Measurement of Health Care Costs

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Overview

- Total cost of care and breaking it down – utilization and price
- Utilization measures for health plans
- Importance of price measures
- New measure development
- Cost measures for clinicians and clinician groups
- Using cost measures to track policy

Contributing Factors

- To higher total costs in US (vs. international)
  - Prices per unit of service
  - Volume of certain services (not hospital days but imaging, surgery, laboratory, others)
- To continued rise
  - Price per unit of service (especially new services)
  - Technology- additive-and entirely new
  - More people defined as having disease
  - Aging of population

Cost of Care Measures

- **Importance of perspective – whose cost?**
- Total spending for individual, county, state
- Premiums
- Out of pocket spending
- Use of high cost services
  - Emergency room use
  - Avoidable hospitalizations and rehospitalizations
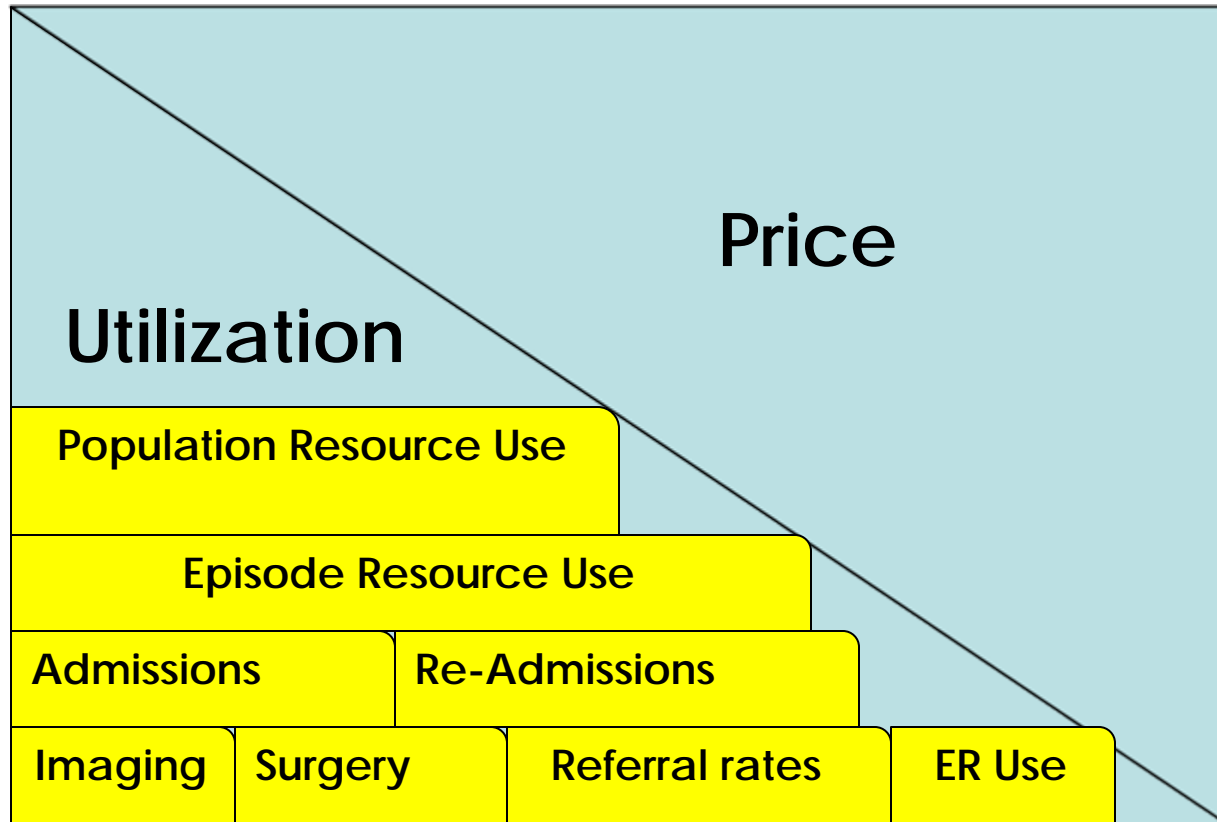 - Use of discretionary/low value procedures

Percent of Adult Asthmatics with an Emergency Room or Urgent Care Visit in the Past Year
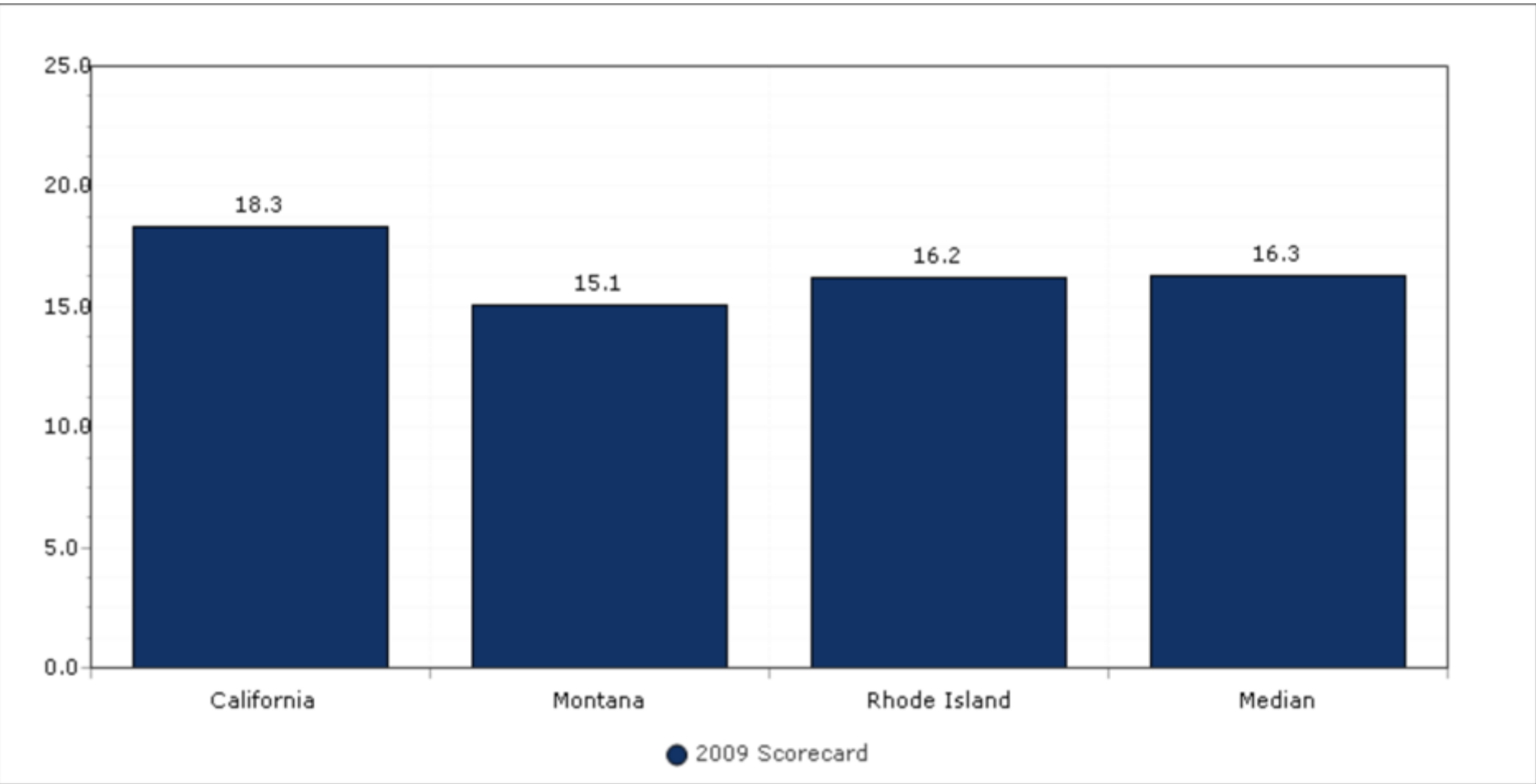
Source: Commonwealth Fund State Scorecard on Health System Performance, 2009
2009 Data: Rutgers Center for State Health Policy analysis of BRFSS (NCCDPHP, BRFSS 2001, 2002, 2003, 2004).

Cost-Related Measures

UTILIZATION MEASURES FOR HEALTH PLANS

Relative Resource Use (RRU) Measures

- Indicates how intensively a plan uses resources (physician visits, hospital stays, etc.) vs. similar plans

- With HEDIS quality measures, RRUs let us talk about quality and cost together

- This gives purchasers and plans a basis for discussing the value plans offer, not merely unit price and discount

- Can be used at the plan AND provider group level

Payers Can Have Impact

Health Plan Functions　　　　　　　　**Results**

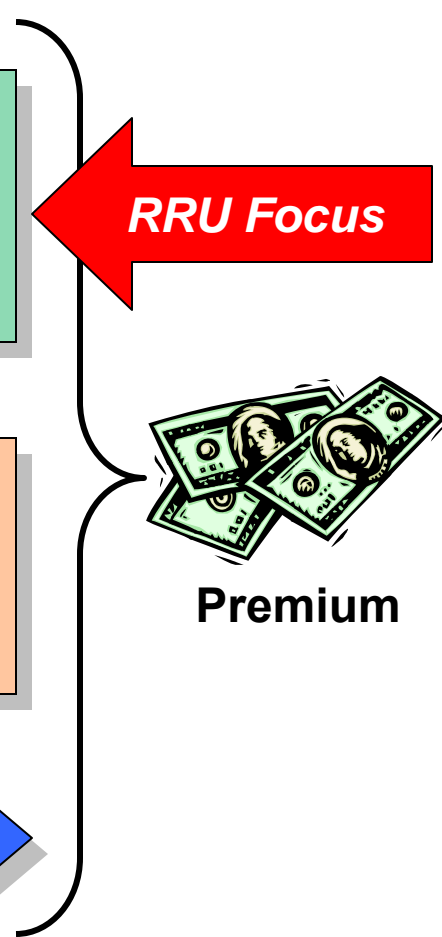| Disease Management
Wellness Programs
Benefit Design
Network Design
Reimbursement Policy | ➡ | Utilization | ⬅ *RRU Focus* |

Provider Contracting ➡ Unit Price/Discount

Premium

Admin. costs, Strategic considerations, etc ➡

Resource Use and Quality Results

Sample Diabetes Relative Resource Use in a Single State – HEDIS 2008:

Plan	Diabetes Quality Composite	Diabetes Medical Components Resource Use				Pharmacy Resource Use
		Combined Medical	Inpatient Facility	Eval & Mngmt	Surgery & Procedures	
Plan A	1.06	1.14	1.32	1.00	0.89	1.14
Plan B	1.10	0.85	0.96	0.74	0.73	1.12
Plan C	1.10	0.80	0.84	0.79	0.71	1.16
Plan D	1.14	0.74	0.77	0.85	0.56	1.13
Plan E	0.97	0.73	0.79	0.76	0.54	1.19

Below average is < 1.00; average is 1.00; above average is > 1.00

NCQA
Measuring quality.
Improving health care.

RRU Results

Combining the RRU together with the quality index will provide critical information to purchasers of health plan services on comparative cost and quality of care to select health plans and providers
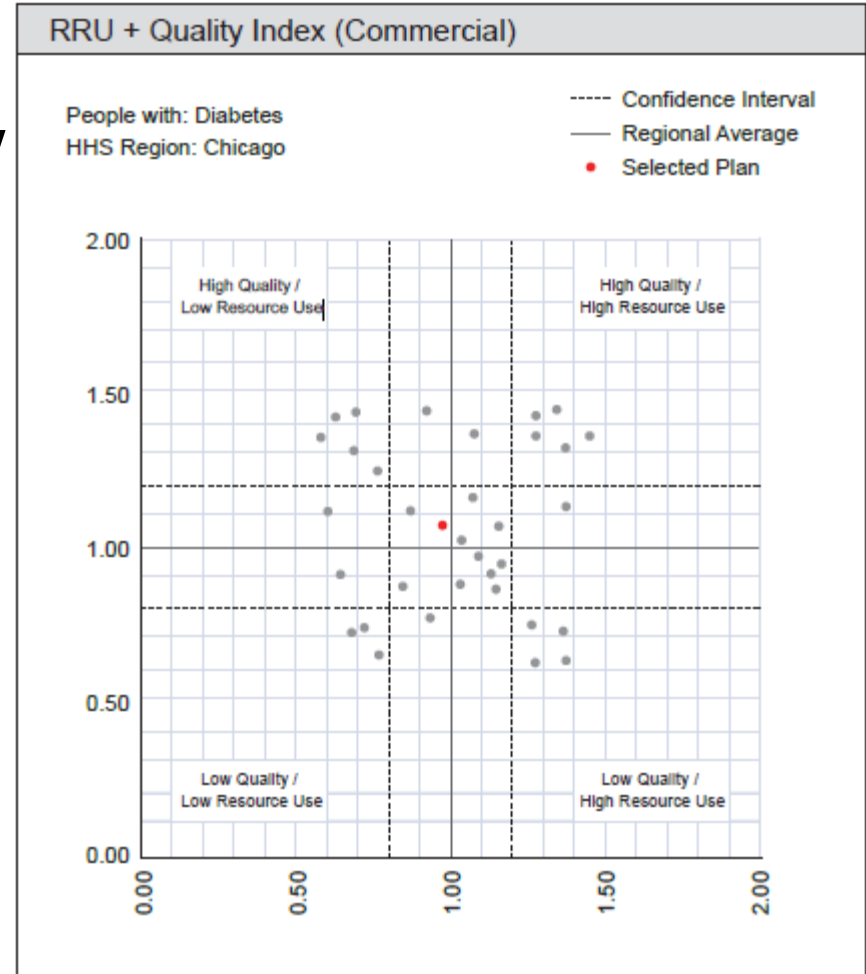
What Have We Learned From RRU?

- Little correlation between quality and overall resource use

- Marked variation between and *within* regions among plans

- Implications:
  - High quality care can be associated with either high *or* low resource levels

  - Moving to high-quality, low-resource use patterns would yield significant savings

New areas to be included in RRUs

- Current standard pricing for RRU measures include reported service categories that encompass 65-70% of services delivered to patients including:
  - Inpatient Facility
  - Evaluation and Management (inpt & outpt)
  - Surgery and Procedure (inpt & outpt)
  - Ambulatory Pharmacy

- Imaging and lab make up an additional 10% of the cost information not captured by this approach- to be added in 2012

Lab and imaging out for public comment

- *Lab*
- High percentage of coding fall within acceptable limits for reliable pricing of services.
  - Recommendation: Include Laboratory as a new priced service reporting category in RRU
- *Imaging*
- High percentage of coding fall within acceptable limits for reliable pricing of services.
  - Recommendation: Include Imaging as a new priced service reporting category in RRU
- *ER*
- Unable to reliably distinguish between emergency and urgent care
  - Recommendation: Do not include as a new service category

Recent findings from RRU analysis

- Relatively high correlations between different RRU components EXCEPT for Pharmacy

- Total Medical (inpatient, surgery, E&M)
  - Higher total Medical RRU with lower quality in diabetes

- Total pharmacy resource use
  - Positive correlation (higher quality with higher resource use) across diseases in HMO plans
  - Somewhat condition-dependent in the PPO plans

- Good stability of RRUs from year to year within a plan

Questions for future work

- Could RRU cost components be "repackaged" to show stronger correlations with quality?

- Can we identify "potentially avoidable resource use" from existing data?

- Are specific input RRU service categories tied to quality particularly relevant to Accountable Care Organizations (ACOs)?

Measures of inappropriate or potential overuse: examples

- Use of imaging studies for low back pain
- Avoidance of antibiotic treatment in adults with acute bronchitis
- Drugs to be avoided in the elderly
- General utilization measures (e.g. emergency room)
  - Without risk adjustment, hard to interpret differences

Health plan readmission measure

- Added to HEDIS for 2011 for Medicare
- A plan-level measure – reflects expectation for managing care during hospital stay and post discharge
- Plans will report this measure for all admissions/readmission with specific exclusions (trauma, cancer)

  Risk adjustment methodology for this measure includes:
  - Age and Gender
  - Maternity/pregnancy related excluded

Some specifics

Measure Description: Inpatient Readmissions (INR)

The percentage of index discharges during the measurement year that were followed by an all-cause inpatient readmission within 30 days of the index discharge date for members 18-89 years of age. Two counts and one rate are reported

The number of index hospital stays *(denominator)*

The number of index hospital stays that were followed by an index readmission *(numerator)*

The adjusted rate of all-cause inpatient readmissions within 30 days of an index discharge

The unadjusted rate is the ratio of the numerator and denominator

IMPORTANCE OF PRICE MEASURES

Price is also part of the picture

- With Medicare and Medicaid programs, government can set the payment rates for providers
- However, private plans face challenges with concentration of market power (e.g. teaching hospitals, single specialty practices without competition, hospitals buying medical practices)

Price-What we have now

- ## Price paid by consumer or purchaser
  - Public- generally available (premiums, deductible and co-pays)
  - Private-little available information on premiums except FEHBP, few others

- ## Payments to providers
  - Public- generally available (vary by program, region, some special units)
  - Private-very little publically available - vary by insurer, provider, may be rebates, withholds and bonuses

- ## Biggest challenge is making sense of data

NEW MEASURE DEVELOPMENT

Potential Future Measures: Expenditures

- ## Public sector
  - Exist by region and hospital area, need to adapt for ACOs or other high level groups

- ## Private sector
  - Regional per capita expenditures (from resource use and standard prices)
  - Benefit and risk adjusted expenditures per patient (plan and self insured employer)
    - Direct measurement would need price
    - Indirect approach may be possible

Potential Future Measures: Utilization

- Risk adjustment to existing utilization measures
- Repeat lab tests
- Referral rates (by type)
- Overuse of procedures (PCI, imaging)
- Repeat procedures (eyes, knees, hips etc)

Potential Future Measures: Price

- **Price paid by consumer or purchaser**
  - Public- effort by Medicare to make more widely known
  - Private-Exchanges will require standardized benefit and premium information

- **Payments to providers**
  - Public- may become more confusing with global or partial global payments
  - Private-some insurers publishing payment information or having hospitals and MDs do so

MEASURES FOR CLINICIAN AND CLINICIAN GROUPS

Cost measures for clinicians and clinician groups

- Resource use measures
  - Episode groupers – try to delineate care related to a particular condition and episode
  - Per capita cost
- Price per service
- Service-specific utilization measures
  - Hospitals
  - Imaging
  - Emergency room use
  - Generic substitution for pharma

Thorny issues

- Attribution
  - Responsibility and control
  - Various algorithms based on visits, costs
- What services count?
- Risk adjustment
  - Smaller the unit of analysis, bigger issue this is (not a problem for state for example)
  - Health status fairly broad
  - Patient characteristics vs. practice style
- Sample size

COST MEASURES AND POLICY

Measuring the impact of strategies

Strategy	Expected impact (selected)
Adopt comprehensive payment reform	Shift to lower cost providers and settings, reduce ER, hospital readmission rates, preventable hospitalizations, HAI and SREs
Use HIT	Reduce overuse, misuse and underuse, reduce administrative costs
Implement evidence-based coverage	Less substitution of higher cost for lower cost technology if value not proven
Engage consumers	Reduce demand for low value care, reduce ER use, hospital readmissions, preventable hospitalizations
Promote good health	Reduce obesity, chronic disease, smoking, services associated with preventable illness

Adapted from "Roadmap to Cost Containment" Massachusetts Health Care Quality and Cost Council