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Title
Managed care profit status, model type, and diabetes care.

Permalink
https://escholarship.org/uc/item/8f579394

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Publication Date
2003

Peer reviewed

modified version of the SF-20 to assess functional status. Using multiple regression, we analyzed treatment and 30-day functional status after adjustment for the estimated propensity of being admitted to a cardiology service, AHRQ guideline risk group, and predicted probability of ACI (with correction for clustering by admitting physician).

RESULTS: On average, physical functioning was higher in cardiology pts (adjusted difference = 5.5 on a scale of 0–100, 95% CI 0–11.1, p = 0.05). There were no differences in role function, general health perception, social function, or mental health measures. In-hospital complications and deaths (combined) were uncommon in both groups (5 vs. 2% in cardiology vs. generalist pts, p = 0.15). Cardiology pts were more likely than generalist pts to receive aspirin (OR 4.1, 95% CI 2.0–8.3), beta-blockers (OR 1.8, 95% CI 1.1–2.9), and cardiac catheterization (OR 2.7, 95% CI 1.0–7.5).

CONCLUSION: Our results suggest that physical function in pts who are admitted to a cardiology service is superior to that of pts admitted to a generalist service for evaluation of possible ACI (at 30-day follow-up). One possible explanation is that cardiology pts are more likely to receive recommended therapies for ACI. Analysis of a larger sample of patients is needed to confirm these findings and to determine whether cardiology admission is associated with improved (or worsened) mortality and cardiac complications.

THE COST OF COMPLICATIONS: PNEUMONIA AFTER ACUTE STROKE.

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BACKGROUND: There is evidence that clinical pathways that include a swallowing evaluation can reduce the incidence of pneumonia that complicates acute stroke, although, in usual care, fewer than half of stroke patients are evaluated. We previously reported that pneumonia after stroke confers a 3-fold increased risk for 30-day mortality; in this study, we examine the incremental costs of pneumonia complicating acute stroke.

METHODS: This was a retrospective cohort study involving 11,286 Medicare patients admitted for ischemic or hemorrhagic stroke to one of 30 hospitals in Greater Cleveland between 1991 and 1997. The sample excludes 3,007 patients who died or had DNR orders within 2 days of admission. For costs, we used patient-level charges adjusted for hospital-specific cost-to-charge ratios, which then were log-transformed. Pneumonia was identified from secondary ICD-9-CM codes. We used detailed chart-abstracted patient data to generate covariates representing patient severity (c-statistic = .73), predicted cost (r2 = .37), and propensity for pneumonia (c-statistic = .83). Linear regression was used to estimate the incremental cost of pneumonia after adjusting for age, sex, race, and the above covariates.

RESULTS: Pneumonia occurred in 5.6% (635/11286) of patients in the cohort. There was a higher incidence in patients with hemorrhagic stroke (13.3% vs 4.9%, p < .001), those admitted from nursing homes (10.8% vs 5.3%, p = .001), and those with greater severity on admission (predicted mortality 13.2% vs 6.0%, p < 0.001). The unadjusted average cost for patients with pneumonia was $15,026, compared to $5,094 for patients without pneumonia, resulting in an incremental in-hospital cost of $9,932. After adjustment, the cost for the average patient with pneumonia was $9,259 as compared to $5,642 for those without pneumonia, representing an incremental cost of $3,618.

CONCLUSION: Extrapolated to the estimated 553,000 U.S. patients annually suffering acute stroke, the cost of pneumonia complicating stroke admissions is approximately $112 million each year. Together with the 3-fold increased mortality risk of pneumonia, and evidence that interventions can reduce risk, these findings provide strong impetus to quality improvement efforts in stroke evaluation and management.

BUILDING A BETTER QUALITY MEASURE: ARE SOME PATIENTS WITH "POOR QUALITY" ACTUALLY GETTING GOOD CARE?

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BACKGROUND: National performance measures monitor the proportion of diabetic patients with low density lipoprotein cholesterol (LDL) levels ≥130 mg/dl, but such simple rates of substandard intermediate outcomes measure poor control, not poor care. Electronic medical records may enhance our ability to improve quality assessment by allowing the creation of more "tightly linked" quality measures that define good quality either by a good intermediate outcome (LDL < 130 mg/dl) or by evidence of appropriate responses to poor control (e.g., starting or optimizing medications for high LDL or not doing so in the face of contraindications).We examined hyperlipidemia therapy for patients with diabetes to determine the relative accuracy of quality assessment using simple intermediate outcome versus tightly linked quality measures.

METHODS: We used a national VA diabetes registry to randomly sample 1154 diabetic patients from two large VA healthcare systems who had an LDL test done between October 1, 1998–March 31, 1999. We reviewed the medical records of all patients with high LDL levels to more fully examine medication treatment for hyperlipidemia, contraindications to treatment and explanations for poor quality.

RESULTS: While 27% (307/1154) of patients had an LDL ≥ 130 mg/dl using the simple intermediate outcome measure, only 13% (148/1154) were classified as having substandard quality using the tightly linked measure. Among the 159 reclassified to adequate quality, 117 had lipid lowering medication started or increased within 6 months of an LDL ≥ 130 mg/dl, 8 were already on high dose medication, 12 had a repeat LDL < 130 mg/dl and 22 had contraindications to treatment. We were able to construct a tightly linked measure from automated data alone that had a high agreement with the tightly linked measure constructed with medical record data (Kappa = 0.84).

CONCLUSION: Simple intermediate outcome measures can be an inaccurate reflection of true quality of care and many patients classified as having substandard quality by "poor control" may actually be receiving good quality of care.

DISCIPLINARY ACTION AGAINST PHYSICIANS: CHARACTERISTICS AND PREDICTORS.

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BACKGROUND: State medical boards routinely discipline physicians (MDs) for violations of laws governing the practice of medicine, but there is a dearth of information linking offender characteristics to severity of disciplinary action. We sought to determine physician characteristics and disciplinary predictors and to report the type, frequency, and severity of disciplinary actions against MDs.

METHODS: We undertook a descriptive and predictive analysis of publicly-available data maintained by the Oklahoma State Board for Medical Licensure and Supervision (OSBMLS) on disciplined MDs.

RESULTS: Longitudinally maintained data since 1922 showed that of 14,314 currently or previously licensed MDs, 396 (2.8%) MDs had been disciplined. Forty-eight MDs currently had a revoked license, 19 were under suspension, and 79 were on probation. Of the 189 disciplined MDs currently practicing medicine, 85.7% were practicing in Oklahoma. While physician race was not a significant factor (OR = 1.23, 95% CI = 0.94–1.62), males (OR = 2.62, 95% CI 1.79–3.84) and non-board-certified MDs (OR = 2.5, 95% CI = 2.05–3.08) were more often disciplined. Logistic regression analysis showed that age > 40 years, male gender, and lack of board certification were the only important predictors of being disciplined. During 2001, complaints against MDs involved quality of care issues (24.8%), incompetence (18.3%), malpractice (16.7%), non-controlled substance fraud (12.7%), billing issues (9.4%), inadequate records (8.4%), fraud (6.7%), prescribing violations (5.9%), sexual misconduct (4.6%), substance abuse (3.8%), criminal activity (3.0%), fraud application (0.3%), and others (31.8%). For that same year, two-thirds of complainants came from a public source.

CONCLUSION: Since 1922, almost 3% of its licensed MDs have been disciplined by the OSBMLS. The characteristics of offender MDs are similar to those previously reported.

MANAGED CARE PROFIT STATUS, MODEL TYPE, AND DIABETES CARE.

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BACKGROUND: The influence of investor-ownership and managed care model on the quality of health care is controversial.

METHODS: We examined the relationship between health plan profit status, provider group model (group/network, group/staff, and independent practice association (IPA)/network), and diabetes quality of care measures: retinal, renal, foot, lipid, and hemoglobin A1C testing; aspirin advice; influenza vaccination; and a sum of these measures using data from the Translating Research into Action for Diabetes (TRIAD) Study. In TRIAD, surveys of managed care enrollees with diabetes (n = 11,921), directors of provider groups (n = 64) and plans (n = 10), and medical records were linked. Models adjusted for clustering at the plan and provider group levels, and patient age, gender, race, diabetes treatment, education, income, health status, and survey language.

RESULTS: Non-profit status was associated with slight but non-significant greater performance of quality of care measures (Table). Among for-profit plans, group/network models provided significantly more (7–17%) of the measures of quality care than IPA/network models (p < 0.01) except for aspirin advice. Among non-profit plans, little difference existed between provider group model types.

CONCLUSION: Profit status was not associated with greater performance of diabetes processes of care measures. Among for-profit plans, group/network models provide better diabetes care than IPA/network models.

Percentage of participants receiving diabetes processes of care and (95% CIs)

	Non-profit	For-profit	Difference
Dilated eye exam	79 (74–83)	76 (72–80)	2
Urine protein checked	86 (78–91)	77 (67–84)	9
Foot exam performed	85 (77–90)	83 (75–89)	2
Lipids checked	63 (51–73)	67 (57–76)	−4
HgbA1c checked	87 (83–90)	86 (83–89)	1
Aspirin advised	62 (55–69)	47 (40–54)	15
Flu vaccination	66 (60–72)	64 (59–69)	2

LINKING DIABETES PROCESSES TO OUTCOMES: THREE PARADOXES.

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BACKGROUND: As quality assessment and health services research move from administrative to clinical databases, new vistas are opened for evaluating and linking care processes and outcomes. Clinical care for patients with diabetes mellitus affords such an opportunity as electronic data from pharmacy and laboratory become more widely accessible and linkable. In the course of a cross-sectional look at diabetes care in a large public hospital outpatient system we uncovered and sought to better understand 3 ?paradoxes? in relationships between outcomes and care processes.

METHODS: We downloaded all insulin and oral hypoglycemic agent prescriptions for 2001 from an NDC outpatient pharmacy database for a public hospital clinic system. Using ?unit number? identifier, unique patients were identified, and linked to all Hgb A1C and glucose tests recorded in a laboratory database. Self-monitoring strip prescriptions dispensed (recorded in pharmacy database) were also downloaded and linked using Microsoft Access and SPSS.