Comparing Episodes of Care and Bundled Payment Approaches

Cecil G. Sheps Center for Health Services Research

Comparative Effectiveness Research Methods Series:
Applications to Health Services Research

May 17, 2013

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Overview: Goal of Seminar Series

- Historically, CER involves comparisons of two active clinical treatments
  - Often medications or procedures
  - Methodological focus to date: meta-analysis, pragmatic randomized clinical trials, and ways to address selection bias such as new user designs, propensity scores, and instrumental variables

- Health services research involves interventions to alter health care system with joint goals of:
  - Enhancing quality and access to care
  - Controlling the costs of care delivery

- Implementation of the Affordable Care Act will accelerate this process
  - Interventions include care management, practice organization, workforce composition, and modifications of the payment system
  - How can CER methods be adapted to address these critical questions?

Focus for Today: Bundled Payment and Episodes of Care

- Prior experience
- Broader causes
- Current models
- Implementation challenges
- Evaluation challenges

Prior Experience (Highlighted in two readings)

- Disease-specific programs
  - ESRD
  - Medicare pilot for CABG (1990-1996)
  - Medicare Acute Care Episodes

- More comprehensive approaches
  - Geisinger's Proven-Care Program

Prior Experience (Table of Experiences, Chambers et al.)

Table 1
Bundled payment policies in the U.S.

Pilot	Payer	Date	Treatment	Bundle description
CardioVascular Care Providers, Inc. at the Texas Heart Institute[a]	Texas Heart Institute	Early 1980s	Coronary artery bypass graft (CABG)	Cardiovascular physician and hospital fees and services
Inpatient Prospective Payment System (IPPS)	Medicare	1983, ongoing	Originally 467 diagnosis related groups (DRGs)	Payment for multiple services performed in a hospital admission, while excluding services unrelated to the DRG
Medicare Participating Heart Bypass Center Demonstration	Medicare	1991–1996	CABG	Medicare Parts A and B inpatient services, readmission related to episode, hospital pass throughs
ProvenCare Program	Geisinger Health System	2006-	CABG; expanded to hip replacement pre- and post-natal care, and cataract and bariatric surgery	Hospital and other facility costs, Pre-operative care, inpatient services, and post-operative care for 90 days
Prometheus Payment Model	Various	2009, ongoing	21 conditions including diabetes, asthma, CABG, hip and knee replacements, colonoscopy	Inpatient and outpatient provider fees and services
Integrated Healthcare Association (IHA) of California's Bundled Episode of Care Pilot	Various	2010, ongoing	Knee replacement and CABG surgery, expanded in 2011 to ten acute conditions/procedures	Inpatient surgical services for hospitals, surgeons, consulting physicians and ancillary providers
Uniform Care Packages	Fairview Health Services	2010, ongoing	12 care packages including chronic diabetes, coronary heart failure, prenatal care, knee replacement, etc.	Parts A and B services
Alternative QUALITY Contract[a]	Blue Cross Blue Shield of Massachusetts	2009, ongoing until all 5-year provider contracts expire	As a global budget, payment applies to a any number of causes for medical treatment that a patient may need over a year	All inpatient and outpatient hospital and physician care (including pharmacy and behavioral health costs)
Medicare Acute Care Episode (ACE) Demonstration	Medicare	2009–2013	Specified cardiovascular and/or orthopedic procedures	Part A and Part B services
Medicaid – bundled payment demonstration in up to 8 U.S. states	Medicaid	2012–2016	State-based, given the condition has the potential for cost savings and quality improvement	Episode of care that includes hospitalization and physicians fees during hospital stay [25]
Medicare End-Stage Renal Disease Management Demo	Medicare	2006–2010	End-stage renal disease (ESRD)	Varied programs for integrative care, could include comorbidity mgmt, nutrition, preventative care, etc. [32]

[a] Not a pilot project.

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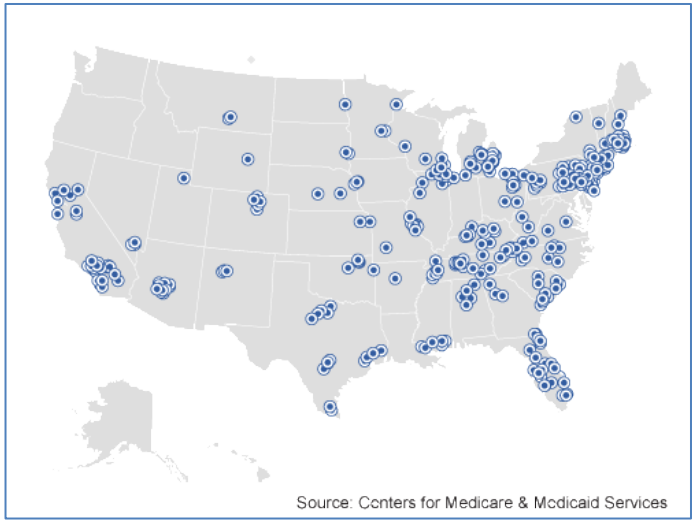
Broader Causes

- Failure of managed care to constrain use
- High readmission rates
- Medicare "structural" problems
  - Conflicting (or at least not coordinated) Medicare payment stipulations
    - Method (e.g., DRG for hospital versus per diem for SNF)
    - Requirements (e.g., 3 day hospitalization requirement)
    - Varied costs of post-acute care (SNF, IRF, LTCH, HHA)
  - Lack of palliative care benefit

Current Models: Diagnosis-Specific Approaches

- CMS's Bundled Payments for Care Improvements (BPCI) Initiative
  http://innovation.cms.gov/initiatives/bundled-payments/
- Four Models
  - Model 1: Retrospective Acute Care Hospital Stay Only
  - Model 2: Retrospective Acute Care Hospital Stay plus Post-Acute Care
  - Model 3: Retrospective Post-Acute Care Only
  - Model 4: Acute Care Hospital Stay Only



- See list of funded models, sites, conditions
  http://innovation.cms.gov/initiatives/Bundled-Payments/Participating-Health-Care-Facilities/index.html
- Interesting letter with waiver requests
  https://www.aamc.org/download/334132/data/aamccommentsonhousecommitteesrevisedsgrreplacementproposal.pdf

Current Models: More Comprehensive Approaches

- Accountable Care Organizations http://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/ACO/index.html?redirect=/aco/
  - Medicare Shared Savings Program—a program that helps Medicare fee-for-service program providers become an ACO.
  - Advance Payment ACO Model—a supplementary incentive program for selected participants in the Shared Savings Program.
  - Pioneer ACO Model—a program designed for early adopters of coordinated care.

- Comprehensive Primary Care Initiative

  http://innovation.cms.gov/initiatives/comprehensive-primary-care-initiative/

- Community Based Care Transition Program
  http://www.cms.gov/Medicare/Demonstration-Projects/DemoProjectsEvalRpts/Medicare-Demonstrations-Items/CMS1239313.html

Implementation Challenges

- Design issues
  - Not necessarily the evaluator's problem, but will affect what is available to evaluate
  - Gain and loss sharing provisions
- Identifying specific diagnoses
  - Key criteria
    - Financial risk faced by provider
    - Potential to reduce cost while not compromising outcome
- Unintended consequences
- Encompassing concern: end-of-life care

Sood et al.: Within-hospital Variation in Costs

EXHIBIT 2

Variations In Hospitals' Spending On Five Conditions, 2004

Condition	Mean total costs (SD)	Average within-hospital interquartile ratio	Within-hospital coefficient of variation
Chronic obstructive pulmonary disease	$9,442 ($10,743)	2.57	1.03
Congestive heart failure	$12,560 ($16,121)	2.94	1.16
Stroke	$14,610 ($16,883)	3.12	0.96
Lower extremity joint replacement	$18,225 ($9,914)	1.47	0.42
Hip fracture	$16,953 ($12,883)	1.96	0.63

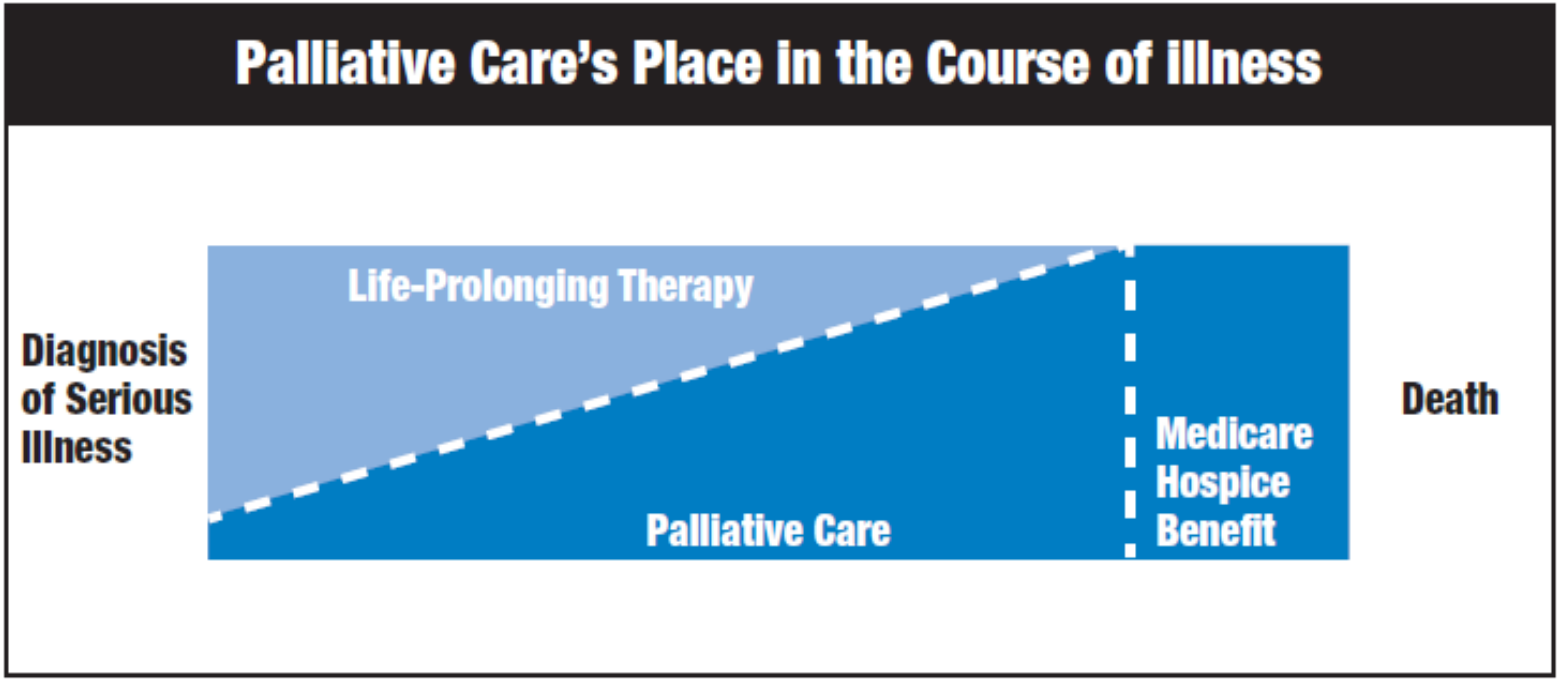
Sood et al.: Between-hospital Variation in Costs

EXHIBIT 3

Variations In Hospitals' Costs For Episodes Of Care And Readmissions, 2004

	Adjusted variation between hospitals (%)	Interquartile range for hospital fixed effects
TOTAL COSTS		
Chronic obstructive pulmonary disease	0.34	3,432
Congestive heart failure	0.15	4,643
Stroke	0.20	6,091
Lower extremity joint replacement	0.51	7,588
Hip fracture	0.35	7,498
READMISSIONS		
Chronic obstructive pulmonary disease	0.04	0.06
Congestive heart failure	0.06	0.09
Stroke	0.12	0.11
Lower extremity joint replacement	0.10	0.06
Hip fracture	0.20	0.10

The Ultimate Episode?



Source: National Consensus Project for Quality Palliative Care, 2009

Specific Evaluation Challenges

- Sources of “historical” or “pre-” data
- Defining the intervention group
  - Diseases
  - Start of episode
  - Selection issues
- Identifying the “controls”
  - Geographically
  - Chronologically
- Realistic goals for time needed to observe outcomes (more than 30 days? 89 days?)
  - Different goals for ACO approach versus diagnosis-specific bundled payment?
  - Other impacts (e.g., referral networks)