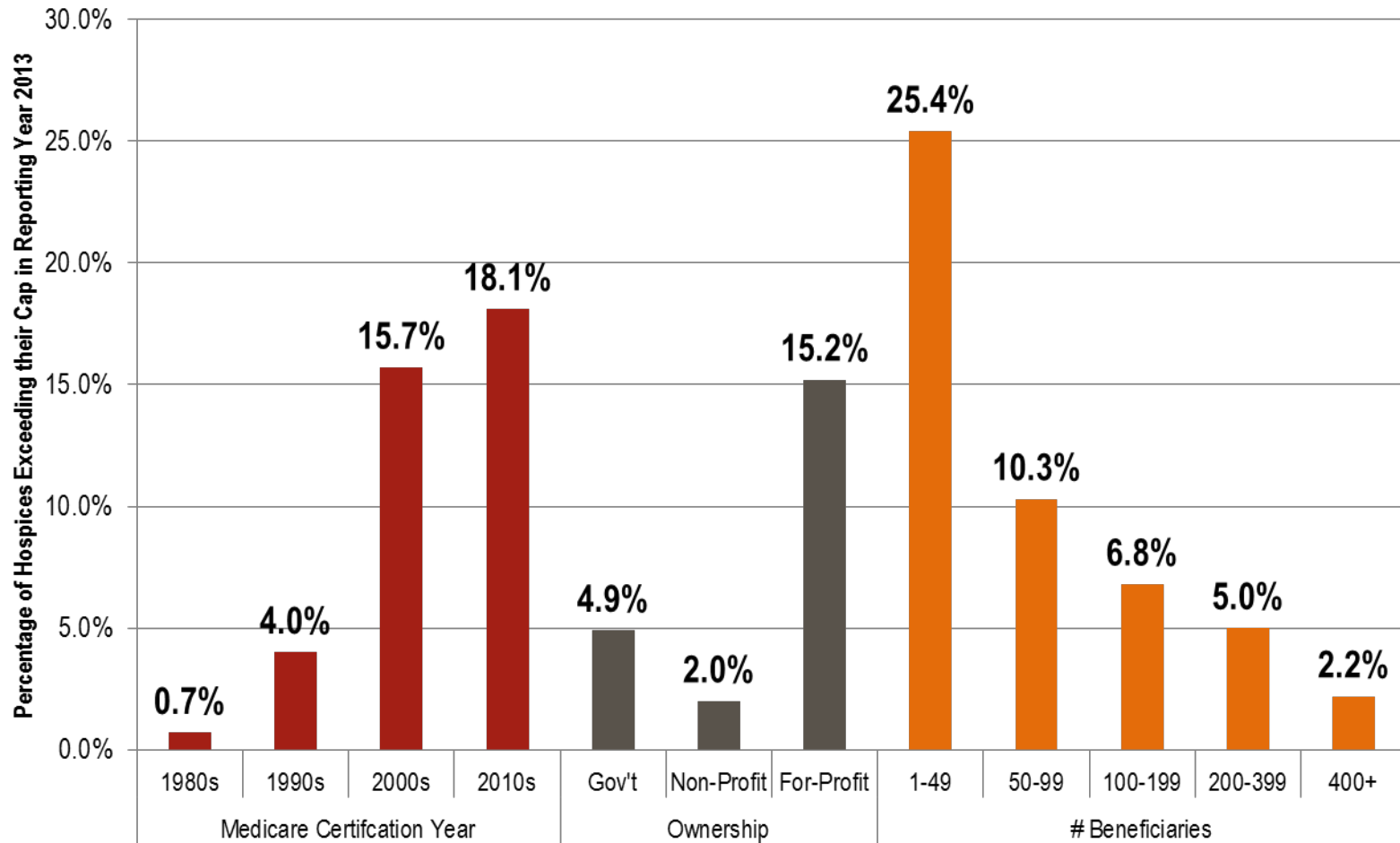


**More Hospices ended 2013 "Just Below" Aggregate Cap than in 2006**

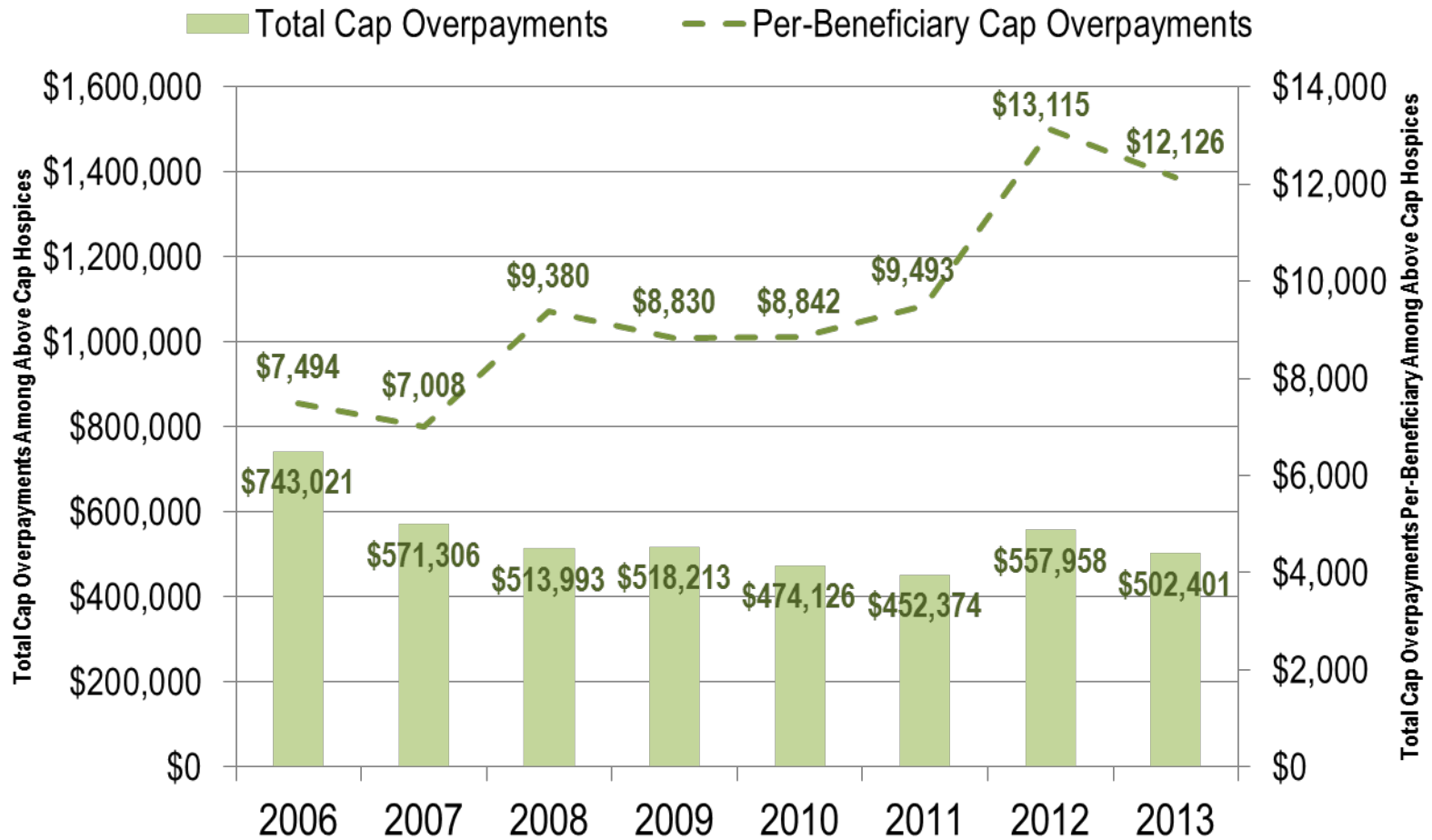




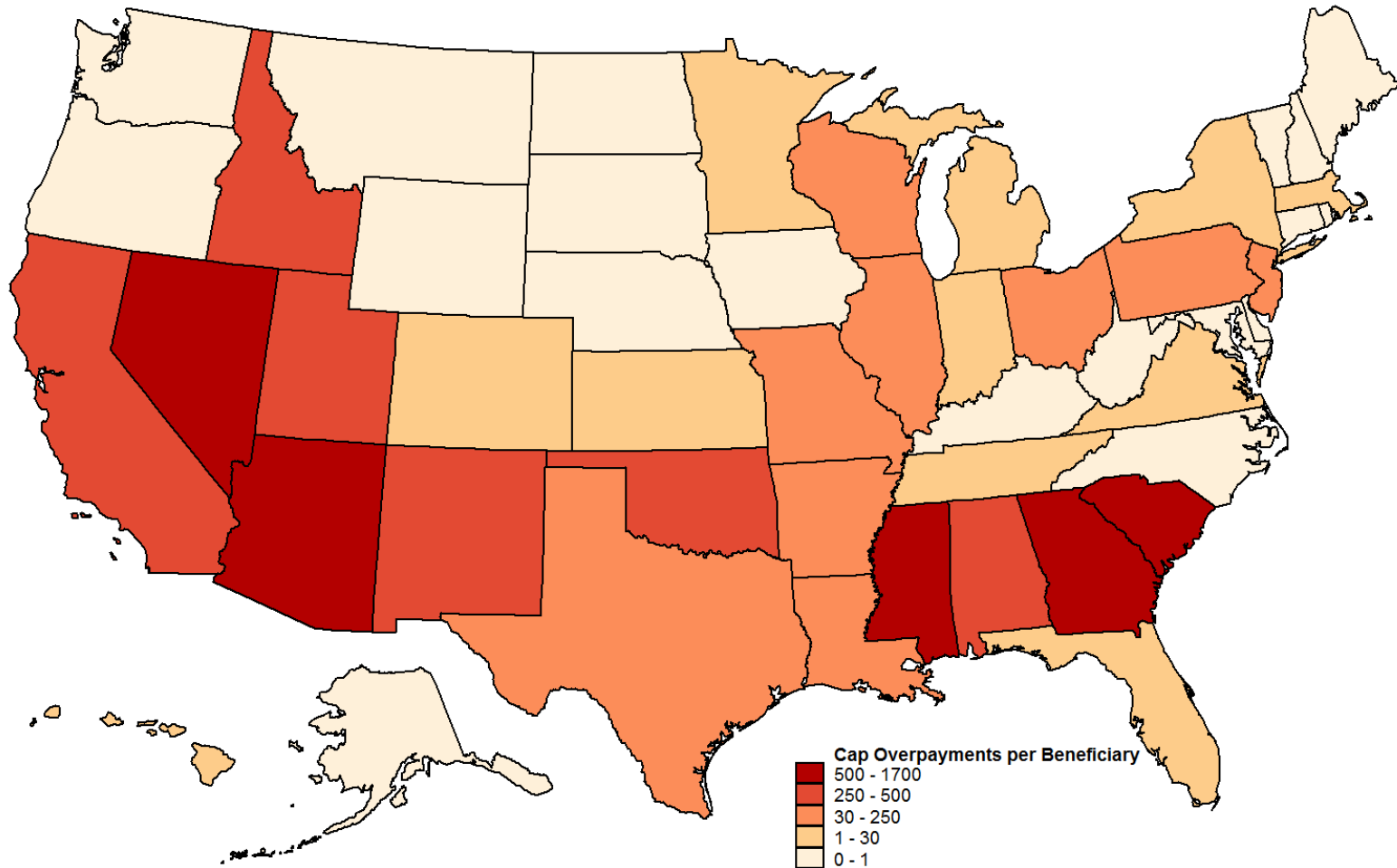
# Above-Cap Rates Across Hospice Characteristics, 2013



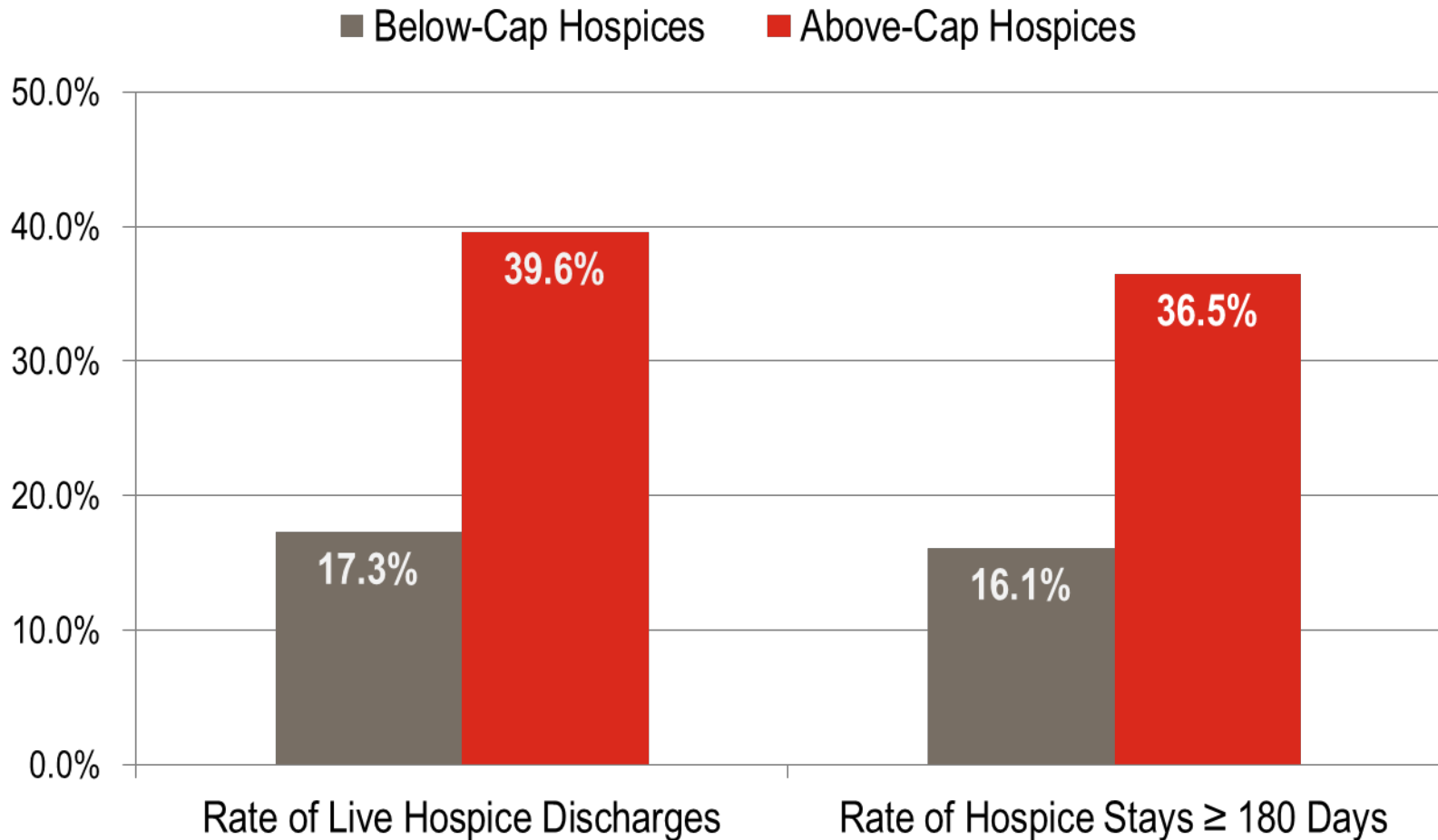
# Hospice-Level Cap Overpayments Among Above-Cap Hospices, 2006-2013



# Geographical Variation in Above-Cap Hospices' Cap Overpayments by, 2013



# Hospice Outcome Differences by Cap Status, 2013



# Potential Cap Reforms (Would Require a Change in Statute)



- Rebase Cap Amount (\$26,157.40 in 2013)
  - Based on inflation-adjusted curative end-of-life treatment costs for cancer patients in early 1980s
  - Update end-of-life cost estimates to reflect current case mix

Medicare Decedents, CY2013	Total Medicare Costs, Final 6 Months of Life	Final 6 Months of Life, 40% of Estimate
All Non-Hospice Beneficiaries	\$36,037.00	\$14,414.80
All Non-Hospice Beneficiaries with Cancer Diagnosis	\$59,701.03	\$23,880.41
All Non-Hospice Beneficiaries, Weighted cancer/non-cancer mix to Hospice patient proportions	\$40,194.09	\$16,077.64

# Other Potential Cap Analyses



- Estimate average episode costs using Medicare hospice cost reports
  - Hospice costs average **\$151.78** per day in 2013 cost data
  - Average hospice stay was **98.6** days (MAC tables)
  - Total cost = **\$151.78 \* 98.6 = \$14,965.51** per hospice episode
- Adjust hospice caps by local wage index
  - At present, all hospices face same per-person cap (\$26,157.40), but payments are wage-adjusted by geography
  - Not adjusting the cap may penalize hospices in high-wage areas (easier to exceed cap) and benefit hospices in low-wage areas (can receive relatively more payments before exceeding cap)
  - Similarly, could not be implemented without statutory change



# Variation of Skilled Visits in the Last Two Days of Life for Medicare Hospice Decedents on Routine Home Care

Joan Teno, MD, MS  
Michael Plotzke, Ph.D.



# Background



- In a study of 292 decedents dying at home or a nursing home in six hospice programs, we found that 29.5% of the patient did not receive a visit by professional staff in the last two days of life.
  - We further found that family members without visits in the last two days of life were less likely to report the care was excellent (65% without such visits said care was excellent compared to 71% with those visits rated care excellent).
  - Furthermore, respondents noted more unmet needs in receiving adequate training to safely care for the patient at home (56% reported an unmet need when there was no visits in the last two days of life compared to 47% when visited reporting an unmet need).



# Methods



- Used 100% of Medicare hospice claims in Fiscal Year 2013
- Only considered individuals who
  - had a claim with a discharge status code equaling death or whose last day in hospice equaled the day of death
  - received Routine Home Care (RHC) for final two days of life
- Skilled visits were those from a social worker, nurse, therapist, or was a physician visit as recorded on the hospice claim.
- The Provider of Services file and Medicare Enrollment Database were used to supplement beneficiary and provider characteristics on the claim

# Methods



- A multivariate logistic model examined factors associated with whether a decedent had a visit by professional staff.

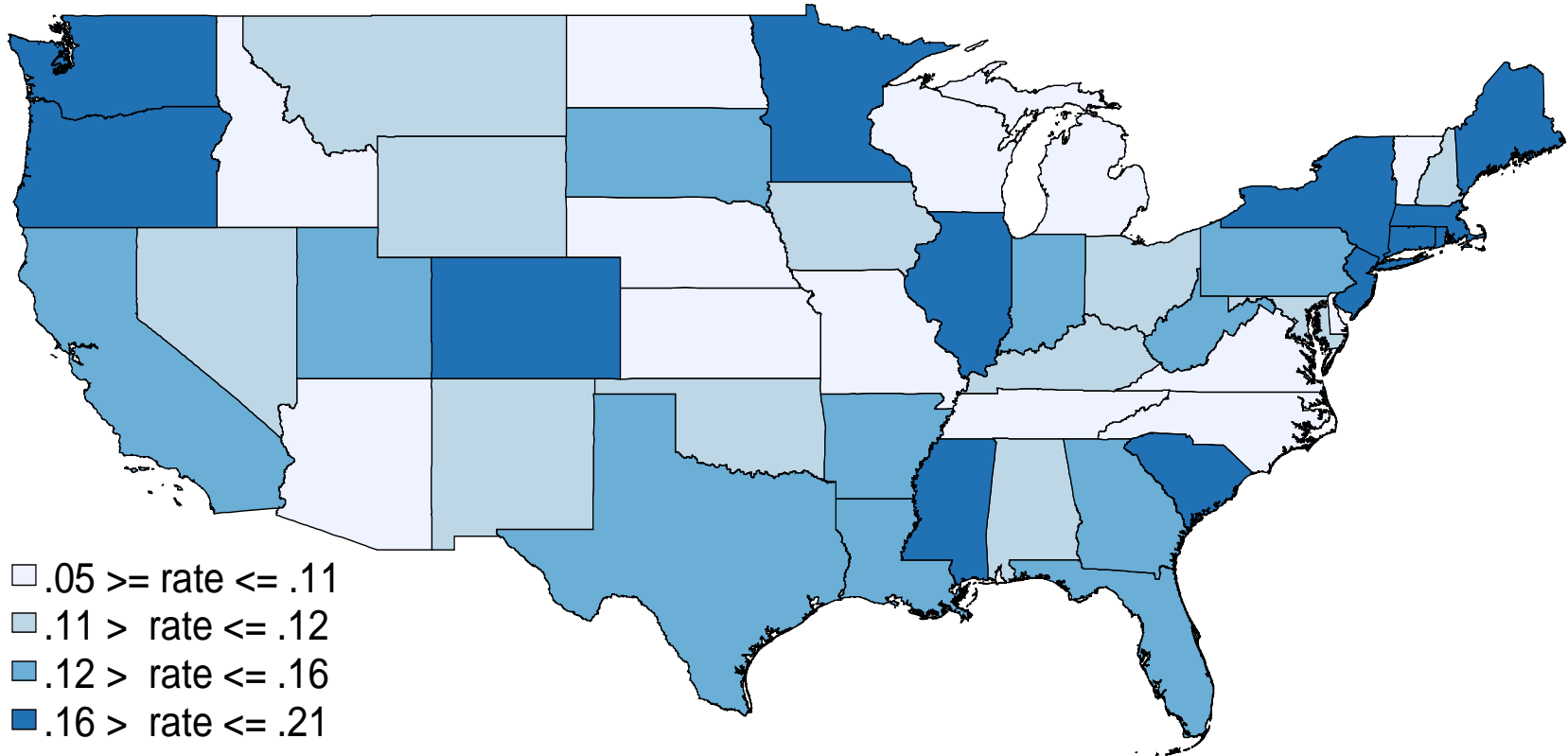
- Decedent characteristics

- Age, gender, race, hospice primary diagnosis, hospice length of stay, rural location, site of service, and day of the week death occurred

- Hospice organization characteristics

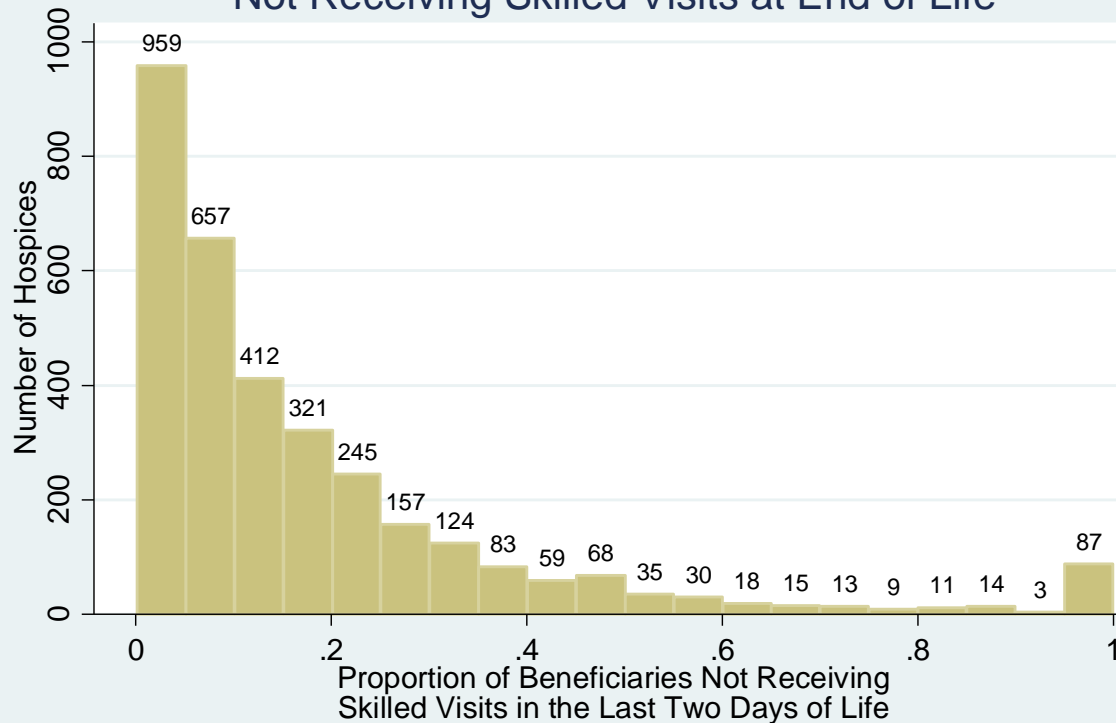
- Age of hospice program, tax status, whether the hospice program is facility based, state hospice is located in, and size of the hospice program

## Proportion of Decedents with RHC on Last Two Days and No Visits



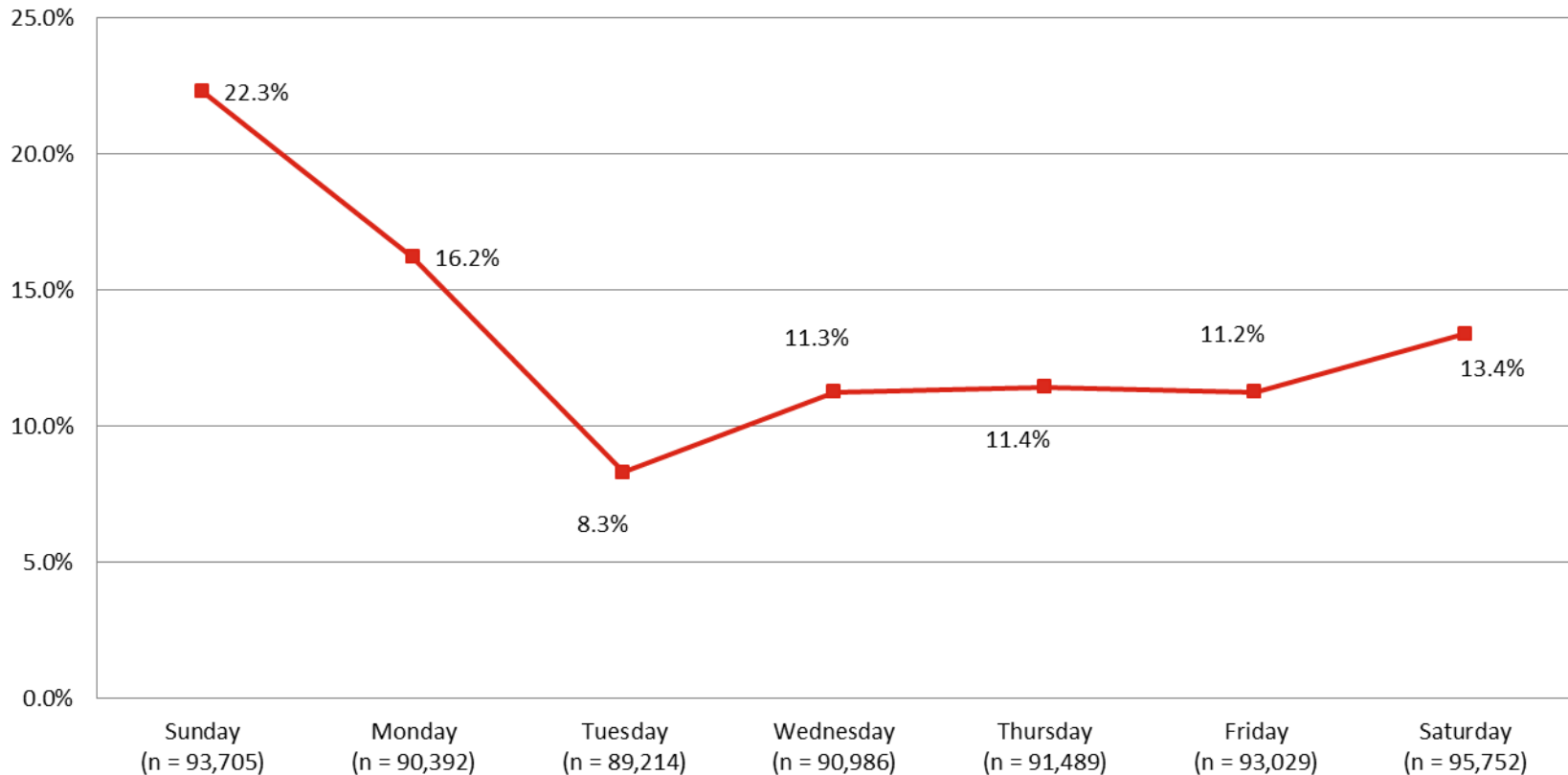
- States with the lowest percentage of beneficiaries with no visits on the last two days of life included: Wisconsin (5.3%), Delaware (6.4%), North Dakota (7.3%), Idaho (8.2%), and Tennessee (8.3%).
- States with the highest percentage of beneficiaries with no visits on the last two days of life included: Washington (21.5%), Oregon (20.1%), New Jersey (19.8%), Minnesota (19.5%), Massachusetts (19.5%).

## Hospice Level Rate of Beneficiaries Not Receiving Skilled Visits at End of Life



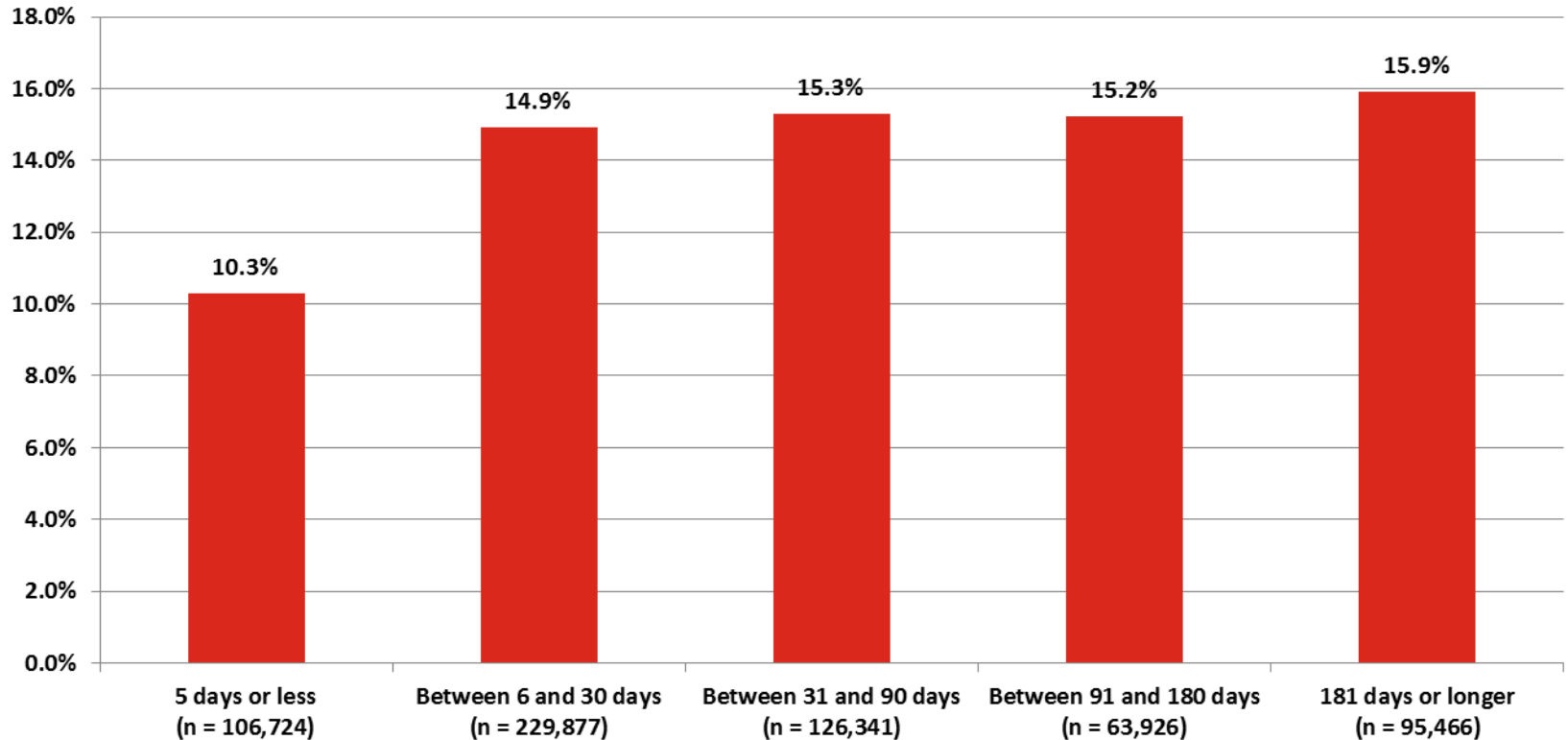
- If provider level rates (i.e. the proportion of decedents at a hospice with no skilled visits at the end of life) are calculated, a large degree of variation is found
  - 439 hospices (not shown on the histogram) have a proportion equal to 0
  - 76 hospices have a proportion equal to 1
  - The 75<sup>th</sup> percentile proportion is 0.21 while the 25<sup>th</sup> percentile proportion is 0.03
  - This distribution appeared similar when breaking out hospices by ownership type, size, and age (not shown).

## Percentage of Beneficiaries Without Skilled Visits During Last Two Days of Life (By Day of Week That Death Occurred)



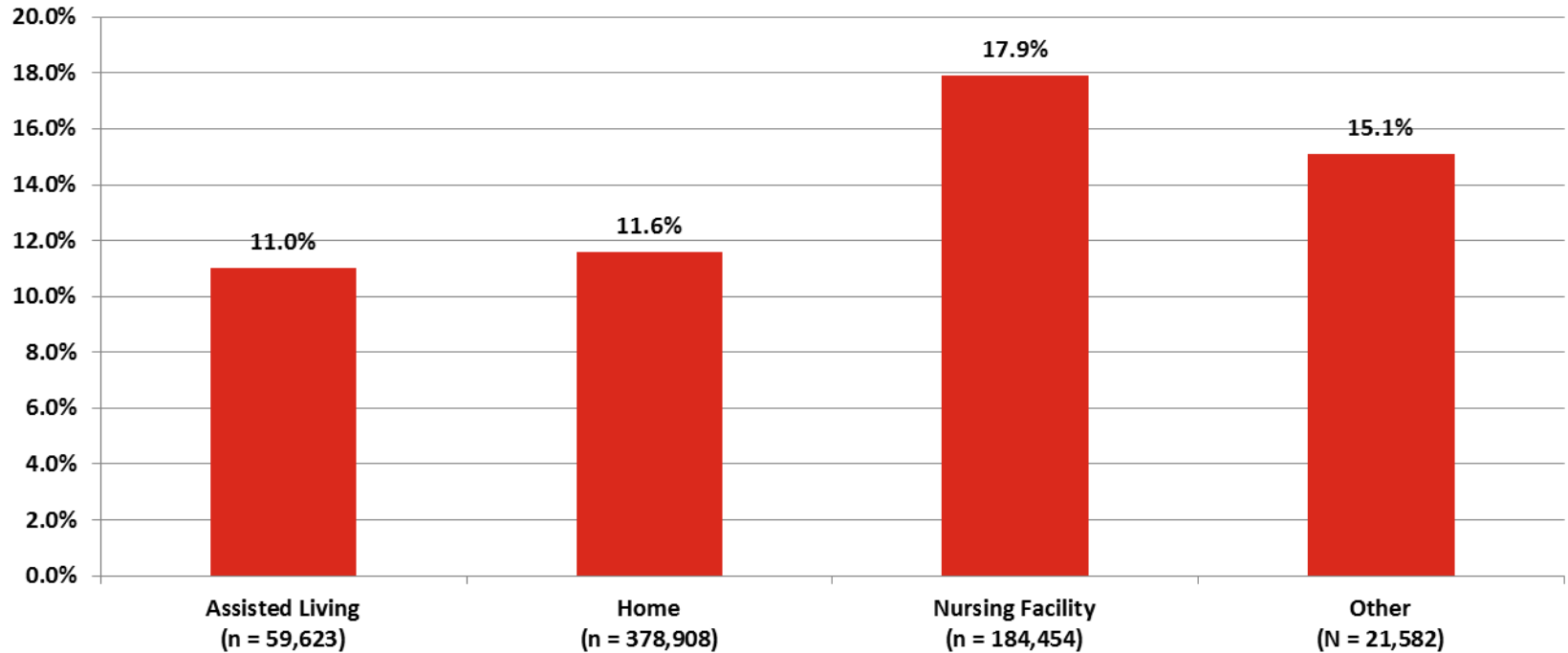
- In general, fewer visits are provided on the weekend, therefore beneficiaries dying on a Sunday are much more likely to not have a visit in the last two days compared to beneficiaries dying on other days
- Hospices which are less likely to provide daily care may represent an area for improvement

## Percentage of Beneficiaries Without Skilled Visits During Last Two Days of Life (By Length of Stay)



- Outside of those individuals who had very short lengths of stay, there is little variation in not receiving a visit at the end of life across different lengths of stay.

## Percentage of Beneficiaries Without Skilled Visits During Last Two Days of Life (By Site of Service)



- Beneficiaries dying in assisted living or at home are somewhat less likely to forgo skilled visits in the last two days of life compared to beneficiaries dying in other sites of service.

# Results of the Multivariate Logistic Model



- Patient Characteristics
  - Blacks more likely to not have visits compared to whites (AOR 1.3)
  - Those dying in a nursing home more likely to not have a visit (AOR 1.6)
  - Those dying on Monday through Saturday were less likely to not have visits compared to those dying on Sunday (AOR: 0.3 – 6.6)
  - Those dying of cancer and ESRD more likely to have a visit while those dying of debility unspecified and dementia were more likely to not have a visit.



# Results of the Multivariate Logistic Model



- Hospice Program Characteristics
  - Persons dying in older hospice programs were more likely to have a visit (AOR 0.70 – 0.90)
  - Larger hospice programs compared smaller programs were more likely to have a visit (AOR 0.61 – 0.75)

# Conclusion



- In 2013, one in seven hospice patients did not have a visit. This varied by state and hospice program.
  - State variation from 5.3% (WI) to 21.5% (WA)
  - Hospice program variation from 2.9% (25<sup>th</sup> percentile) to 21.1% (75<sup>th</sup> percentile).
- Blacks, those who died in a NH, and those who died on Sunday were less likely to have visits in the last two days of life.

# Conclusion



- Future research is needed, but bereaved family reports of higher quality of care with visits provide evidence of their value.
- Efforts to ensure that dying persons and their family are receiving the right care at the right time that ensures appropriate palliation, adequate emotional support, and that the family receive adequate training to safely care for the patient is warranted.



# Variation in Rates of Live Discharge

Joan Teno, MD, MS  
Michael Plotzke, Ph.D.



# Live Discharges – FFY 2013



- In FFY 2013 there were
  - 1,159,852 discharges
  - 212,574 (18.3%) were live discharges
- In FFY 2013, there were 3,096 hospices with 51 or more discharges
  - Median live discharge rate is 18.3%
  - 10<sup>th</sup> percentile equals 9.5%
  - 90<sup>th</sup> percentile equals 39.1%
  - \$888 million in hospice payments (5.9% of all hospices payments for the 3,096 hospices)

# Live Discharge: State Variation (FFY 2013)



- Lowest live discharge rate
  - Kentucky (11.6%)
  - Illinois (11.7%)
  - Nebraska (12.3%)
  - Connecticut (13.1%)
  - Michigan (13.5%)
- Highest live discharge rate
  - Mississippi (37.0%)
  - Alabama (30.3%)
  - South Carolina (29.8%)
  - District of Columbia (29.5%)
  - Arizona (25.8%)

# Live Discharge: Hospice Variation (FFY 2013)



- Hospices above the 90<sup>th</sup> percentile for live discharges
  - Provided 3.97 visits per week on average
  - Had an average LOS equal to 159.4 days
  - Had a rate of not providing skilled visits for the last two days of life (RHC days) equal to 22.3%
- Hospices below the 90<sup>th</sup> percentile for live discharges
  - Provided 4.48 visits per week on average
  - Had an average LOS equal to 90.8 days
  - Had a rate of not providing skilled visits for the last two days of life (RHC days) equal to 13.7%

# Live Discharges



- Reason for live discharge (FY 2014)
  - Revocation 38.2%
  - Transfer to another hospice 11.6%
  - No longer meeting eligibility criteria 43.1%
  - Moved out of Service area 5.3%
  - Discharge for cause 1.8%



# Questions?



Please contact Abt Associates  
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for questions or comments regarding today's  
presentations.