

# Clarifying Sources of Geographic Differences in Medicare Spending

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# Motivation

- 50-60% unexplained difference in Medicare spending per beneficiary between high and low cost areas, even taking age, gender, race, and some health measures into account
- One recent study showed that 18% of the difference is due to health measures, leaving 70% unexplained
- Are there other unmeasured factors that affect the size of unexplained differences?
- “an unmeasured confounder would have to be a more powerful predictor of utilization than those we measured” (Ann Intern Med 2003)

# Typically measured factors

- Demographics
  - ❖ Age, gender and race
- Community type (metro area)
- Income
- Baseline health measures
  - ❖ General health status
  - ❖ Small number of specific conditions
  - ❖ Health behaviors (smoking, BMI)

# Other factors to consider (1)

- More extensive set of baseline health measures
- Changes in health during the year (new diagnoses and death)
- Supplemental insurance coverage
- Patient preferences for care
- Health system organization
  - ❖ Hospital ownership, physician practice types

# Other factors to consider (2)

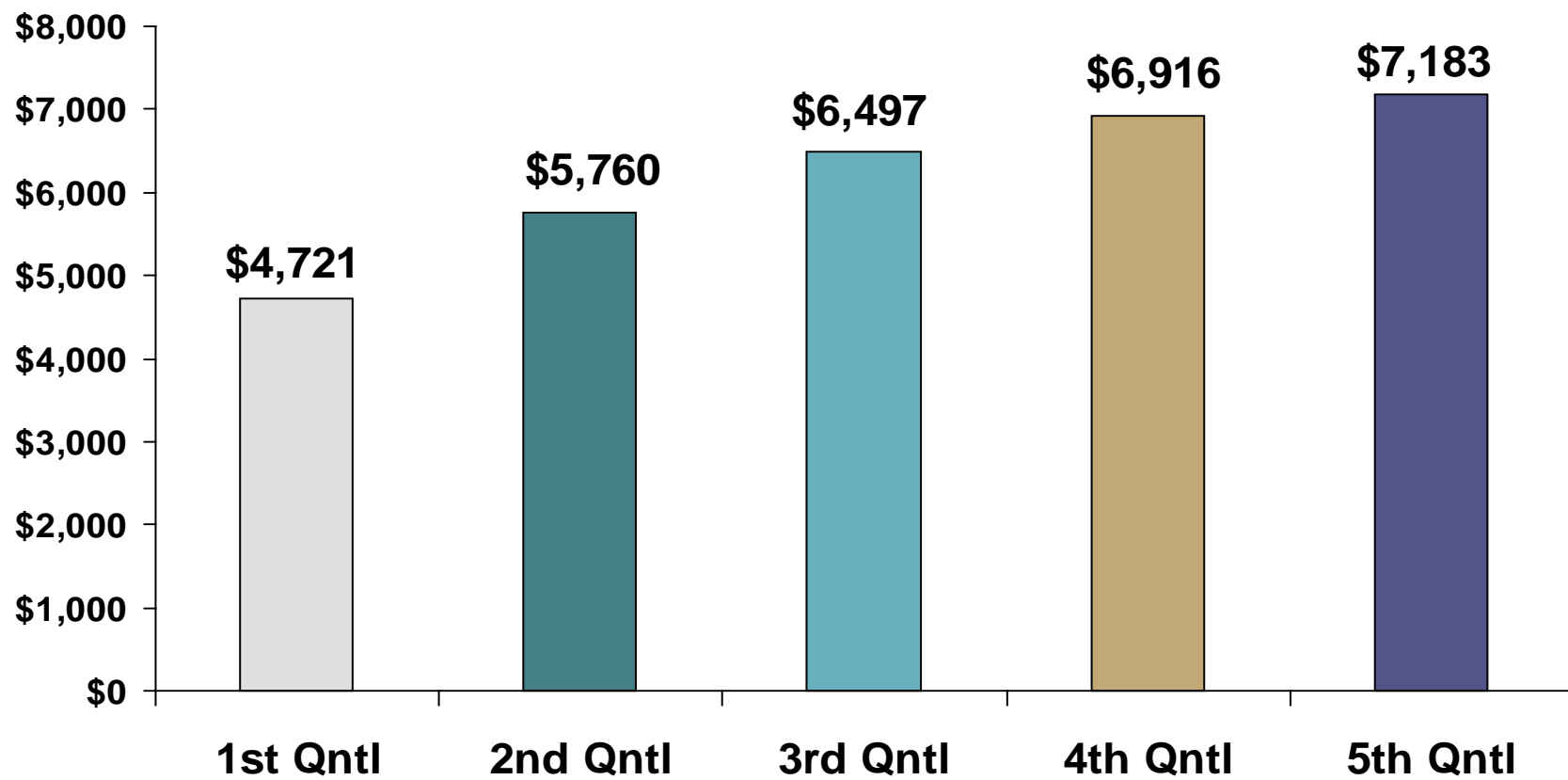
- Market structure
  - ❖ Are there dominant providers? shortages or surpluses of some types of care?
- Inappropriate Medicare payments - Are they high or low relative to
  - ❖ the costs of services?
  - ❖ private payers' rates?
- Providers' profit-seeking behavior

**Some of these factors may explain Medicare spending but may not or should not be recognized in Medicare payments.**

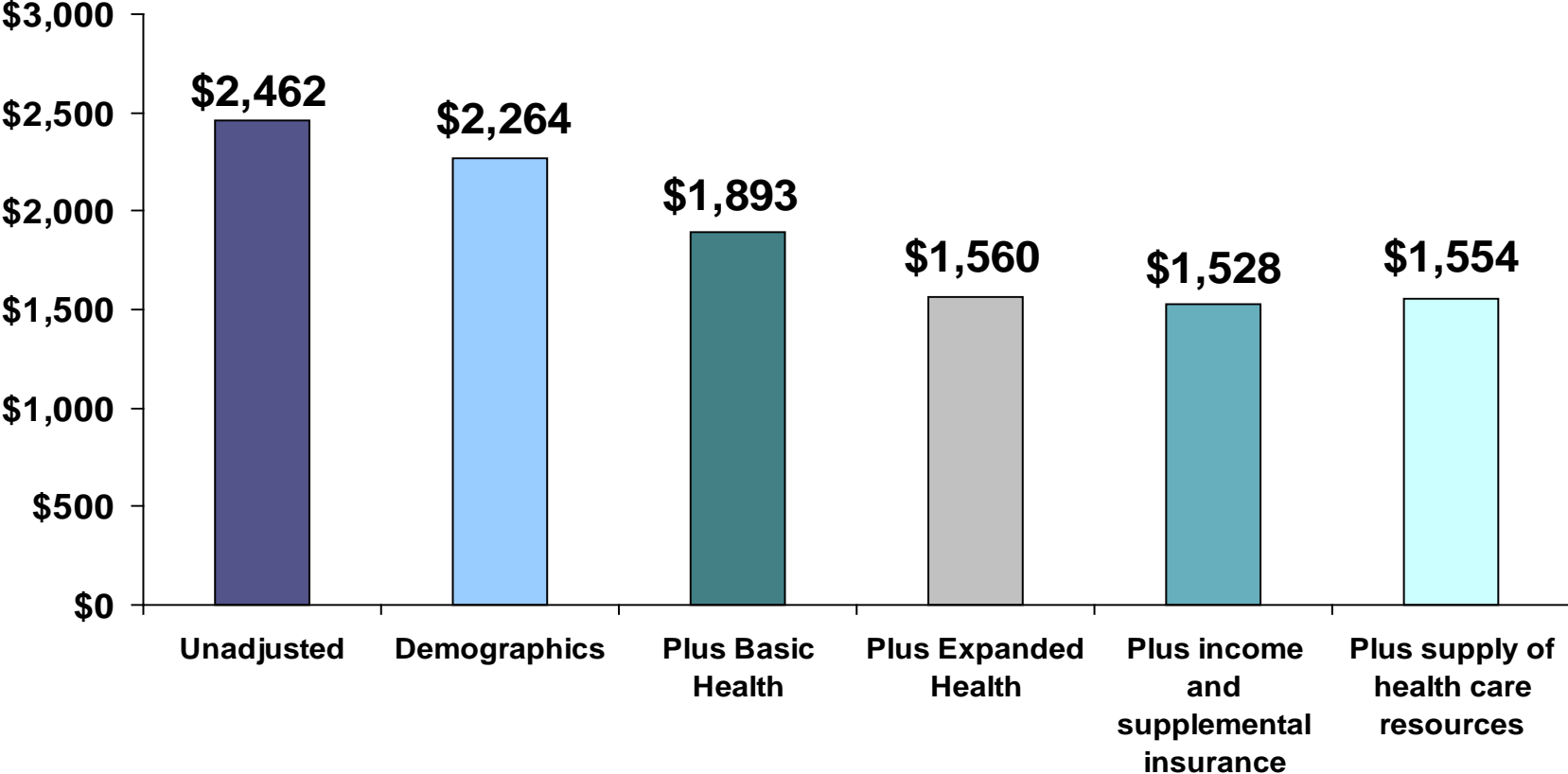
# Data and Methods

- 2000-2002 Medicare Current Beneficiary Survey
  - ❖ 6725 beneficiaries over 64 years old
- Hospital wage index to adjust for cross-sectional price differences
- HRR quintiles based on price-adjusted Medicare spending per beneficiary
- Regressions used to assess influence of factors on geographic differences

# Price-adjusted Medicare Spending per Beneficiary, 2000-2002

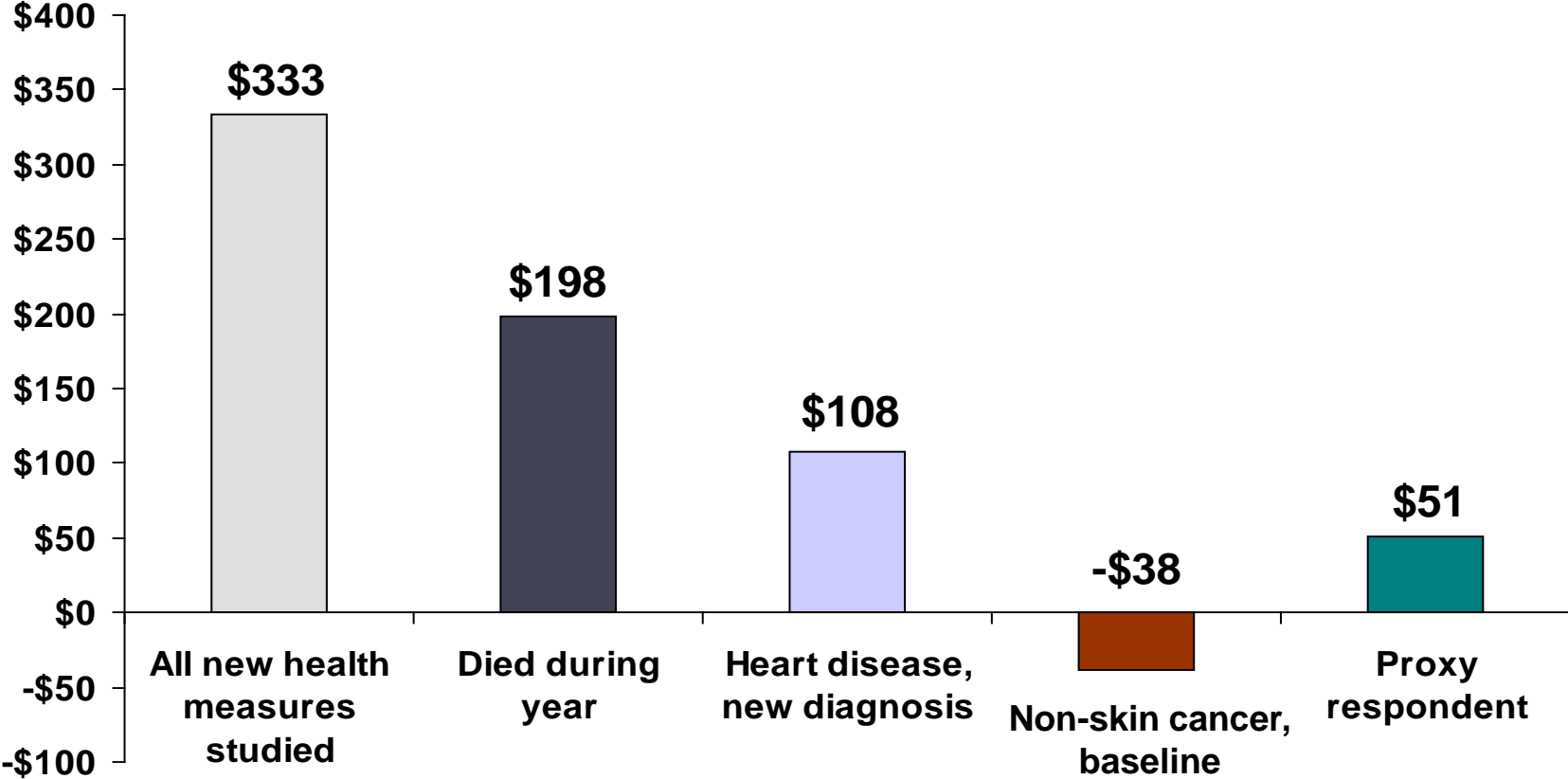


# Unexplained Differences in Medicare Spending per Beneficiary, Quintile 1 vs. 5



Source: Analysis based on the 2000-2002 Medicare Current Beneficiary Survey

# Contribution of selected health factors on unexplained spending difference, Quintile 1 vs. 5



Source: Analysis based on the 2000-2002 Medicare Current Beneficiary Survey

# Implications

- Geographic differences in spending do not always imply inefficiency
- One-third of the difference we observe is due to health measures
  - ❖ Severity of illness and multiple chronic conditions data might explain even more
- Policies driven by geographic spending differences could easily reward or penalize the wrong areas, providers or beneficiaries