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

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