Does Strong Patient Dissatisfaction Predict Decisions To Leave Hospitals Against Medical Advice?

12th CAHPS and 2nd SOPS User Group Meeting

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TRANSFORMING HEALTH CARE THROUGH RESEARCH AND EDUCATION

Overview

- Rationale for the study

- Approach/ methods

- What we found

- What it means (and might mean)

Project Rationale

- Leaving hospitals against medical advice (AMA; self discharge) is growing problem
    - National AMA rate estimate—1.2%
    - 39% increase from 1997-2007
    - Total number estimated for 2010: 412,750

Stranges, E. (Thomson Reuters), Wier, L. (Thomson Reuters), Merrill , C. (Thomson Reuters), and Steiner, C. (AHRQ). *Hospitalizations in which Patients Leave the Hospital against Medical Advice (AMA), 2007*. HCUP Statistical Brief #78. August 2009. Agency for Healthcare Research and Quality, Rockville, MD.

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Project Rationale

- Three primary foci for research on AMA
  - Causes:
    - Mental illness; substance abuse
    - Insurance status (uninsured & Medicaid)
    - Patient characteristics
      - Male
      - African American
      - Poverty
      - Medical conditions: chest pain, diabetes

Project Rationale

- Three primary foci for research on AMA
  - Consequences of AMAs:
    - Readmissions
    - Complications
    - Costs to patient and health system
  - Preventing AMAs
    - Identifying high risk patients
    - Interventions to reduce risks

Project Rationale

• Hospital's role in contributing to AMAs not examined

> • Large variability in AMA rates that seem to treat similar patient populations
> • Patient-centered analysis shifts question:
>> • From: What's wrong with the patient?
>> • To: What's wrong with the patient experience?

Project Rationale

Preliminary test of link between AMA and bad patient experiences in hospitals. If patient experience contributes to AMAs, then:

• HCAHPS scores and AMA rates should be related (H1)

• Patient dissatisfaction should be a stronger AMA predictor than patient satisfaction (H2)

• Relationship should be larger after controlling for other patient factors (H3)

Methods

- Data:
  - AMA info from 2007 Medicare claims
  - HCAHPS data from Hospital Compare (2008)
- Exclusions:
  - General acute care hospitals w HCAHPS data
  - At least 200 Medicare discharges of patients 65+
  - Excluded Medicare patients under 65 or in Medicare due to disability

Methods

- Measure construction
  - AMA rates: based on discharge status code
  - Covariates: diagnosis and procedure codes
  - HCAHPS rates:
    - Pt satisfaction: average of 10 dimensions for pct of patients who rated hospital in top category
    - Pt dissatisfaction: average of 10 dimensions for pct of patients who rated hospital in bottom category
    - Both measures highly reliable (alphas =.93)
    - Strong inverse correlation– r=-.92 (mathematical necessity)

Results

- H1: Relationship between HCAHPS and AMA rates confirmed
    - Patient dissatisfaction accounted for 23% of the variance in risk adjusted AMA rates ($p<.001$)

- H2: Dissatisfaction was a stronger predictor of AMA than satisfaction
    - Patient satisfaction accounted for 15% of the variance in risk adjusted AMA rates—significantly less ($z=4.3$, $p<.001$)

Results

- H3: Inclusion of covariates in model substantially increased variance accounted for:

Relationships between AMA Rates and Satisfaction Measures*

	N	Patient Satisfaction	Patient Dissatisfaction
AMA High Risk White	893	-.10	.09
AMA High Risk Non-White	233	-.19	.21
AMA Low Risk White	2361	-.40	.51
AMA Low Risk Non-White	1711	-.33	.41

*High risk rates based on patients treated for substance abuse or psychiatric conditions. All relationships are significant at $p<.01$. N represents the number of hospitals on which the relationship was calculated.

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What Does This Mean

• No proof of causal relationship, but good reason to further explore the tip of the iceberg hypothesis: more bad patient experiences may lead to more AMA cases

• Good reason to supplement current AMA research with research focused on patient experience

• Good reason to attend to dissatisfaction scores—not just satisfaction

Qualifiers

• Further risk adjustment and updates of HCAHPS data ongoing

• Value in replicating with all-payer data

• Anecdotal stories of poor AMA coding

• Value of focused study on why low risk patients leave hospitals AMA—may be missing key risk factors or covariates

Questions

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