Reforming Payments in Acute and Emergency Care

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Objectives for today

• To describe the role of emergency care in value and payment reform efforts

• To describe recent studies that explore issues in payment and delivery reform in acute & emergency care
Acute unscheduled care

- Care for the ill & injured
- U.S. system evolved to meet demands
  - Under FFS
- Much of the care is high quality
- Some care is fragmented
- Many settings are high cost & overcrowded

Payment & delivery reform

- New focus on value
  - ACA of 2010 / MACRA of 2015
  - Payment / delivery reforms
    - CMMI / Private market
    - Coordinate, low cost, and patient-centered
    - Election of 2016
APMs

• How does this apply to us?

Payment reform issues

• Demand is exogenous / social determinants
• Data availability
• Critical role of system in public health
• Patient Safety
  – Reducing intensity -> Medical errors?

Critical questions

• What is the variation in ED admission rate & advanced imaging rates?
• Is more better when it comes to chest pain admissions?
• What happens to ED care with global budgeting?
• What is the role of emergency departments in payment reform?
ED admission

- HCUP data (2008), 1,376 EDs
- Average admission rate = 17.5%
- Varied from 9.8% to 25.8% at 10th and 90th percentiles.
- Several factors associated:
  - Incr % of Medicare and uninsured patients, more inpatient beds, lower ED volumes, for-profit ownership, trauma center status, and higher hospital occupancy rates were associated with higher admission rates.
  - Hospitals in counties with fewer primary care MDs per capita and higher ED admission rates had higher ED admission rates.

Pines et al. Variation in emergency department admission rates across the United States MCRR 2013

ED admission

- 3 EDs within the same health system
- ED physician-level and hospital-level admission rates were estimated with hierarchic logistic regression
- ~400k visits / 89 ED physicians
- After adjusting for patient and clinical characteristics, the hospital-level admission rate varied from 27% to 41%.
- At the physician level, admission rates varied from 21% to 49%.


ED admission

- 100% Medicare sample from 2012
- County-level ED adm rates, adjusted with HCC score
- The average county HCC adjusted ED admission rate was 30.8% in the Medicare population.
- Counties in the lowest quintile: ED admission rate of 19.9% or lower. By comparison, counties in the highest quintile had an ED admission rate of 40.3% or higher.

ED admission

- 6 EDs
- 51,807 ED encounters avg adm rate was 20.0%
- Unadjusted admission rates differed between sites by 2.9% (range 0-8.4%) for the same physician.
- The adjusted admission rate was 19.3% and differed between sites by 2.1% (range 0.4%-6.2%)

Pines JM et al. How (ED) admission decisions differ when the same physician works in two different emergency department. Am J Emerg Med 2017

ED admission

- 19 EDs and 603 MDs
- 15 most commonly admitted conditions, and calculated condition-specific RSARs
- Decomposed contribution of provider-level and hospital-level variation.
- 8 conditions with the highest hospital-level variation were: 1) injuries, 2) extremity fracture (except hip fracture), 3) skin infection, 4) lower respiratory disease, 5) asthma/chronic obstructive pulmonary disease (A&C), 6) abdominal pain, 7) fluid/electrolyte disorders, and 8) chest pain.

Khajah et al. The relative contribution of provider and ED-level factors to variation among the top 15 reasons for ED admission. Am J Emerg Med 2017

ED admission

- 1.4 m visits across 18 sites from 2012-2013.
- Avg adjusted admission rate was 22.9%, ranging from 16.1% to 32%.
- Incr odds of hospital admission with advancing age, male sex, and patients seen by a physician vs. mid-level provider
- Incr odds of admit with rising ED volume, at academic institutions and at for-profit hospitals.
- Admission rates were lower in communities with a higher per capita income, a higher rate of uninsured patients, and in more urban hospitals. In communities with the most primary providers, there were lower odds of admission.

CT variation

- 4 hospitals
- All patients who underwent CT or V/Q from 06-09
- Diagnostic yield ranged from 4.2% to 8.2%; after adjusting for patient- and provider-level factors.
- No significant variation in diagnostic yield among the 90 providers after adjusting for patient, hospital, and provider characteristics.


Is more better?

- 20% sample in CMS data
- Adj admission rate with chest pain was 63% for the middle quintile and ranged from 38% to 81% in the lowest/highest quintiles.
- 3.6 fewer cases of AMI (95% confidence interval [CI] = 1.5 to 5.1 cases) and 2.8 fewer deaths (95% CI = 0.6 to 4.1 deaths) per 1,000 chest pain patients associated with an admission rate of 81% versus 38%.

Coterill et al. Variation in chest pain emergency department admission rates and acute myocardial infarction and death within 30 days in the Medicare population. Acad Emerg Med 2015

Is more better in trauma?

- 126,103 admissions with minor or moderate injury were included in the study population.
- HCUP data 2010-12
- Mortality rate was 6.4 per 1,000 admissions. No significant difference found in mortality between trauma and nontrauma centers in unadjusted / adjusted models.
- Avg cost was $13,465 and, after adjustment, was 33.1% higher at trauma centers compared with nontrauma centers (95% CI 16.9% to 51.6%).

Delivery/payment reform

- US primary care practices: 308 w and 1,906 w/o PCMH (08-10) Medicare
- Comparing PCMH v. non-PCMH, the rate of growth in ED payments per beneficiary was $54 less for 2009 PCMH and $48 less for 2010 PMCH v non-PCMH relative to non-PCMH
- The rate of growth in all-cause and ambulatory care-sensitive condition ED visits per 100 beneficiaries was 13 and 8 visits fewer for 2009 patient-centered medical homes and 12 and 7 visits fewer for 2010 patient-centered medical homes, respectively.
- No hospitalization effect!


Global budgets

Pines et al. Maryland’s Experiment with Capitated Rural Hospital Payments: Large Reductions in Hospital-Based Care. Health Affairs
Involvement of ED

- 15 interviews
- Current quality measurements have good intentions, the focus weighed heavily on process rather than outcome measures
- ED is overlooked by other stakeholders in the APM space
- Inadequate financial incentives to modify physician behavior
- Hesitation among some emergency physicians to transition away from traditional FFS.
- Transitions will be a loss of compensation and autonomy of practice, while others value-based payments as an opportunity to transform and enhance the role of emergency medicine


Takeaways

- Great variation in common decisions
  - Admission > CT
- Higher intensity acute care -> may lead to better outcomes
- High intensity care for patients who don’t need it may just be costly
- Payment reforms have great impact on ED care
- ED physicians -> need to get involved

Payment reform issues

- Disruptive, not destructive
- How do we pay acute care providers if not through FFS?
- What about decreasing volumes?
- One-size-fits-all model may not work
- Incentives need to be aligned across settings
Vision of the ideal system

1. Prevent avoidable acute health problems and the associated care from happening.
2. Create and expand patient-centered ways to deliver acute care.
3. Improve the efficiency of the acute care system itself

Questions?